

Vendor	Can you describe the project or work that the vendor has completed for you? Please describe the level of detail the vendor has provided in completing its work / project	Was the vendor responsive, accessible, and available to you throughout the term of the project / work?	Are you satisfied with the work performed?	What are the vendors strengths and conversely what are the vendor's weaknesses?	Have you encountered any problems with the vendor, or had any contract or billing issues with the vendor?	Would you recommend the vendor to other entities for similar work? If you needed additional services in the future, how likely are you to choose the vendor again?	Are there any important questions I should have asked but didn't?
<p>IHS Markit Marisa Waxman Budget Director City of Philadelphia 9/3/2021</p>	<p>They do economic forecasting as well as revenue and tax based forecasting. They do somewhere between 8 to 12 of our taxes [revenue streams]. We use that when we are developing our overall revenue estimates for our budget each year. The big thing is when they provide us with [forecasted] growth rates annually for each of our tax types. They have a model they use for sales tax, income tax, etc., and they provide information about the inputs. They provide us with a monthly economic forecast report that contains an overview of economic conditions of nation, state, city/county. They help us in instances when we have to testify or present to the fiscal oversight board. IHS Markit will help present to the oversight board when we're describing why we're making certain revenue estimates. They've also appeared with us when we are in the middle of contract negotiations or arbitrations with our labor union. They provide information on our ability to pay and talking about our economic and revenue expectations going forward.</p>	<p>Absolutely, I would give them the highest possible marks. We had an instance when due to a communications breakdown, IHS Markit was not invited to a meeting in which their input was needed for a presentation. The mistake was realized about 36 hours before the event but IHS Markit was able to travel to Philadelphia and present even on that short time frame.</p>	<p>We are. We really appreciate the work, some of it we can do in house but it is really helpful to have it validated by an external firm with this reputation, because folks would really critique if we did it, so it's helpful to have that third party. We are quite satisfied.</p>	<p>Strengths: reliability and accessibility, clarity, and pricing. They have done everything we have asked them to do and we get a really good value out of them.</p> <p>Weaknesses: they do everything we ask them to do, but they don't often provide suggestions about what more we could do or to approach the problems differently. I almost wouldn't call it a weakness, and because the pricing is really good and they've never tried to upsell us, but maybe there are things we would find value in that we don't know about.</p>	<p>None at all. Their invoices are pretty straightforward, it's basically just use a flat amount each month.</p>	<p>Similar work: I would absolutely recommend them for similar work. In the future: we have a very competitive bidding process, so can't say they definitely would, but we have gone through multiple competitive bidding processes where IHS Markit has been among several vendors and we have picked them repeatedly.</p>	<p>You should have asked, "have they been accurate?" We do not tend to go back in check to see if they were closer in their projections than other economists out there. It's not something we have been checking, because things have been working out really well for us. They tend to be on the conservative side and so do we so that works, but I can't give you a metric that says "they're always within 3% of the actual value."</p>
<p>IHS Markit Allen Knudson Legislative Budget Analyst and Auditor North Dakota Legislative Council 9/8/2021</p>	<p>IHS Markit provides economic forecasting services for the ND Legislative Assembly. They provide the economic outlook for the state's economy with a specific focus on the agriculture and energy sectors. They specifically forecast annual tax revenues for: a. Sales and use taxes, b. Motor vehicle excise tax, c. Individual income tax, and d. Corporate income tax</p>	<p>Yes, we have monthly conference calls to discuss the forecasting progress. The IHS team is also available for questions at any time.</p>	<p>Yes, IHS Markit provides a quality product for us.</p>	<p>Strengths - Responsiveness, spending time to get an in-depth understanding of our state tax structure and economic climate, and willing to consider our input and suggestions.</p> <p>Weaknesses - We have contracted with IHS twice covering two budget cycles over 4 years (we have a biennial budget). During the first contract period, a couple of the members of the IHS team were not as prepared as they should have been to present their report to the legislative committee. However, since then, the team has improved substantially and has been doing an outstanding job presenting relevant information to the legislative committee.</p>	<p>No</p>	<p>Yes, we would recommend them to other state's for similar work and yes, we would consider contracting with them again for our next budget cycle.</p>	<p>No</p>
<p>IHS Markit Stephanie Rubino Assistant Budget Director State of New York Did not respond</p>							

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<b>Foster &amp; Foster</b> Ryan Stokes Director Division of State Group Insurance, FL Dept. of Management Services 9/1/2021	Foster & Foster (F&F) has completed multiple projects for the Division of State Group Insurance (DSGI). These projects include actuarial valuations for annual Other Post-Employment Benefits (OPEB) calculations, annual Retiree Drug Subsidy actuarial valuations, as well as benefits consulting for potential program changes and procurement assistance.	Yes	Yes	F&F is diligent about understanding the client's needs. For a benefits consulting project, there was a shortfall in meeting the expectations of the summary report.	We have not had any issues with F&F and continue to use them today.	Yes	No
<b>Foster &amp; Foster</b> Cameron Mock Chief of Staff Governor's Office of Management and Budget, State of Illinois 8/31/2021	Actuarial analysis for statewide pension systems and local police and fire pension systems. Work includes providing analysis for hypothetical and actual policy changes, and the resulting impact on liabilities and assets as a result of such changes. One particular project was a substantial undertaking: determining the actuarial impact of consolidating all of the 550+ local police and fire pension fund assets into two statewide funds.	Yes, extraordinarily responsive; day or night.	Yes, extremely satisfied.	Adeptness, deep talent, and responsiveness. I could not discern any weaknesses.	No, I did not	Yes, I would. I would be highly likely to choose them again for additional services.	N/A
<b>Foster &amp; Foster</b> Maria del Carmen Lopez Financial Oversight & Management Board for Puerto Rico Did not respond							

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<p><b>BKD</b> Reference 1 9/7/2021</p>	<p>BKD has been completing sales tax returns for the High Performance Transportation Enterprise (HPTE). On behalf of HPTE, BKD evaluates the sales information and determines where HPTE is required to file sales tax and also the amount due. Additionally, if HPTE is required to set up new sales tax accounts with states, cities, counties etc., BKD will establish the accounts as well. If there are any inquiries, penalties, or audits, BKD will resolve the issues and provide support during the audit.</p>	<p>Yes, BKD has been responsive when contacted.</p>	<p>Yes.</p>	<p>BKD is required to have a quick turnaround for the sales tax filings due to when HPTE's sales information is available in their system. This does not allow BKD much time to create the sales tax returns and file them. They always have met the deadline of getting the returns filed on time.</p> <p>However due to the short time frame that BKD has to complete the monthly sales tax returns, it at times puts a rush on our staff to meet the payment deadlines. The payments/returns are due by the 20th of every month. At times HPTE has received the payment information on the 19th, creating a rush to process the payments.</p>	<p>No.</p>	<p>Yes, HPTE would recommend BKD and would renew their contract when it expires.</p>	<p>No.</p>
<p><b>BKD</b> Reference 2 9/13/2021</p>	<p>The vendor is providing consulting services in employee tax withholding requirements by state, state unemployment insurance reporting, workers' compensation, filings for the Taxpayer Certainty and Disaster Tax Relief Act of 2020, and other related matters on an ad-hoc basis.</p>	<p>Yes, the vendor has been responsive to questions and answers have been timely and thorough.</p>	<p>The project has not been completed, however, to date we are satisfied with the performance.</p>	<p>The vendor is knowledgeable on the subject matter. We have not encountered any issues that would signal a weakness at this time.</p>	<p>We have not been through a billing cycle with the vendor to date. We have not had any contract issues to date.</p>	<p>Based on performance so far, yes, a positive recommendation would be given. If we need additional services outside of the scope of the contract, a request for proposal would be issued for the project and all qualified firms would be invited to respond.</p>	<p>No.</p>
<p><b>BKD</b> Reference 3 9/17/2021</p>	<p>BKD, specifically Bob Johnson Jr, was engaged to provide guidance on the filing and calculation of the Employee Retention Tax credit that was offered as part of COVID-19 mitigation efforts in 2020.</p> <p>BKD was provided a list of questions relative to the topic including but not limited to tracking requirements, eligible hours, eligible impact window and best practices.</p> <p>Mr. Johnson prepared responses to our questions, that were rooted in fact and available guidance, and conducted meetings with us to discuss his recommendations and findings. This feedback was incorporated with our internal review on the topic so a fully informed decision could be made and executed upon.</p>	<p>The vendor was responsive to email and willfully participated in any requested meetings (WebEx). They also worked within any timelines we provided. We experienced no issues in obtaining their attention.</p>	<p>I was satisfied with their input and willingness to provide guidance on this topic.</p>	<p>BKD will ensure that they have a clear understanding of the question(s) at hand and will perform the research necessary to provide a well thought out and reasoned response. They also do a good job of following up written guidance with meetings to ensure proper interpretation of written intent was achieved.</p> <p>We did not experience any issues with their performance on this project.</p>	<p>None that I am aware of.</p>	<p>I would recommend this vendor to other entities. I would also utilize this vendors services in the future.</p>	<p>None.</p>

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<p>Econometric Studios, LLC Amanda Lankford Senior Analytics Product Lead Enterprise Data and Analytics VMware 9/17/2021</p>	<p>Thomas did time-series forecasting, regression modeling, and research for me. He knows his stuff. In terms of the level of detail, Thomas is great at providing the most basic detail of his analysis, from the micro data to the coding used to produce the forecasts. He is very transparent and puts a lot of effort into making sure his work is accurate and objective. He is efficient at what he does and always has a positive attitude towards his professional fields. I can't think of a better consultant to have worked with than Thomas.</p>	<p>Yes, Thomas is very responsive and accessible. He responds quickly to calls, text, and emails.</p>	<p>Yes, Thomas does great work. He uses cutting-edge tools to accomplish his work, presents well, and is a great communicator.</p>	<p>I think Thomas' three greatest strengths are: (1) Innovative. Thomas understands very detailed aspects of projects and is able to make technical changes that at first may seem simple but are really innovative. (2) Well-read. Thomas knows his stuff, and he's not just aware of his own work. He keeps tabs on what others are doing, I think in an effort to be a very good consultant. When it is a subject he knows well (forecasting, economics), he can talk your ear off until you have to kick him out the door. (3) Technical capabilities. Thomas knows time-series forecasting, machine learning, artificial intelligence and how to apply these models and traditional econometrics modeling to large and small datasets. He's able to explain what he is doing in simple terms that are easy to follow. On weaknesses, I think his most glaring weakness is that he is sometimes very technical in his work when at times he could make his presentation style more light-hearted. With that said, he's a good conversationalist and I enjoy talking with him.</p>	<p>No, I have not run into any problems with Thomas. He is detailed in his invoices. I've never had a question on billing.</p>	<p>Yes, I would recommend Thomas for forecasting and economics work. He is at the top of his field. I would definitely hire him in the future. He's easy to work with and does a good job. His work stands up to outside critique.</p>	<p>N/A</p>
<p>Econometric Studios, LLC Bufus Outlaw <i>Did not respond</i></p>							
<p>Econometric Studios, LLC Nate Talley <i>Did not respond</i></p>							

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<p>REMI Jim Smith President Blueprint Nebraska 10/5/2021</p>	<p>Blueprint Nebraska is a state-wide private-sector driven initiative that started back in 2018. The organization created a 15 point plan for economic growth and prosperity for the state. Competitiveness, tax modernization was one of the points. So we were interested in quantifying the economic and fiscal impacts of various tax policy changes, as well as labor force attraction, research and development programs, etc. To that end, REMI was approached and asked to create a custom economic and fiscal model of Nebraska to calculate those types of impacts, and to produce a report and a fact sheet detailing the findings. The REMI model was customized for ten economic regions of the state. 70 sectors were incorporated into the model. The regional configuration of the model reflected the current 9 Nebraska Economic Development Regions and 1 region for the rest of the nation. We looked at employment, regional and gross state product, industry output, investment activity, personal income, government revenue, prices and business costs, and population.</p>	<p>Oh sure, yes.</p>	<p>Yes, in fact, the REMI report is available the Blueprint Nebraska website. There you can find copies of the report in its entirety.</p>	<p>Strengths: technical and analytical strengths. They had competent staff that were well versed in econometric modeling, interplay between economies. That was certainly their strength.</p> <p>Weaknesses: As you would find with any entity like that, they are not well versed on the politics of the state. For example, we could have gone to the University of Nebraska to model this. University of Nebraska might be well versed in the intricacies of the politics in Nebraska but they would have other bias. REMI did not have a bias, they were competent, but we had to go in with the understanding that they did not have all the pieces of the political puzzle of Nebraska.</p>	<p>No, we were probably one of their better clients in that we just paid everything up front, no usual billing or structured billing. We had certain constraints that we had to spend under, so we just paid them all up front and they delivered on everything they had promised.</p>	<p>We would recommend REMI again. In fact, we structured the contract such that if there were to be any revisions or modifications to the plan, REMI would run those modifications for us.</p>	<p>No I don't think so.</p>
<p>REMI Aysegul Jezewski Chief Economist New York State Division of Budget 10/6/2021</p>	<p>REMI did not do any project for us, we ran the software on our end, but they provided us assistance. They advised us as to which variables to shock and how to fine tune our budget. So they helped us run our own simulation but they did not do a project for us.</p>	<p>Yes, they have been. There were several folks at REMI who answered my question depending on who was more familiar with the topic I was asking about.</p>	<p>Yes, I am satisfied, to the degree that they could provide that help. In some cases they were not able to provide help because they are not flexible enough to do what I wanted to do.</p>	<p>I dealt with many different people at REMI. I certainly preferred to talk to some of them because they know much better how the model works, they are more sophisticated. There are some folks that are younger who don't know the model or the economics behind it, but they know how to push the buttons in the software. But if I were to talk about the ones I like to deal with to answer my questions, they were very strong, they understood what the model did, and they helped me determine which types of variables I should be changing to get to where I needed to get to. I was very happy with their help, except that only some of them...but they've hired so many people since we started doing this project.</p>	<p>Not necessarily. I don't deal with billing, but I have the impression that they are quite flexible.</p>	<p>Yes</p>	<p>Perhaps ease of use of software or how they change it over time.</p>
<p>REMI Stephen Moore Committee to Unleash Prosperity Did not respond</p>							

**Price Comparison Table – State Budgeting and Revenue Forecasting Consulting Services**

<b>BKD, LLP</b>	<b>Econometrics Studios, LLC</b>	<b>IHS Markit (dba IHS Global, Inc.)</b>	<b>REMI, Inc.</b>
<u>Supervisor</u> (Partner/Principal): \$450-\$625/hr. (x3 positions)	<u>Supervisor</u> : \$150/hr. (x1 position)	<u>Supervisor</u> (Project Technical Lead/Project Manager): \$358.45/hr. (x1)	<u>Supervisor</u> : \$400/hr. (x1)
<u>Other Professional Staff</u> : Director: \$425/hr. (x2)  Sr. Manager: \$375/hr. (x2)  Manager: \$325/hr. (x3)	<u>Other Professional Staff</u> : No titles listed: \$75/hr. (x.1)	<u>Other Professional Staff</u> : Consulting Executive-in-charge: \$358.45/hr. (x1)  Sr. Technical Advisor: \$358.45/hr. (x1)  Lead Analyst 1: \$307.33/hr. (x1) Lead Analyst 2: \$247.82/hr. (x1) Business Analyst 1: \$181.20/hr. (x1) Business Analyst 2: \$155.66/hr. (x1)	<u>Other Professional Staff</u> : Analyst: \$250/hr. (x2)
<u>Support Staff</u> : \$225/hr. (x2)	<u>Support Staff</u> : \$25/hr. (x.05)	<u>Support Staff</u> : None specified	<u>Support Staff</u> : \$150/hr. (x1)
<b>Travel</b> : Flat fee not to exceed \$15,000	<b>Travel</b> : No amount listed.	<b>Travel</b> : No amount listed.	<b>Travel</b> : \$6,400/day +expenses (if no more than 2 days total under k, up to \$15,000)
<b>Subcontractor Rates</b> : Sr. Actuarial Consultant: \$450/hr. Actuarial Consultant: \$400/hr. Actuarial Analyst: \$350/hr. Administrative: \$200/hr.  Max Amount: \$280,000	<b>Subcontractor Rates</b> : No subcontractor proposed.	<b>Subcontractor Rates</b> : No subcontractor proposed.  <b>Other Expenses</b> : \$76,255 fixed price for report deliverable re: revenue forecasting and analysis	<b>Subcontractor Rates</b> : No subcontractor proposed  <b>Other Expenses</b> : 1 year rental of REMI Tax PI Model of Arkansas (1-region, 70 sector): \$78,250
<b>Total Max Bid: \$590,000</b>	<b>Total Max Bid: \$29,500</b>	<b>Total Max Bid: \$1,000,000</b>	<b>Total Max Bid: \$170,000</b>

**State Budgeting and Revenue Forecasting Consulting Services Contract –2021 – RFP Response Checklist**

	<b>BKD, LLP</b> (Joey Lambert)	<b>Econometric Studios, LLC</b> (Dr. Thomas Young)	<b>IHS Markit (dba IHS Global, Inc.)</b> (Duyen Phan)	<b>REMI, Inc.</b> (Elizabeth Colegrove)
<b>Delivered by Closing Time/Date</b>	X	X (no original document – all copies and electronic version)	X	X
<b>Signed Proposal and OPPTS</b>	X	X	X	X
<b>Submitted 2 Electronic Versions (Redacted/Unredacted)</b>	X	X (no redacted version submitted)	X (no redacted version submitted)	X (no redacted version submitted)
<b>Authorized to do Business in AR</b>	X	X (received 10/2)	No listing found with AR SOS (See add'l info received at 09/29)	In the process of obtaining (see email 10/18)
<b>Copy of EEO Policy</b>	X	X (received 10/2)	X	X (received 10/18)
<b>Illegal Immigrant Certification</b>	X	X	X	X
<b>Completion of Disclosure Forms EO-98-04</b>	X	X (received 10/2)	X	X
<b>Response to each #’d paragraph</b>	X	X (received 10/2)	X (received 09/29)	X (received 10/18)
<b>Vendor References</b>	X (p. 31 of proposal)	X (p. 10 of proposal)	X (pp. 25-28 of proposal)	X (pp. 13-14 of proposal)
<b>Subcontractors</b>	Foster & Foster	None listed.	None listed.	None listed.
<b>TIN# Submitted</b>	X	X	X	X





# State of Arkansas Bureau of Legislative Research

Marty Garrity, Director  
Kevin Anderson, Assistant Director  
for Fiscal Services  
Tim Carlock, Assistant Director  
for Information Technology  
Matthew Miller, Assistant Director  
for Legal Services  
Estella Smith, Assistant Director  
for Research Services

## REQUEST FOR PROPOSAL

RFP Number: BLR-210002	
Commodity: <b>State Budgeting and Revenue Forecasting Consulting Services</b>	Proposal Opening Date: <b>August 30, 2021</b>
Date: <b>June 21, 2021</b>	Proposal Opening Time: <b>4:00 P.M. CDT</b>

PROPOSALS SHALL BE SUBMITTED IN HARD COPY AND ELECTRONIC FORMAT AND WILL BE ACCEPTED UNTIL THE TIME AND DATE SPECIFIED ABOVE. THE PROPOSAL ENVELOPE MUST BE SEALED AND SHOULD BE PROPERLY MARKED WITH THE PROPOSAL NUMBER, DATE AND HOUR OF PROPOSAL OPENING, AND VENDOR'S RETURN ADDRESS. THE ELECTRONIC SUBMISSIONS SHOULD BE CLEARLY MARKED AS A PROPOSAL IN RESPONSE TO RFP NO. BLR-210002. IT IS NOT NECESSARY TO RETURN "NO BIDS" TO THE BUREAU OF LEGISLATIVE RESEARCH.

Vendors are responsible for delivery of their proposal documents to the Bureau of Legislative Research prior to the scheduled time for opening of the particular proposal. When appropriate, Vendors should consult with delivery providers to determine whether the proposal documents will be delivered to the Bureau of Legislative Research office street address prior to the scheduled time for proposal opening. Delivery providers, USPS, UPS, FedEx, and DHL, deliver mail to our street address, 500 Woodlane Street, State Capitol Building, Room 315, Little Rock, Arkansas 72201, on a schedule determined by each individual provider. These providers will deliver to our offices based solely on our street address.

MAILING ADDRESS: 500 Woodlane Street State Capitol Building, Room 315 Little Rock, Arkansas 72201  E-MAIL: thayerj@blr.arkansas.gov  TELEPHONE: (501) 682-1937	PROPOSAL OPENING LOCATION: Bureau of Legislative Research Director's Office State Capitol Building, Room 315
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Company Name: \_\_\_\_\_

Name (type or print): \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Identification:

Federal Employer ID Number

Social Security Number

**FAILURE TO PROVIDE TAXPAYER IDENTIFICATION NUMBER MAY  
RESULT IN PROPOSAL REJECTION**

Business Designation (check one):	Individual [ ]	Sole Proprietorship [ ]	Public Service Corp [ ]
	Partnership [ ]	Corporation [ ]	Government/ Nonprofit [ ]

GENERAL DESCRIPTION:	State Budgeting and Revenue Forecasting Consulting Services
TYPE OF CONTRACT:	Term

**MINORITY BUSINESS POLICY**

Participation by minority businesses is encouraged in procurements by state agencies, and although it is not required, the Bureau of Legislative Research ("BLR") supports that policy. "Minority" is defined at Arkansas Code Annotated § 15-4-303 as "a lawful permanent resident of this state who is: (A) African American; (B) Hispanic American; (C) American Indian; (D) Asian American; (E) Pacific Islander American; or (F) A service-disabled veteran as designated by the United States Department of Veteran Affairs". "Minority business enterprise" is defined at Arkansas Code Annotated § 15-4-303 as "a business that is at least fifty-one percent (51%) owned by one (1) or more minority persons". The Arkansas Economic Development Commission conducts a certification process for minority businesses. Vendors unable to include minority-owned businesses as subcontractors may explain the circumstances preventing minority inclusion.

**EQUAL EMPLOYMENT OPPORTUNITY POLICY**

The Vendor shall submit a copy of the Vendor's Equal Opportunity Policy. EO Policies shall be submitted in hard copy and electronic format to the Bureau of Legislative Research accompanying the solicitation response. The Bureau of Legislative Research will maintain a file of all Vendor EO policies submitted in response to this solicitation. The submission is a one-time requirement, but Vendors are responsible for providing updates or changes to their respective policies.

**EMPLOYMENT OF ILLEGAL IMMIGRANTS**

The Vendor shall certify prior to award of the contract that it does not employ or contract with any illegal immigrants in its contract with the Bureau of Legislative Research. Vendors shall certify on the Proposal Signature Page and online at <https://www.ark.org/dfa/immigrant/index.php/disclosure/submit/new> . Any subcontractors used by the Vendor at the time of the Vendor's certification shall also certify that they do not employ or contract with any illegal immigrant. Certification by the subcontractors shall be submitted within thirty (30) days after contract execution.

**RESTRICTION OF BOYCOTT OF ISRAEL**

Pursuant to Arkansas Code § 25-1-503, a public entity shall not enter into a contract with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of Israel. This prohibition does not apply to a company which offers to provide the goods or services for at least twenty percent (20%) less than the lowest certifying business.

By checking the designated box on the Proposal Signature Page, the Vendor agrees and certifies that they do not, and will not for the duration of the contract boycott Israel.

## **DISCLOSURE FORMS**

Completion of the EO-98-04 Governor's Executive Order contract disclosure forms located at <http://www.dfa.arkansas.gov/offices/procurement/Documents/contgrantform.pdf> is required as a condition of obtaining a contract with the Bureau of Legislative Research and shall be submitted with the Vendor's response.

## **SECTION I. GENERAL INFORMATION**

### **1.0 INTRODUCTION**

The purpose of this Request for Proposals ("RFP") issued by the Bureau of Legislative Research ("BLR") is to invite responses ("Proposals") from Vendors desiring to provide State Budgeting and Revenue Forecasting Consulting Services for the Joint Committee on Economic and Tax Policy of the Arkansas General Assembly (the "Committee").

The Committee and the BLR intend to execute one (1) contract as a result of this procurement (the "Contract"), if any contract is issued at all, encompassing all of the products and services contemplated in this RFP, and Proposals shall be evaluated accordingly. All Vendors must fully acquaint themselves with the needs and requirements of the Committee and the BLR and obtain all necessary information to develop an appropriate solution and to submit responsive and effective Proposals.

### **1.1 ISSUING AGENCY**

This RFP is issued by the BLR for the benefit of the Committee, with the vendor selection process to be conducted by the Legislative Council Executive Subcommittee ("Executive Subcommittee"). The BLR is the sole point of contact in the state for the selection process. Vendor questions regarding RFP-related matters should be made in writing (via e-mail) through the Director of the BLR's Legal Counsel, Jillian Thayer, [thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov). Questions regarding technical information or clarification should be addressed in the same manner.

### **1.2 SCHEDULE OF EVENTS**

- |   |                                       |
|---|---------------------------------------|
| • Release RFP   | June 21, 2021                         |
| • Deadline for submission of questions  | August 13, 2021                       |
| • Closing for receipt of proposals and opening of proposals                               | August 30, 2021 at 4:00 p.m. CDT      |
| • Evaluation of proposals by BLR  | August 31, 2021 to September 15, 2021 |
| • Proposals released to ALC-Executive Subcommittee Members                                | September 16, 2021                    |
| • Selection of Vendors to make Oral Presentations   | To Be Announced                       |
| • Oral Presentations/Intent to Award  | To Be Announced                       |
| • Approval of draft contract by the Policy-Making Subcommittee of the Legislative Council | December 15, 2021                     |
| • Approval of final contract by the Legislative Council                                   | December 17, 2021                     |
| • Effective Date of Act 876 of 2021; Contract Term begins                                 | January 1, 2022                       |

Proposals are due no later than the date and time listed on Page 1 of the RFP.

### 1.3 **CAUTION TO VENDORS**

- Vendors shall not contact members of the Committee, the Executive Subcommittee, or the BLR regarding this RFP or the Vendor Selection process from the time the RFP is posted until the Intent to Award is issued, other than through submission of questions in the manner provided for under Section 1.7 of this RFP. The BLR will initiate all other necessary contact with Vendors. ***Any violation of this requirement can be considered a basis for disqualification of the Vendor by the Executive Subcommittee.***
  
- **Vendors shall respond to each numbered paragraph of the RFP, including by written acknowledgment of the requirements and terms contained in paragraphs that require no other response.** (e.g. "Section 1.3. Vendor acknowledges and agrees with the requirements set forth in this section.") Failure to provide a response will be interpreted as an affirmative response or agreement to the conditions. Reference to handbooks or other technical materials as part of a response must not constitute the entire response, and Vendor must identify the specific page and paragraph being referenced.
  
- On or before the date and time specified on page one of this RFP, Vendors shall submit:
  - a. One (1) signed original hard copy of the original proposal and the Official Proposal Price Sheet ("OPPS");
  - b. Fifteen (15) additional copies of the redacted proposal and the OPPS (If no redacted version is submitted, then 15 copies of the original proposal.); and
  - c. If the Vendor's proposal contains information that is proprietary and confidential, two (2) electronic versions of the proposal (one (1) redacted electronic version and one (1) unredacted electronic version) on CD, flash drive, or via e-mail. However, if there is no information to redact, one (1) electronic version of the proposal is sufficient.
  
- If emailing electronic versions, send to Jillian Thayer at [thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov) .
  
- Failure to submit the required number of copies with the proposal may be cause for rejection.
  
- For a proposal to be considered, an official authorized to bind the Vendor to a resultant contract must have signed the proposal **and** the Official Proposal Price Sheet.
  
- All official documents shall be included as part of the resultant Contract.
  
- The Executive Subcommittee reserves the right to award a contract or reject a proposal for any or all line items of a proposal received as a result of this RFP, if it is in the best interest of the Executive Subcommittee to do so. Proposals will be rejected for one or more reasons not limited to the following:
  - a. Failure of the Vendor to submit his or her proposal(s) on or before the deadline established by the issuing office;
  - b. Failure of the Vendor to respond to a requirement for oral/written clarification, presentation, or demonstration;
  - c. Failure to supply Vendor references;

- d. Failure to sign the original proposal **and** the Official Proposal Price Sheet;
- e. Failure to complete and sign the Official Proposal Price Sheet(s);
- f. Any wording by the Vendor in its response to this RFP, or in subsequent correspondence, that conflicts with or takes exception to a requirement in the RFP; or
- g. Failure of any proposed services to meet or exceed the specifications.

#### **1.4 RFP FORMAT**

Any statement in this document that contains the word “must” or “shall” means that compliance with the intent of the statement is mandatory, and failure by the Vendor to satisfy that intent will cause the proposal to be rejected.

#### **1.5 ALTERATION OF ORIGINAL RFP DOCUMENTS**

The original written or electronic language of the RFP shall not be changed or altered except by approved written addendum issued by the BLR. This does not eliminate a Vendor from taking exception(s) to these documents, but it does clarify that the Vendor cannot change the original document’s written or electronic language. If the Vendor wishes to make exception(s) to any of the original language, it must be submitted by the Vendor in separate written or electronic language in a manner that clearly explains the exception(s). If Vendor’s submittal is discovered to contain alterations/changes to the original written or electronic documents, the Vendor’s response may be declared non-responsive, and the response shall not be considered.

#### **1.6 REQUIREMENT OF AMENDMENT**

THIS RFP MAY BE MODIFIED ONLY BY AMENDMENTS WRITTEN AND AUTHORIZED BY THE BUREAU OF LEGISLATIVE RESEARCH. Vendors are cautioned to ensure that they have received or obtained and responded to any and all amendments to the RFP prior to submission.

#### **1.7 RFP QUESTIONS**

Any questions regarding the contents and requirements of the RFP and the format of responses to the RFP shall be directed to Jillian Thayer **via email only** at [thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov). Questions must be submitted by the deadline set forth in Section 1.2, Schedule of Events. Questions submitted by Vendors and answers to questions, as provided by the Bureau of Legislative Research, will be made public.

#### **1.8 PRICES/COST**

An official authorized to bind the Vendor to any resulting Contract must sign the Official Proposal Price Sheet.

Vendors must include all pricing information on the Official Proposal Price Sheet and any attachments thereto and must clearly mark said page(s) as pricing information. Official Proposal Price Sheets may be reproduced as needed. Vendors may expand items to identify all proposed services and costs. A separate listing, which must include pricing, may be submitted with summary pricing.

All charges included on the Official Proposal Price Sheet, must be valid for one hundred eighty (180) days following proposal opening, and shall be included in the cost evaluation. The pricing must include all associated costs for the service being bid.

The BLR will not be obligated to pay any costs not identified on the Official Proposal Price Sheet. Any cost not identified by the Vendor but subsequently incurred in order to achieve successful operation will be borne by the Vendor.

#### **1.9 PROPRIETARY INFORMATION**

Proposals and documents pertaining to the RFP become the property of the BLR, and after release to the Executive Subcommittee, shall be open to public inspection pursuant to the Freedom of Information Act of 1967, Arkansas Code § 25-19-101, *et seq.* It is the responsibility of the Vendor to identify all proprietary information by providing a redacted copy of the proposal, as discussed below, and to seal such information in a separate envelope or e-mail marked as confidential and proprietary.

If the proposal contains information that the Vendor considers confidential and proprietary, the Vendor shall submit one (1) complete electronic copy of the proposal from which any proprietary information has been removed, *i.e.*, a redacted copy. The redacted copy should reflect the same pagination as the original, show the empty space from which information was redacted, and be submitted on a CD, a flash drive, or in a separate e-mail. Except for the redacted information, the electronic copy must be identical to the original hard copy. The Vendor is responsible for ensuring the redacted copy on CD, flash drive, or submitted via e-mail is protected against restoration of redacted data. ***Submission of a redacted copy is at the discretion of the Vendor, but if no information is redacted, the entire proposal will be considered available as public information once published to the Executive Subcommittee members.***

#### **1.10 DELIVERY OF RESPONSE DOCUMENTS**

It is the responsibility of Vendors to submit proposals at the place and on or before the date and time set in the RFP solicitation documents. Proposal documents received at the BLR office after the date and time designated for proposal opening are considered late proposals and shall not be considered. Proposal documents that are to be returned may be opened to verify which RFP the submission is for.

#### **1.11 BID EVALUATION**

The Executive Subcommittee will evaluate all proposals to ensure all requirements are met. The Contract will be awarded on the basis of the proposal that most thoroughly satisfies the relevant criteria as determined by the Executive Subcommittee.

#### **1.12 ORAL AND/OR WRITTEN PRESENTATIONS/DEMONSTRATIONS**

The Executive Subcommittee may select a small group of Vendors from among the proposals submitted to attend a meeting of the Executive Subcommittee to answer questions and to make oral and written presentations to the Executive Subcommittee. The date of this meeting will be announced by the Executive Subcommittee at least one (1) week prior. All presentations are subject to be recorded.

The Successful Vendor selected by the Executive Subcommittee shall also attend the December 15, 2021 meeting of the Policy Making Subcommittee of the Legislative Council and the December 17, 2021 meeting of the Legislative Council, in order to answer any questions that may arise regarding the Contract.

#### **1.13 INTENT TO AWARD**

After complete evaluation of the proposal, the intent to award will be announced at the meeting of the Executive Subcommittee at which select Vendors' oral presentations are given (See Section 1.12). The date of this meeting will be announced by the Executive Subcommittee at least one (1) week prior. The purpose of the announcement is to establish a specific time in which vendors and agencies are aware of the intent to award. The Executive Subcommittee reserves the right to waive this policy, the Intent to Award, when it is in the best interest of the state.

#### **1.14 APPEALS**

A Vendor who is aggrieved in connection with the award of a contract may protest to the Legislative Council. The protest shall be submitted in writing within five (5) calendar days after the intent to award is announced. After reasonable notice to the protestor, the Legislative Council, or the Joint Budget Committee if the Arkansas General Assembly is in session, shall promptly meet to discuss and issue a decision in writing that states the reasons for the action taken. The Legislative Council's or the Joint Budget Committee's decision is final and conclusive. In the event of a timely protest, the Bureau of Legislative Research shall not proceed further with the solicitation or with the award of the contract unless the co-chairs of the Arkansas Legislative Council or the Joint Budget Committee make a written determination that the award of the contract without delay is necessary to protect substantial interests of the state.

#### **1.15 PAST PERFORMANCE**

A Vendor's past performance may be used in the evaluation of any offer made in response to this solicitation. The past performance should not be greater than three (3) years old and must be supported by written documentation submitted to the Bureau of Legislative Research with the Vendor's RFP response.

Documentation shall be in the form of a report, memo, file, or any other appropriate authenticated notation of performance to the vendor files.

#### **1.16 TYPE OF CONTRACT**

This will be a term contract commencing on the date of execution of the Contract, and terminating on December 31, 2022, with an option for one (1) renewal of up to twelve (12) months. The Executive Subcommittee and the BLR will have the option to renegotiate at the time of renewal.

#### **1.17 PAYMENT AND INVOICE PROVISIONS**

All invoices shall be delivered to the BLR and must show an itemized list of charges. The Invoice, Invoice Remit, and Summary must be delivered via email to Jillian Thayer, Legal Counsel to the Director, at [thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov).

The BLR shall have no responsibility whatsoever for the payment of any federal, state, or local taxes that become payable by the Successful Vendor or its subcontractors, agents, officers, or employees. The Successful Vendor shall pay and discharge all such taxes when due.

Payment will be made in accordance with applicable State of Arkansas accounting procedures upon acceptance by the BLR. The BLR may not be invoiced in advance of delivery and acceptance of any services. Payment will be made only after the Successful Vendor has successfully satisfied the BLR as to the reliability and effectiveness of the services as a whole. Purchase Order Number and/or Contract Number should be referenced on each invoice.

The Successful Vendor shall be required to maintain all pertinent financial and accounting records and evidence pertaining to the Contract in accordance with generally accepted principles of accounting and other procedures specified by the BLR. Access will be granted to state or federal government entities or any of their duly authorized representatives upon request.

Financial and accounting records shall be made available, upon request, to the BLR's designee(s) at any time during the contract period and any extension thereof and for five (5) years from expiration date and final payment on the Contract or extension thereof.

#### **1.18 PRIME CONTRACTOR RESPONSIBILITY**

The Successful Vendor will be required to assume prime contractor responsibility for the Contract and will be the sole point of contact.

If any part of the work is to be subcontracted, the Vendor must disclose in its proposal the following information: a list of subcontractors, including firm name and address, contact person, complete description of work to be subcontracted, and descriptive information concerning subcontractor's business organization.

#### **1.19 DELEGATION AND/OR ASSIGNMENT**

The Vendor shall not assign the Contract in whole or in part or any payment arising therefrom without the prior written consent of the Committee. The Vendor shall not delegate any duties under the Contract to a subcontractor unless the BLR, as approved by the Committee, has given written consent to the delegation.

#### **1.20 CONDITIONS OF CONTRACT**

The Successful Vendor shall at all times observe and comply with federal and state laws, local laws, ordinances, orders, and regulations existing at the time of or enacted subsequent to the execution of the Contract which in any manner affect the completion of the work. The Successful Vendor shall indemnify and save harmless the BLR, the Committee, the Executive Subcommittee, the Arkansas Legislative Council, the Arkansas General Assembly, and the State of Arkansas and all of their officers, representatives, agents, and employees against any claim or liability arising from or based upon the violation of any such law, ordinance, regulation, order, or decree by an employee, representative, or subcontractor of the Successful Vendor.

### **1.21 STATEMENT OF LIABILITY**

The BLR and the Committee will demonstrate reasonable care but shall not be liable in the event of loss, destruction, or theft of contractor-owned technical literature to be delivered or to be used in the installation of deliverables. The Vendor is required to retain total liability for technical literature until the deliverables have been accepted by the authorized BLR official. At no time will the BLR or the Committee be responsible for or accept liability for any Vendor-owned items.

The Successful Vendor shall indemnify and hold harmless the Committee and its members, the Arkansas General Assembly and its members, the BLR and its officers, directors, agents, retailers, and employees, and the State of Arkansas from and against any and all suits, damages, expenses, losses, liabilities, claims of any kind, costs or expenses of any nature or kind, including, with limitation, court costs, attorneys' fees, and other damages, arising out of, in connection with, or resulting from the development, possession, license, modification, disclosure, or use of any copyrighted or non-copyrighted materials, trademark, service mark, secure process, invention, process or idea (whether patented or not), trade secret, confidential information, article, or appliance furnished or used by a vendor in the performance of the Contract.

The resulting Contract shall be governed by the laws of the State of Arkansas, without regard for Arkansas' conflict of law principles. Any claims against the Bureau of Legislative Research, the Committee, the Arkansas Legislative Council, or the Arkansas General Assembly, whether arising in tort or in contract, shall be brought before the Arkansas State Claims Commission as provided by Arkansas law, and shall be governed accordingly. Nothing in this RFP or the resulting contract shall be construed as a waiver of sovereign immunity.

### **1.22 AWARD RESPONSIBILITY**

The BLR and the Executive Subcommittee will be responsible for award of any resulting contract(s).

### **1.23 INDEPENDENT PRICE DETERMINATION**

By submission of this proposal, the Vendor certifies, and in the case of a joint proposal, each party thereto certifies as to its own organization, that in connection with this proposal:

- The prices in the proposal have been arrived at independently, without collusion, and that no prior information concerning these prices has been received from or given to a competitive company; and
- If there is sufficient evidence of collusion to warrant consideration of this proposal by the Office of the Attorney General, all Vendors shall understand that this paragraph may be used as a basis for litigation.

### **1.24 PUBLICITY**

News release(s), media interviews, or other publicity by a Vendor pertaining to this RFP or any portion of the project shall not be made without prior written approval of the BLR, as authorized by the co-chairs of the Executive Subcommittee or the co-chairs of the Committee. Failure to comply with this requirement is deemed to be a valid reason for disqualification of the Vendor's proposal.

The Successful Vendor agrees not to use the BLR's, the Committee's, the Executive Subcommittee's, the Arkansas Legislative Council's, or the Arkansas General Assembly's names, trademarks, service marks, logos, images, or any data arising or resulting from this RFP or the Contract as part of any commercial advertising or proposal without the express prior written consent of the BLR, the Committee, and the Executive Subcommittee in each instance.

### **1.25 CONFIDENTIALITY**

The Successful Vendor shall be bound to confidentiality of any confidential information that its employees may become aware of during the course of performance of contracted services. Consistent and/or uncorrected breaches of confidentiality may constitute grounds for cancellation of the Contract.

The Successful Vendor shall represent and warrant that its performance under the Contract will not infringe any patent, copyright, trademark, service mark, or other intellectual property rights of any other person or entity and that it will not constitute the unauthorized use or disclosure of any trade secret of any other person or entity.

### **1.26 PROPOSAL TENURE**

All Proposals shall remain valid for one hundred eighty (180) calendar days from the Proposal due date referenced on Page 1 of the RFP.

### **1.27 WARRANTIES**

- The Successful Vendor shall warrant that it currently is, and will at all times remain, lawfully organized and constituted under all federal, state, and local law, ordinances, and other authorities of its domicile and that it currently is, and will at all times remain, in full compliance with all legal requirements of its domicile and the State of Arkansas.
- The Successful Vendor shall warrant and agree that all services provided pursuant to this RFP and the Contract have been and shall be prepared or done in a workman-like manner consistent with the highest standards of the industry in which the services are normally performed. The Successful Vendor further represents and warrants that all computer programs implemented for performance under the Contract shall meet the performance standards required thereunder and shall correctly and accurately perform their intended functions.
- The Successful Vendor shall warrant that it is qualified to do business in the State of Arkansas and is in good standing under the laws of the State of Arkansas, and shall file appropriate tax returns as provided by the laws of this State.

### **1.28 CONTRACT TERMINATION**

Subsequent to award and execution of the Contract, the Committee and the BLR may terminate the Contract at any time. In the event of termination, the Successful Vendor agrees to apply its best efforts to bring work in progress to an orderly conclusion, in a manner and form consistent with the Contract and satisfactory to the Committee.

### **1.29 VENDOR QUALIFICATIONS**

The Successful Vendor must, upon request of the Executive Subcommittee, furnish satisfactory evidence of its ability to furnish products or services in accordance with the terms and conditions of this proposal. The Executive Subcommittee reserves the right to make the final determination as to the Vendor's ability to provide the services requested herein.

The Vendor must demonstrate that it possesses the capabilities and qualifications described in Sections 3 and 5, including without limitation the following:

- Be capable of providing the services required by the Committee;
- Provide documentation that it is authorized to do business in this State; and
- Complete the Official Proposal Price Sheet in Attachment A.

### **1.30 NEGOTIATIONS**

As provided in this RFP, discussions may be conducted by the Executive Subcommittee and the BLR with a responsible Vendor who submits proposals determined to be reasonably susceptible of being selected for award for the purpose of obtaining clarification of proposal responses and negotiation for best and final offers.

### **1.31 LICENSES AND PERMITS**

During the term of the Contract, the Vendor shall be responsible for obtaining, and maintaining in good standing, all licenses (including professional licenses, if any), permits, inspections, and related fees for each or any such licenses, permits, and/or inspections required by the state, county, city, or other government entity or unit to accomplish the work specified in this solicitation and the contract.

### **1.32 OWNERSHIP OF DATA & MATERIALS**

All data, material, and documentation prepared for the Committee pursuant to the Contract shall belong exclusively to the BLR, for the use of the Committee and other committees of the Arkansas General Assembly, as authorized by the Committee.

## **SECTION 2. OVERVIEW**

### **2.0 ACT 876 OF 2021 OVERVIEW**

Act 876 of 2021 (the "Act"), enacted by the 93<sup>rd</sup> General Assembly of the State of Arkansas, requires the Secretary of the Department of Finance and Administration to provide the BLR with "direct access to nonconfidential aggregate and statistical information derived from state tax collection and administration records for use in state budgeting and forecasting and the preparation of fiscal impact statements on proposed legislation." The Act further provides that the BLR may provide access to this information to "any consultant retained by the Bureau of Legislative Research." The Act has an effective date of January 1, 2022.

### **2.1 OBJECTIVES**

It is the objective of the Committee, by entering into a Contract for consultant services, to provide to the members of the Arkansas General Assembly detailed and accurate information concerning state budgeting and forecasting matters, including without limitation access to budgeting and forecasting analysis, research and recommendations, as well as fiscal impact reports on proposed legislation. This will assist the General Assembly to better serve the fiscal needs of the state.

This Request for Proposal is designed to obtain a Contract to provide State Budgeting and Revenue Forecasting Consulting Services to the Committee. All responses to this RFP shall reflect the overall goals and objectives stated herein.

## **SECTION 3. STATE BUDGETING AND REVENUE FORECASTING CONSULTING SERVICES**

### **3.0 SCOPE OF WORK / SPECIFICATIONS**

It will be the responsibility of the Vendor to provide the Committee, and ultimately, the members of the Arkansas General Assembly, with accurate and detailed reports, guidance, and opinions, including without limitation, information set forth in Section 2.1, above, and in this Section 3.0, including without limitation the following services:

- Prepare fiscal impact reports for proposed legislation, including dynamic scoring;
- Provide revenue forecasting and analysis;
- Provide consultation and advisory services regarding proposed legislation;
- Provide budgeting and forecasting research and analysis, as requested, including reports regarding updates to state and federal laws, and best practices in state budgeting;
- Attend meetings of the Committee, as requested, or of other legislative committees as authorized by the Committee co-chairs;
- Be readily accessible to Committee members and BLR staff; and
- Be available for periodic education discussions with Committee members and staff.

In the event that services in addition to those described in Sections 2.1 and 3.0 are required during the term of the Contract, the Committee shall vote to authorize additional work, subject to the approval of the Legislative Council co-chairs, who shall have the power to approve the additional services and an additional fee for those services in an amount not to exceed ten percent (10%) of the total contract amount.

### **3.1 CONSULTING CAPABILITIES**

It should be expected that the Committee may require other details, reports, guidance, and information as part of the final work product under this RFP. It is not possible to capture all variables and discussion points that may be required by the members of the Committee or the legislative body at large so the prospective

Vendor should take this opportunity to provide any comparative experience to the scope of work envisioned herein to fully and completely communicate their ability to succeed.

In this Section 3.1, Vendor should detail all capabilities, ideas, guidance, and other information to fully demonstrate the capabilities of the prospective Vendor.

### **3.2 STATE BUDGETING AND REVENUE FORECASTING CONSULTING**

The Successful Vendor will be evaluated based on a clear and confident understanding of the goals and deliverables addressed in Section 2 and Section 3. To be evaluated as a complete response to this RFP, each prospective vendor must detail their experience, understanding, and potential path of success for each item addressed above.

Vendor's response to this Request for Proposal should be comprehensive and address each individual item of section 3.0 to the Vendor's fullest extent to communicate their understanding of the requirement and how best the Vendor will meet this requirement. All pertinent information regarding the Vendor's proposed solution, team, actuarial resources, technical infrastructure, or other details must be provided to the items in 3.0 and 3.1

The consulting services provided by the successful Vendor pursuant to this Request for Proposal must address the stated specifications and requirements. These services will be provided to the Committee and other legislative committees, as approved.

As requested, the Vendor must attend various meetings of the Committee and other legislative committees of the Arkansas General Assembly. Hourly compensation will be paid for meeting times. The Vendor shall explain any anticipated limitations in its ability to attend meetings of the Committee or other legislative committees or to provide any of the services described in Section 3.0.

All projects shall be paid pursuant to the fee schedule. The Vendor shall submit itemized invoices to the BLR, which will pay the invoices on a monthly basis.

The BLR does not grant the Vendor with exclusive rights to all State Budgeting and Revenue Forecasting Consulting Services contemplated under this RFP. In the event that the Committee decides that acquisition of these services by another Vendor is in the Committee's best interests, the BLR reserves the right to contract and purchase State Budgeting and Revenue Forecasting Consulting Services from a different source outside of the contract resulting from this RFP, and the Committee's action to procure services outside of the Contract does not infringe upon, nor terminate, the contract resulting from this Request for Proposal.

### **3.3 PROCUREMENT OF GOODS AND SERVICES**

If the Vendor anticipates the need to procure additional goods or services in order to provide the consulting services requested in their RFP, the Vendor must identify the goods and / or services that may be procured, the reason the procurement is necessary, the name of the vendor for whom the goods or services are to be procured, and the anticipated cost of the goods and/or services to be procured.

## **SECTION 4. COST PROPOSAL**

### **4.0 COMPENSATION**

Compensation for State Budgeting and Revenue Forecasting Consulting Services shall be paid based upon the work performed as specified in this RFP. A Vendor seeking consideration shall submit a compensation proposal for State Budgeting and Revenue Forecasting Consulting Services as provided throughout the RFP.

The fee schedule will cover the time spent in the completion of the requested task or project, as well as other administrative costs (including, but not limited to, secretarial, bookkeeping, budget preparation, monitoring and auditing services, travel expenses, etc.). The fee schedule will cover the time expended

inclusive of all overhead or any other costs associated with the particular individuals who may be performing the services.

#### **4.1 PAYMENT SCHEDULE**

The BLR shall pay the Vendor based on the hours expended for approved projects on a monthly basis or as otherwise may be agreed to in writing by the parties. The BLR may request and the Vendor shall provide timesheets or other documentation as may be directed by the BLR prior to the payment for any services rendered. Failure to provide appropriate and satisfactory documentation will be sufficient grounds to withhold payment for the disputed amount, but other nondisputed amounts must be paid in a timely manner.

#### **4.2 TRAVEL, LODGING, AND MEALS**

The Successful Vendor may submit invoices and receive reimbursement for actual travel expenses allowed by law related to attending meetings of the Committee and other legislative committees of the Arkansas General Assembly, or other travel related to work under the Contract as approved by the co-chairs of the Committee. Reimbursement of travel expenses will be included in the total maximum contract amount.

Estimates of expenses as allowed by law for travel related to field work required by the Contract and this RFP should be included by the Vendor in the fee schedule, as required by Section 4.0.

### **SECTION 5. ADDITIONAL VENDOR REQUIREMENTS**

#### **5.0 COMPREHENSIVE VENDOR INFORMATION**

All proposals should be complete and carefully worded and should convey all of the information requested by the Executive Subcommittee and the BLR. If significant errors are found in the Vendor's proposal, or if the proposal fails to conform to the essential requirements of the RFP, the Executive Subcommittee will be the sole judge as to whether that variance is significant enough to reject the proposal. Proposals should be prepared simply and economically, providing a straightforward, concise description of the Vendor's capabilities to satisfy the requirements of the RFP. Emphasis should be on completeness and clarity of the content. Proposals that include either modifications to any of the contractual requirements of the RFP or a Vendor's standard terms and conditions may be deemed non-responsive and therefore not considered for award.

#### **5.1 VENDOR PROFILE**

In addition to information requested in other sections of the RFP, the Vendor shall submit the following:

- Business Name;
- Business Address;
- Alternate Business Address;
- Primary Contact Name, Title, Telephone, Fax, and E-mail Address;
- How many years this company has been in this type of business;
- Proof that the Vendor is qualified to do business in the State of Arkansas;
- A disclosure of the Vendor's name and address and, as applicable, the names and addresses of the following: If the Vendor is a corporation, the officers, directors, and each stockholder of more than a ten percent (10%) interest in the corporation. However, in the case of owners of equity securities of a publicly traded corporation, only the names and addresses of those known to the corporation to own beneficially five percent (5%) or more of the securities need be disclosed; if the Vendor is a trust, the trustee and all persons entitled to receive income or benefits from the trust; if the Vendor is an association, the members, officers, and directors; and if the Vendor is a partnership or joint venture, all of the general partners, limited partners, or joint venturers;

- A disclosure of all the states and jurisdictions in which the Vendor does business and the nature of the business for each state or jurisdiction;
- A disclosure of all the states and jurisdictions in which the Vendor has contracts to supply the type of services requested under this RFP and the nature of the goods or services involved for each state or jurisdiction;
- A disclosure of the details of any finding or plea, conviction, or adjudication of guilt in a state or federal court of the Vendor for any felony or any other criminal offense other than a traffic violation committed by the persons identified as management, supervisory, or key personnel;
- A disclosure of the details of any bankruptcy, insolvency, reorganization, or corporate or individual purchase or takeover of another corporation, including without limitation bonded indebtedness, and any pending litigation of the Vendor;
- A disclosure of any conflicts of interest on the part of the Vendor or its personnel that will be working on this project.
- Additional disclosures and information that the Executive Subcommittee may determine to be appropriate for the procurement involved.

## **5.2 GENERAL INFORMATION**

Vendor shall submit any additional information for consideration such as specialized services, staffs available, or other pertinent information the Vendor may wish to include.

## **5.3 DISCLOSURE OF LITIGATION**

A Vendor shall include in its Proposal a complete disclosure of any civil or criminal litigation or indictment involving such Vendor. A Vendor shall also disclose any civil or criminal litigation or indictment involving any of its joint ventures, strategic partners, prime contractor team members, and subcontractors. This disclosure requirement is a continuing obligation, and any litigation commenced after a Vendor has submitted a Proposal under this RFP must be disclosed to the BLR in writing within five (5) days after the litigation is commenced.

## **5.4 EXECUTIVE SUMMARY**

A Vendor must provide a summary overview and an implementation plan for the entire project being proposed. The intent of this requirement is to provide the Executive Subcommittee with a concise but functional summary of the discussion of each phase of the Vendor's plan in the order of progression. While the Executive Subcommittee expects a Vendor to provide full details in each of the sections in other areas of the RFP relating to its plan, the Executive Summary will provide a "map" for the Executive Subcommittee to use while reviewing the Proposal.

Each area summarized must be listed in chronological order, beginning with the date of Contract execution, to provide a clear indication of the flow and duration of the project. A Vendor may use graphics, charts, pre-printed reports, or other enhancements as a part of this section to support the chronology or add to the presentation. Any such materials must be included in the original and each copy of the Proposal.

## **5.5 VENDOR'S QUALIFICATIONS**

A Vendor shall provide resumes or short biographies and qualifications of all management, supervisory, and key personnel to be involved in performing the services contemplated under this RFP. The resumes shall present the personnel in sufficient detail to provide the Executive Subcommittee with evidence that the personnel involved can perform the work specified in the RFP. A Vendor shall provide a brief history of its company, to include the name and location of the company and any parent/subsidiary affiliation with other entities. If a Vendor is utilizing the services of a subcontractor(s) for any of the service components listed, the Vendor shall include in its proposal response a brief history of the subcontractor's company to include the information requested herein.

A Vendor shall provide:

- A brief professional history, including the number of years of experience in providing the services required under this RFP or related experience and any professional affiliations and trade affiliations.
- A listing of current accounts and the longevity of those accounts.
- An organizational chart highlighting the names/positions that will be involved in the contract, including the individual who will be primarily responsible for managing the account on a day-to-day basis.
- A detailed description of the plan for assisting the Committee in meeting its goals and objectives, including how the requirements will be met and what assurances of efficiency and success the proposed approach will provide.
- An indication of the timeframe the Vendor would require to assist the Committee in meeting its goals and objectives.
- A detailed, narrative statement listing the three (3) most recent, comparable contracts (including contact information) that the Vendor has performed and the general history and experience of its organization.
- At least three (3) references from entities that have recent (within the last three (3) years) contract experience with the Vendor and are able to attest to the Vendor's work experience and qualifications relevant to this RFP.
- A list of every business for which Vendor has performed, at any time during the past three (3) years, services substantially similar to those sought with this solicitation. Err on the side of inclusion; by submitting an offer, Vendor represents that the list is complete.
- List of failed projects, suspensions, debarments, and significant litigation.
- An outline or other information relating to why the Vendor's experience qualifies in meeting the specifications stated in Section 3 of this RFP.

A Vendor shall provide information on any conflict of interest with the objectives and goals of the Committee that could result from other projects in which the Vendor is involved. Failure to disclose any such conflict may be cause for Contract termination or disqualification of the response.

A Vendor or its subcontractor(s) must list all clients that were lost between June 2018 and the present and the reason for the loss. The Executive Subcommittee reserves the right to contact any accounts listed in this section. A Vendor must describe any contract disputes involving an amount of thirty-five thousand dollars (\$35,000) or more that the Vendor, or its subcontractor(s), has been involved in within the past two (2) years. Please indicate if the dispute(s) have been successfully resolved.

#### **5.5.1 BACKGROUND INVESTIGATION**

Vendors must allow the BLR to perform an investigation of the financial responsibility, security, and integrity of a Vendor submitting a bid, if required by the Executive Subcommittee.

## **SECTION 6. EVALUATION CRITERIA FOR SELECTION**

### **6.0 GENERALLY**

The Vendor should address each item listed in this RFP to be guaranteed a complete evaluation. After initial qualification of proposals, selection of the Successful Vendor will be determined in a meeting of the Executive Subcommittee by evaluation of several factors.

The Executive Subcommittee has developed evaluation criteria that will be used by the Executive Subcommittee and that is incorporated in Section 6.1 of this RFP. Other agents of the Executive Subcommittee may also examine documents.

Submission of a proposal implies Vendor acceptance of the evaluation technique and Vendor recognition that subjective judgments must be made by the Executive Subcommittee during the evaluation of the proposals.

The Executive Subcommittee reserves, and a Vendor by submitting a Proposal grants to the Executive Subcommittee, the right to obtain any information from any lawful source regarding the past business history, practices, and abilities of Vendor, its officers, directors, employees, owners, team members, partners, and/or subcontractors.

### **6.1 EVALUATION CRITERIA**

The following evaluation criteria are listed according to their relative importance; however, the difference between the importance assigned to any one criterion and the criteria immediately preceding and following is small:

- Directly related experience;
- Pricing;
- Plan for providing services;
- Proposed schedule for providing services;
- Proposed personnel and the credentials of those assigned;
- Compliance with the requirements of the RFP; and
- Past performance.

# **PROPOSAL SIGNATURE PAGE**

Type or Print the following information:

## **Prospective Contractor Contact Information**

Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_

Phone: \_\_\_\_\_ Alternate Phone: \_\_\_\_\_

Email: \_\_\_\_\_

## **Confirmation of Redacted Copy**

- YES, a redacted copy of proposal documents is enclosed.
- NO, a redacted copy of submission documents is not enclosed. I understand a full copy of non-redacted submission documents will be released if requested.

*Note: If a redacted copy of the proposal documents is not provided with the Vendor's proposal, and neither box is checked a copy of the unredacted documents will be released in response to any request made under the Arkansas Freedom of Information Act (FOIA).*

## **Illegal Immigrant Confirmation**

By signing and submitting a response to this RFP and by certifying online at <https://www.ark.org/dfa/immigrant/index.php/disclosure/submit/new> , the Vendor agrees and certifies that they do not employ or contract with illegal immigrants. If selected, the Vendor certifies that they will not employ or contract with illegal immigrants during the aggregate term of the contract.

## **Israel Boycott Restriction Confirmation**

By checking the box below, the Vendor agrees and certifies that they do not boycott Israel, and if selected, will not boycott Israel during the aggregate term of the contract.

- Vendor does not and will not boycott Israel.

---

***An official authorized to bind the Vendor to a resultant contract shall sign below.***

The Signature below signifies agreement that any exception that conflicts with the requirements of this RFP will cause the Vendor's proposal to be disqualified.

**Authorized Signature:** \_\_\_\_\_ **Title:** \_\_\_\_\_

**Printed/Typed Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**ATTACHMENT A**  
**OFFICIAL PROPOSAL PRICE SHEET**

**Note: The Official Proposal Price Sheet must be submitted in a separate envelope or e-mail. Any reference to pricing in the technical proposal shall be cause for disqualification from further considerations for award.**

1. Bids should provide at least a 180-day acceptance period.
2. By submission of a proposal, the proposer certifies the following:
  - A. Prices in this proposal have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition;
  - B. No attempt has been made nor will be by the proposer to induce any other person or firm to submit a proposal for the purpose of restricting competition;
  - C. The person signing this proposal is authorized to represent the company and is legally responsible for the decision as to the price and supporting documentation provided as a result of this RFP; and
  - D. Prices in this proposal have not been knowingly disclosed by the proposer and will not be prior to award to any other proposer.

**The Official Price Proposal Sheet must be submitted in substantially the following form, allowing for the inclusion of specific information regarding positions, goods, services, etc., and signed by an official authorized to bind the Vendor to a resultant contract.**

DESCRIPTION	PRICE PER HOUR	NUMBER OF POSITIONS
Supervisor		
Other Professional Staff (List by Position)		
Support Staff		
DESCRIPTION	PRICE PER UNIT (IF APPLICABLE)	TOTAL PRICE
Subcontractors (if any)		
Travel		
Any Additional Goods & Services (List Individually)		
<b>TOTAL MAXIMUM AMOUNT OF BID:</b>		

\_\_\_\_\_  
Signature, Title

\_\_\_\_\_  
Date

**State Budgeting and Revenue Forecasting Consultant Services**  
**Summary of Response to RFP**

**Evaluation Criteria:**

<b>Directly Related Experience:</b>	<ul style="list-style-type: none"> <li>• Vendor Experience – REDACTED, pp. 28-32</li> <li>• <i>See</i> National &amp; Local Government Expertise, at p. 14 of proposal – describes Arkansas experience in providing services to cities, state agencies, and other entities of local government.</li> </ul>
<b>Price:</b>	<p><u>Total Max Bid:</u> \$590,000</p> <p><i>See</i> attached Official Proposal Price Sheet and Price Comparison Table.</p>
<b>Plan/Schedule:</b>	<p><u>Plan:</u></p> <ul style="list-style-type: none"> <li>• Phase 1: Planning</li> <li>• Phase 2: Research/Information Gathering</li> <li>• Phase 3: Preliminary Report and Communications Delivery</li> <li>• Phase 4: Interim Period between Preliminary and Final Report</li> <li>• Phase 5: Final Report and Communications Delivery</li> <li>• <i>See</i> further explanation of the steps at pp. 26-28 of proposal.</li> </ul> <p><u>Schedule:</u></p> <ul style="list-style-type: none"> <li>• Timeframe, at p. 28 of proposal.</li> <li>• States that BKD is confident it can meet all deadlines and is aware of the quick turnaround time needed during legislative sessions.</li> </ul>
<b>Availability:</b>	<ul style="list-style-type: none"> <li>• Offices located in Little Rock</li> <li>• Available to attend meetings of legislative committees, see proposal at p.9 and p. 17</li> </ul>
<b>Personnel:</b>	<ul style="list-style-type: none"> <li>• Chris Doolittle – Client Relationship Partner</li> <li>• Robert T. Johnson, Jr. – Engagement Leader</li> </ul>

**BKD (Cont'd)**

	<ul style="list-style-type: none"><li>• <i>See</i> Organizational Chart, at p. 26 of proposal.</li><li>• <i>See also</i> Team Bios, pp. 18-23 of proposal.</li></ul>
<b>Past Performance:</b>	<ul style="list-style-type: none"><li>• Founded in 1923, and “has provided similar services to budgeting and forecasting analysis, research, and recommendations for decades”, <i>See</i> Vendor History at p. 23 of proposal.</li><li>• Work Samples – REDACTED.</li><li>• Client List – REDACTED.</li><li>• <i>See also</i> References Table (References – REDACTED, p. 31 of proposal).</li></ul>
<b>Compliance with RFP Requirements:</b>	See Attached Checklist.
<b>Subcontractors:</b>	Foster & Foster Consulting Actuaries, Inc. <ul style="list-style-type: none"><li>• BKD plans to subcontract actuarial services “to assist Vendor in the evaluation of proposed legislation, revenue forecasting research and analysis, analysis of changes to both state and federal law, and, ultimately, to assist in the preparation of fiscal impact reports.”, at second p. 2 of proposal.</li><li>• Foster &amp; Foster has been providing actuarial services since 1979, and is headquartered in Fort Myers, FL.</li><li>• Subcontractor price proposal – up to \$280,000 of total max contract amount. <i>See</i> attached Official Proposal Price Sheet and Price Comparison Table.</li></ul>



## Budgeting with Confidence

### **BKD's Solution for Arkansas State Budgeting and Revenue Forecasting Consulting Services (Response to RFP No. BLR-210002)**

#### **State of Arkansas Bureau of Legislative Research**

Proposal Opening Date: August 30, 2021  
Proposal Opening Time: 4:00 p.m. CDT

Submitted by **BKD, LLP**  
400 West Capitol Avenue | Suite 2500 | Little Rock, AR 72201  
Phone: 501.372.1040 | Fax: 501.372.1250  
Susan M. Davenport, CPA, FHFMA | Managing Partner  
sdavenport@bkd.com

**Attachment A – Official Proposal Pricing Sheet**

**BKD**  
CPAs & Advisors

# Pricing Sheet

## ATTACHMENT A OFFICIAL PROPOSAL PRICE SHEET

**Note: The Official Proposal Price Sheet must be submitted in a separate envelope or e-mail. Any reference to pricing in the technical proposal shall be cause for disqualification from further considerations for award.**

1. Bids should provide at least a 180-day acceptance period.
2. By submission of a proposal, the proposer certifies the following:
  - A. Prices in this proposal have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition;
  - B. No attempt has been made nor will be by the proposer to induce any other person or firm to submit a proposal for the purpose of restricting competition;
  - C. The person signing this proposal is authorized to represent the company and is legally responsible for the decision as to the price and supporting documentation provided as a result of this RFP; and
  - D. Prices in this proposal have not been knowingly disclosed by the proposer and will not be prior to award to any other proposer.

**The Official Price Proposal Sheet must be submitted in substantially the following form, allowing for the inclusion of specific information regarding positions, goods, services, etc., and signed by an official authorized to bind the Vendor to a resultant contract.**

DESCRIPTION	PRICE PER HOUR	NUMBER OF POSITIONS
Supervisor	Partner/Principal - \$450.00 - \$625.00	3
Other Professional Staff (List by Position)	Director - \$425.00, Senior Manager - \$375.00, Manager - \$325.00	Director - 2, Senior Manager - 2, Manager 3
Support Staff	\$225.00	2
DESCRIPTION	PRICE PER UNIT (IF APPLICABLE)	TOTAL PRICE
Subcontractors (if any)	Senior Actuarial Consultant - \$450.00, Actuarial Consultant - \$400.00, Actuarial Analyst - \$350.00, Administrative - \$200.00	Hourly not to exceed \$280,000
Travel	Flat fee	Not to exceed \$15,000
Any Additional Goods & Services (List Individually)	N/A	\$0.00
<b>TOTAL MAXIMUM AMOUNT OF BID:</b>		Hourly not to exceed \$590,000.

  
\_\_\_\_\_  
Signature, Title

August 30, 2021  
\_\_\_\_\_  
Date

Everyone needs a trusted advisor.

Who's yours?

**BKD**  
CPAs & Advisors



## Budgeting with Confidence

### BKD's Solution for Arkansas State Budgeting and Revenue Forecasting Consulting Services (Response to RFP No. BLR-210002)

#### State of Arkansas Bureau of Legislative Research

Proposal Opening Date: August 30, 2021  
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Submitted by **BKD, LLP**  
400 West Capitol Avenue | Suite 2500 | Little Rock, AR 72201  
Phone: 501.372.1040 | Fax: 501.372.1250  
Susan M. Davenport, CPA, FHFMA | Managing Partner  
sdavenport@bkd.com

REDACTED COPY

**BKD**  
CPAs & Advisors



August 30, 2021

Ms. Jillian Thayer  
Director of Legal Counsel  
State of Arkansas Bureau of Legislative Research  
500 Woodlane Street | State Capitol Building | Room 315  
Little Rock, AR 72201

Dear Ms. Thayer:

Through a variety of support services, including research, drafting legislation, and providing sound advice, the State of Arkansas Bureau of Legislative Research (BLR) plays a vital role in the success of members of the House of Representatives and Senate. Having accurate and detailed information concerning state budgeting and forecasting is crucial for the BLR and the Joint Committee on Economic and Tax Policy (the Committee) to assist the General Assembly better serve the fiscal needs of the state. With numerous complex challenges such as frequently changing accounting rules and decreased budgets, receiving high-quality consulting services from a reputable firm with extensive experience serving governmental entities can help you accomplish this. That's where **BKD, LLP** comes in.

As the largest CPA firm in the state with the local resources, our trusted advisors have the knowledge and insight BLR and the Committee need. Approximately 510 public sector entities nationwide depend on BKD as their CPA and advisory firm for practical guidance. This industry experience and our knowledge of Arkansas and other states' tax law, as well as our involvement with national and state associations, allows us to understand the specific issues BLR and the Committee may face.

In addition to our commitment to providing unmatched client service, BKD can leverage our strong tax expertise, including state and local tax, along with flexible schedules and the ability to handle a constantly changing workload, to help recommend changes to the Arkansas tax code.

We believe our proposal will help you select our firm for efficient and objective services delivered by experienced professionals. If we can answer questions about this proposal, you may reach us at 501.372.1040 or by email as provided below.

Sincerely,

  
Susan M. Davenport, CPA, FHFMA  
Managing Partner  
[sdavenport@bkd.com](mailto:sdavenport@bkd.com)

  
Chris J. Doolittle, CPA  
Partner  
[cdoolittle@bkd.com](mailto:cdoolittle@bkd.com)

  
Robert T. Johnson Jr.  
Principal  
[rjohnson@bkd.com](mailto:rjohnson@bkd.com)



# TABLE OF CONTENTS

<b>Section 1. General Information</b> .....	<b>1</b>
1.0 Introduction .....	1
1.1 Issuing Agency .....	1
1.2 Schedule of Events.....	1
1.3 Caution to Vendors .....	2
1.4 RFP Format .....	3
1.5 Alteration of Original RFP Documents.....	3
1.6 Requirement of Amendment.....	3
1.7 RFP Questions .....	3
1.8 Prices/Cost .....	3
1.9 Proprietary Information .....	4
1.10 Delivery of Response Documents .....	4
1.11 Bid Evaluation .....	4
1.12 Oral and/or Written Presentations/Demonstrations .....	4
1.13 Intent to Award.....	5
1.14 Appeals .....	5
1.15 Past Performance .....	5
1.16 Type of Contract .....	2
1.17 Payment and Invoice Provisions .....	2
1.18 Prime Contractor Responsibility .....	2
1.19 Delegation and/or Assignment .....	3
1.20 Conditions of Contract .....	3
1.21 Statement of Liability .....	3
1.22 Award Responsibility .....	4
1.23 Independent Price Determination .....	4
1.24 Publicity .....	4
1.25 Confidentiality .....	5
1.26 Proposal Tenure .....	5
1.27 Warranties .....	5
1.28 Contract Termination .....	5
1.29 Vendor Qualifications.....	5
1.30 Negotiations.....	6
1.31 Licenses and Permits .....	6
1.32 Ownership of Data & Materials.....	6
<b>Section 2. Overview</b> .....	<b>7</b>
2.0 Act 876 of 2021 Overview.....	7
2.1 Objectives .....	7
<b>Section 3. State Budgeting &amp; Revenue Forecasting Consulting Services</b> .....	<b>8</b>
3.0 Scope of Work / Specifications.....	8
3.1 Consulting Capabilities .....	8
3.2 State Budgeting and Revenue Forecasting Consulting.....	9
3.3 Procurement of Goods and Services.....	9

**Section 4. Cost Proposal..... 10**

4.0 Compensation..... 10

4.1 Payment Schedule..... 10

4.2 Travel, Lodging, and Meals ..... 10

**Section 5. Additional Vendor Requirements ..... 11**

5.0 Comprehensive Vendor Information ..... 11

5.1 Vendor Profile ..... 11

5.2 General Information ..... 14

Why Choose BKD ..... 14

5.3 Disclosure of Litigation..... 16

5.4 Executive Summary ..... 16

5.5 Vendor's Qualifications ..... 17

**Section 6. Evaluation Criteria for Selection ..... 34**

6.0 Generally ..... 34

6.1 Evaluation Criteria ..... 34

**Appendix..... 36**

Request for Proposal (page 1)..... 37

Equal Opportunity Policy Statement..... 39

Proposal Signature Page..... 40

Contract & Grant Disclosure & Certification Form ..... 41

Arkansas State Board of Public Accountancy License..... 43

Partners & Principals ..... 44

Past Performance Documentation..... 49

Foster & Foster Client List ..... 68

BKD Firm Profile ..... 82

Facing Risk with Confidence ..... 83

BKD PRIDE Values ..... 84

# TABLE OF CONTENTS

# Section 1. General Information

For your convenience, BKD, LLP has structured our proposal according to the questions in the State of Arkansas Bureau of Legislative Research’s (BLR) Request for Proposal (RFP) for the Joint Committee on Economic and Tax Policy of the Arkansas General Assembly (Committee). We believe our proposal will demonstrate our qualifications to serve BLR and the Committee.

**INFORMATION CONTAINED IN BKD’S RFP RESPONSE, WHICH IT ASSERTS AS CONFIDENTIAL, IS EITHER BUSINESS AND/OR PROPRIETARY TRADE SECRET INFORMATION NOT SUBJECT TO DISCLOSURE AS SET FORTH IN THE STATE OF RKANSAS FREEDOM OF INFORMATION ACT. SUCH CONFIDENTIAL INFORMATION HAS INDEPENDENT ECONOMIC VALUE TO BKD, IS NOT REASONABLY ASCERTAINABLE BY THIRD PARTIES AND IS THE SUBJECT OF REASONABLE EFFORTS BY BKD TO MAINTAIN ITS SECRECY AND/OR CONFIDENTIALITY. SUCH INFORMATION IN THIS PROPOSAL SHALL BE REDACTED AS DIRECTING IN SECTION 1.9.**

## 1.0 Introduction

The purpose of this Request for Proposals (“RFP”) issued by the Bureau of Legislative Research (“BLR”) is to invite responses (“Proposals”) from Vendors desiring to provide State Budgeting and Revenue Forecasting Consulting Services for the Joint Committee on Economic and Tax Policy of the Arkansas General Assembly (the “Committee”).

The Committee and the BLR intend to execute one (1) contract as a result of this procurement (the “Contract”), if any contract is issued at all, encompassing all of the products and services contemplated in this RFP, and Proposals shall be evaluated accordingly. All Vendors must fully acquaint themselves with the needs and requirements of the Committee and the BLR and obtain all necessary information to develop an appropriate solution and to submit responsive and effective Proposals.

BKD acknowledges and agrees with the statements above.

## 1.1 Issuing Agency

This RFP is issued by the BLR for the benefit of the Committee, with the vendor selection process to be conducted by the Legislative Council Executive Subcommittee (“Executive Subcommittee”). The BLR is the sole point of contact in the state for the selection process. Vendor questions regarding RFP-related matters should be made in writing (via e-mail) through the Director of the BLR’s Legal Counsel, Jillian Thayer, [thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov). Questions regarding technical information or clarification should be addressed in the same manner.

BKD acknowledges and agrees with the statements above.

## 1.2 Schedule of Events

- Release RFP ..... June 21, 2021
- Deadline for submission of questions .....August 13, 2021
- Closing for receipt of proposals and opening of proposals ..... August 30, 2021 at 4:00 p.m. CDT
- Evaluation of proposals by BLR .....August 31, 2021 to September 15, 2021
- Proposals released to ALC-Executive Subcommittee Members ..... September 16, 2021
- Selection of Vendors to make Oral Presentations ..... To Be Announced
- Oral Presentations/Intent to Award ..... To Be Announced

- Approval of draft contract by the Policy-Making Subcommittee of the Legislative Council .....December 15, 2021
- Approval of final contract by the Legislative Council .....December 17, 2021
- Effective Date of Act 876 of 2021; Contract Term begins ..... January 1, 2022

Proposals are due no later than the date and time listed on Page 1 of the RFP.

BKD acknowledges and agrees with the statements above. A copy of Page 1 of the RFP is provided in the Appendix.

### 1.3 Caution to Vendors

Vendors shall not contact members of the Committee, the Executive Subcommittee, or the BLR regarding this RFP or the Vendor Selection process from the time the RFP is posted until the Intent to Award is issued, other than through submission of questions in the manner provided for under Section 1.7 of this RFP. The BLR will initiate all other necessary contact with Vendors. Any violation of this requirement can be considered a basis for disqualification of the Vendor by the Executive Subcommittee.

Vendors shall respond to each numbered paragraph of the RFP, including by written acknowledgment of the requirements and terms contained in paragraphs that require no other response. (e.g. "Section 1.3. Vendor acknowledges and agrees with the requirements set forth in this section.") Failure to provide a response will be interpreted as an affirmative response or agreement to the conditions. Reference to handbooks or other technical materials as part of a response must not constitute the entire response, and Vendor must identify the specific page and paragraph being referenced.

On or before the date and time specified on page one of this RFP, Vendors shall submit:

- a. One (1) signed original hard copy of the original proposal and the Official Proposal Price Sheet ("OPPS");
- b. Fifteen (15) additional copies of the redacted proposal and the OPPS (If no redacted version is submitted, then 15 copies of the original proposal.); and
- c. If the Vendor's proposal contains information that is proprietary and confidential, two (2) electronic versions of the proposal (one (1) redacted electronic version and one (1) unredacted electronic version) on CD, flash drive, or via e-mail. However, if there is no information to redact, one (1) electronic version of the proposal is sufficient.

If emailing electronic versions, send to Jillian Thayer at [thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov) .

Failure to submit the required number of copies with the proposal may be cause for rejection.

For a proposal to be considered, an official authorized to bind the Vendor to a resultant contract must have signed the proposal and the Official Proposal Price Sheet.

All official documents shall be included as part of the resultant Contract.

The Executive Subcommittee reserves the right to award a contract or reject a proposal for any or all line items of a proposal received as a result of this RFP, if it is in the best interest of the Executive Subcommittee to do so.

Proposals will be rejected for one or more reasons not limited to the following:

- a. Failure of the Vendor to submit his or her proposal(s) on or before the deadline established by the issuing office;
- b. Failure of the Vendor to respond to a requirement for oral/written clarification, presentation, or demonstration;
- c. Failure to supply Vendor references;
- d. Failure to sign the original proposal and the Official Proposal Price Sheet;
- e. Failure to complete and sign the Official Proposal Price Sheet(s);

- f. Any wording by the Vendor in its response to this RFP, or in subsequent correspondence, that conflicts with or takes exception to a requirement in the RFP; or
- g. Failure of any proposed services to meet or exceed the specifications.

BKD acknowledges and agrees with the statements above.

## 1.4 RFP Format

Any statement in this document that contains the word “must” or “shall” means that compliance with the intent of the statement is mandatory, and failure by the Vendor to satisfy that intent will cause the proposal to be rejected.

BKD acknowledges and agrees with the statements above.

## 1.5 Alteration of Original RFP Documents

The original written or electronic language of the RFP shall not be changed or altered except by approved written addendum issued by the BLR. This does not eliminate a Vendor from taking exception(s) to these documents, but it does clarify that the Vendor cannot change the original document’s written or electronic language. If the Vendor wishes to make exception(s) to any of the original language, it must be submitted by the Vendor in separate written or electronic language in a manner that clearly explains the exception(s). If Vendor’s submittal is discovered to contain alterations/changes to the original written or electronic documents, the Vendor’s response may be declared non-responsive, and the response shall not be considered.

BKD acknowledges and agrees with the statements above.

## 1.6 Requirement of Amendment

**THIS RFP MAY BE MODIFIED ONLY BY AMENDMENTS WRITTEN AND AUTHORIZED BY THE BUREAU OF LEGISLATIVE RESEARCH.** Vendors are cautioned to ensure that they have received or obtained and responded to any and all amendments to the RFP prior to submission.

BKD acknowledges and agrees with the statements above.

## 1.7 RFP Questions

Any questions regarding the contents and requirements of the RFP and the format of responses to the RFP shall be directed to Jillian Thayer via email only at [thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov). Questions must be submitted by the deadline set forth in Section 1.2, Schedule of Events. Questions submitted by Vendors and answers to questions, as provided by the Bureau of Legislative Research, will be made public.

BKD acknowledges and agrees with the statements above.

## 1.8 Prices/Cost

An official authorized to bind the Vendor to any resulting Contract must sign the Official Proposal Price Sheet.

Vendors must include all pricing information on the Official Proposal Price Sheet and any attachments thereto and must clearly mark said page(s) as pricing information. Official Proposal Price Sheets may be reproduced as needed. Vendors may expand items to identify all proposed services and costs. A separate listing, which must include pricing, may be submitted with summary pricing.

All charges included on the Official Proposal Price Sheet, must be valid for one hundred eighty (180) days following proposal opening, and shall be included in the cost evaluation. The pricing must include all associated costs for the service being bid.

The BLR will not be obligated to pay any costs not identified on the Official Proposal Price Sheet. Any cost not identified by the Vendor but subsequently incurred in order to achieve successful operation will be borne by the Vendor.

BKD acknowledges and agrees with the statements above.

## 1.9 Proprietary Information

Proposals and documents pertaining to the RFP become the property of the BLR, and after release to the Executive Subcommittee, shall be open to public inspection pursuant to the Freedom of Information Act of 1967, Arkansas Code § 25-19-101, et seq. It is the responsibility of the Vendor to identify all proprietary information by providing a redacted copy of the proposal, as discussed below, and to seal such information in a separate envelope or e-mail marked as confidential and proprietary.

If the proposal contains information that the Vendor considers confidential and proprietary, the Vendor shall submit one (1) complete electronic copy of the proposal from which any proprietary information has been removed, i.e., a redacted copy. The redacted copy should reflect the same pagination as the original, show the empty space from which information was redacted, and be submitted on a CD, a flash drive, or in a separate e-mail. Except for the redacted information, the electronic copy must be identical to the original hard copy. The Vendor is responsible for ensuring the redacted copy on CD, flash drive, or submitted via e-mail is protected against restoration of redacted data. Submission of a redacted copy is at the discretion of the Vendor, but if no information is redacted, the entire proposal will be considered available as public information once published to the Executive Subcommittee members.

BKD acknowledges and agrees with the statements above.

## 1.10 Delivery of Response Documents

It is the responsibility of Vendors to submit proposals at the place and on or before the date and time set in the RFP solicitation documents. Proposal documents received at the BLR office after the date and time designated for proposal opening are considered late proposals and shall not be considered. Proposal documents that are to be returned may be opened to verify which RFP the submission is for.

BKD acknowledges and agrees with the statements above.

## 1.11 Bid Evaluation

The Executive Subcommittee will evaluate all proposals to ensure all requirements are met. The Contract will be awarded on the basis of the proposal that most thoroughly satisfies the relevant criteria as determined by the Executive Subcommittee.

BKD acknowledges and agrees with the statements above.

## 1.12 Oral and/or Written Presentations/Demonstrations

The Executive Subcommittee may select a small group of Vendors from among the proposals submitted to attend a meeting of the Executive Subcommittee to answer questions and to make oral and written presentations to the Executive Subcommittee. The date of this meeting will be announced by the Executive Subcommittee at least one (1) week prior. All presentations are subject to be recorded.

The Successful Vendor selected by the Executive Subcommittee shall also attend the December 15, 2021 meeting of the Policy Making Subcommittee of the Legislative Council and the December 17, 2021 meeting of the Legislative Council, in order to answer any questions that may arise regarding the Contract.

BKD acknowledges and agrees with the statements above.

## 1.13 Intent to Award

After complete evaluation of the proposal, the intent to award will be announced at the meeting of the Executive Subcommittee at which select Vendors' oral presentations are given (See Section 1.12). The date of this meeting will be announced by the Executive Subcommittee at least one (1) week prior. The purpose of the announcement is to establish a specific time in which vendors and agencies are aware of the intent to award. The Executive Subcommittee reserves the right to waive this policy, the Intent to Award, when it is in the best interest of the state.

BKD acknowledges and agrees with the statements above.

## 1.14 Appeals

A Vendor who is aggrieved in connection with the award of a contract may protest to the Legislative Council. The protest shall be submitted in writing within five (5) calendar days after the intent to award is announced. After reasonable notice to the protestor, the Legislative Council, or the Joint Budget Committee if the Arkansas General Assembly is in session, shall promptly meet to discuss and issue a decision in writing that states the reasons for the action taken. The Legislative Council's or the Joint Budget Committee's decision is final and conclusive. In the event of a timely protest, the Bureau of Legislative Research shall not proceed further with the solicitation or with the award of the contract unless the co-chairs of the Arkansas Legislative Council or the Joint Budget Committee make a written determination that the award of the contract without delay is necessary to protect substantial interests of the state.

BKD acknowledges and agrees with the statements above.

## 1.15 Past Performance

A Vendor's past performance may be used in the evaluation of any offer made in response to this solicitation. The past performance should not be greater than three (3) years old and must be supported by written documentation submitted to the Bureau of Legislative Research with the Vendor's RFP response. Documentation shall be in the form of a report, memo, file, or any other appropriate authenticated notation of performance to the vendor files.

BKD has provided similar services to budgeting and forecasting analysis, research, and recommendations, as well as fiscal impact reports for decades. Examples of these clients include Colorado Department of Revenue, Choctow Nation Housing Authority, City Utilities of Springfield, Indianapolis Airport Authority, Nebraska Lottery, State Universities Retirement System of Illinois and recently University of Arkansas Systems. Documentation of our work in the form of sample reports/memos/files/other are provided in the Appendix.

A representative client list of government clients is provided below:

REDACTED

## 1.16 Type of Contract

This will be a term contract commencing on the date of execution of the Contract, and terminating on December 31, 2022, with an option for one (1) renewal of up to twelve (12) months. The Executive Subcommittee and the BLR will have the option to renegotiate at the time of renewal.

BKD acknowledges and agrees with the statements above.

## 1.17 Payment and Invoice Provisions

All invoices shall be delivered to the BLR and must show an itemized list of charges. The Invoice, Invoice Remit, and Summary must be delivered via email to Jillian Thayer, Legal Counsel to the Director, at thayerj@blr.arkansas.gov .

The BLR shall have no responsibility whatsoever for the payment of any federal, state, or local taxes that become payable by the Successful Vendor or its subcontractors, agents, officers, or employees. The Successful Vendor shall pay and discharge all such taxes when due.

Payment will be made in accordance with applicable State of Arkansas accounting procedures upon acceptance by the BLR. The BLR may not be invoiced in advance of delivery and acceptance of any services. Payment will be made only after the Successful Vendor has successfully satisfied the BLR as to the reliability and effectiveness of the services as a whole. Purchase Order Number and/or Contract Number should be referenced on each invoice.

The Successful Vendor shall be required to maintain all pertinent financial and accounting records and evidence pertaining to the Contract in accordance with generally accepted principles of accounting and other procedures specified by the BLR. Access will be granted to state or federal government entities or any of their duly authorized representatives upon request.

Financial and accounting records shall be made available, upon request, to the BLR's designee(s) at any time during the contract period and any extension thereof and for five (5) years from expiration date and final payment on the Contract or extension thereof.

BKD acknowledges and agrees with the statements above.

## 1.18 Prime Contractor Responsibility

The Successful Vendor will be required to assume prime contractor responsibility for the Contract and will be the sole point of contact.

If any part of the work is to be subcontracted, the Vendor must disclose in its proposal the following information: a list of subcontractors, including firm name and address, contact person, complete description of work to be subcontracted, and descriptive information concerning subcontractor's business organization.

BKD acknowledges and agrees with the statements above. For this engagement BKD will be teaming up with Foster & Foster Consulting Actuaries, Inc (Foster & Foster). The following information is provided by Foster & Foster and is intended for informational purposes only.

### Subcontractor Information

**Firm Name:** Foster & Foster Consulting Actuaries, Inc.

**Address:** 184 Shuman Boulevard, Suite 305, Naperville, IL 60563

**Contact Person:** Jason Franken, Principal -- FSA/EA/MAAA

**Phone:** 630.620.0200

**Email:** jason.franken@foster-foster.com

**Work to be Subcontracted:** Actuarial consulting services to assist Vendor in the evaluation of proposed legislation, revenue forecasting research and analysis, analysis of changes to both state and federal law, and ultimately, to assist in the preparation of fiscal impact reports to the Committee and Arkansas General Assembly. Subcontractor will also be readily accessible to Committee members and BLR staff, and available for Committee meeting attendance and other educational opportunities with Committee members and staff.

**About Foster & Foster:** BKD, LLP has partnered with Foster & Foster Consulting Actuaries, Inc. ("Foster & Foster" or the "Firm") to serve the BLR and the Committee on this engagement. Below, please find a brief overview of Foster & Foster, its people, and practice.

Foster & Foster is a nationwide actuarial consulting firm that has been providing actuarial services to public entities since 1979. The Firm is headquartered in Fort Myers, Florida, and has offices in Cape Coral and Tampa, Florida, Georgia, Texas, Illinois, Arizona, Michigan, and Pennsylvania. Our firm is comprised of 86 consultants and professional staff, including 28 credentialed actuaries, eight of which are Fellows of the Society of Actuaries (FSA), the highest distinction an actuary can obtain, and our consultants have a combined 600-plus years of public sector actuarial experience.

Foster & Foster derives 100 percent of its revenue from actuarial consulting services – advising public pension funds at the state, county and municipal level, state and local governmental health programs, state legislatures and other public entities. We currently provide actuarial services to over 1,000 public sector plans/entities nationwide, representing millions of participants and billions of dollars of assets under management. We consider ourselves to be experts in all phases of public retirement and other post-employment benefit (OPEB) plan design and administration of these programs. Furthermore, the work we've done for our clients across the country over the years has exposed us to a multitude of different projects and challenges, equipping us with a broad array of ideas and solutions to serve the BLR and the Committee. We hope to have the opportunity to work with the BLR and the Committee on this engagement.

## 1.19 Delegation and/or Assignment

**The Vendor shall not assign the Contract in whole or in part or any payment arising therefrom without the prior written consent of the Committee. The Vendor shall not delegate any duties under the Contract to a subcontractor unless the BLR, as approved by the Committee, has given written consent to the delegation.**

BKD acknowledges and agrees with the statements above.

## 1.20 Conditions of Contract

**The Successful Vendor shall at all times observe and comply with federal and state laws, local laws, ordinances, orders, and regulations existing at the time of or enacted subsequent to the execution of the Contract which in any manner affect the completion of the work. The Successful Vendor shall indemnify and save harmless the BLR, the Committee, the Executive Subcommittee, the Arkansas Legislative Council, the Arkansas General Assembly, and the State of Arkansas and all of their officers, representatives, agents, and employees against any claim or liability arising from or based upon the violation of any such law, ordinance, regulation, order, or decree by an employee, representative, or subcontractor of the Successful Vendor.**

BKD acknowledges and agrees with the statements above.

## 1.21 Statement of Liability

**The BLR and the Committee will demonstrate reasonable care but shall not be liable in the event of loss, destruction, or theft of contractor-owned technical literature to be delivered or to be used in the installation of deliverables. The Vendor is required to retain total liability for technical literature until the deliverables have been**

accepted by the authorized BLR official. At no time will the BLR or the Committee be responsible for or accept liability for any Vendor-owned items.

The Successful Vendor shall indemnify and hold harmless the Committee and its members, the Arkansas General Assembly and its members, the BLR and its officers, directors, agents, retailers, and employees, and the State of Arkansas from and against any and all suits, damages, expenses, losses, liabilities, claims of any kind, costs or expenses of any nature or kind, including, with limitation, court costs, attorneys' fees, and other damages, arising out of, in connection with, or resulting from the development, possession, license, modification, disclosure, or use of any copyrighted or non-copyrighted materials, trademark, service mark, secure process, invention, process or idea (whether patented or not), trade secret, confidential information, article, or appliance furnished or used by a vendor in the performance of the Contract.

The resulting Contract shall be governed by the laws of the State of Arkansas, without regard for Arkansas' conflict of law principles. Any claims against the Bureau of Legislative Research, the Committee, the Arkansas Legislative Council, or the Arkansas General Assembly, whether arising in tort or in contract, shall be brought before the Arkansas State Claims Commission as provided by Arkansas law, and shall be governed accordingly. Nothing in this RFP or the resulting contract shall be construed as a waiver of sovereign immunity.

BKD acknowledges and agrees with the statements above.

## 1.22 Award Responsibility

The BLR and the Executive Subcommittee will be responsible for award of any resulting contract(s).

BKD acknowledges and agrees with the statements above.

## 1.23 Independent Price Determination

By submission of this proposal, the Vendor certifies, and in the case of a joint proposal, each party thereto certifies as to its own organization, that in connection with this proposal:

- The prices in the proposal have been arrived at independently, without collusion, and that no prior information concerning these prices has been received from or given to a competitive company; and
- If there is sufficient evidence of collusion to warrant consideration of this proposal by the Office of the Attorney General, all Vendors shall understand that this paragraph may be used as a basis for litigation.

BKD acknowledges and agrees with the statements above.

## 1.24 Publicity

News release(s), media interviews, or other publicity by a Vendor pertaining to this RFP or any portion of the project shall not be made without prior written approval of the BLR, as authorized by the co-chairs of the Executive Subcommittee or the co-chairs of the Committee. Failure to comply with this requirement is deemed to be a valid reason for disqualification of the Vendor's proposal.

The Successful Vendor agrees not to use the BLR's, the Committee's, the Executive Subcommittee's, the Arkansas Legislative Council's, or the Arkansas General Assembly's names, trademarks, service marks, logos, images, or any data arising or resulting from this RFP or the Contract as part of any commercial advertising or proposal without the express prior written consent of the BLR, the Committee, and the Executive Subcommittee in each instance.

BKD acknowledges and agrees with the statements above.

## 1.25 Confidentiality

The Successful Vendor shall be bound to confidentiality of any confidential information that its employees may become aware of during the course of performance of contracted services. Consistent and/or uncorrected breaches of confidentiality may constitute grounds for cancellation of the Contract.

The Successful Vendor shall represent and warrant that its performance under the Contract will not infringe any patent, copyright, trademark, service mark, or other intellectual property rights of any other person or entity and that it will not constitute the unauthorized use or disclosure of any trade secret of any other person or entity.

BKD acknowledges and agrees with the statements above.

## 1.26 Proposal Tenure

All Proposals shall remain valid for one hundred eighty (180) calendar days from the Proposal due date referenced on Page 1 of the RFP.

BKD acknowledges and understands the statement above.

## 1.27 Warranties

- The Successful Vendor shall warrant that it currently is, and will at all times remain, lawfully organized, and constituted under all federal, state, and local law, ordinances, and other authorities of its domicile and that it currently is, and will at all times remain, in full compliance with all legal requirements of its domicile and the State of Arkansas.
- The Successful Vendor shall warrant and agree that all services provided pursuant to this RFP and the Contract have been and shall be prepared or done in a workman-like manner consistent with the highest standards of the industry in which the services are normally performed. The Successful Vendor further represents and warrants that all computer programs implemented for performance under the Contract shall meet the performance standards required thereunder and shall correctly and accurately perform their intended functions.
- The Successful Vendor shall warrant that it is qualified to do business in the State of Arkansas and is in good standing under the laws of the State of Arkansas, and shall file appropriate tax returns as provided by the laws of this State.

BKD acknowledges and agrees to the statements above.

## 1.28 Contract Termination

Subsequent to award and execution of the Contract, the Committee and the BLR may terminate the Contract at any time. In the event of termination, the Successful Vendor agrees to apply its best efforts to bring work in progress to an orderly conclusion, in a manner and form consistent with the Contract and satisfactory to the Committee.

BKD acknowledges and agrees with the statements above.

## 1.29 Vendor Qualifications

The Successful Vendor must, upon request of the Executive Subcommittee, furnish satisfactory evidence of its ability to furnish products or services in accordance with the terms and conditions of this proposal. The Executive Subcommittee reserves the right to make the final determination as to the Vendor's ability to provide the services requested herein.

The Vendor must demonstrate that it possesses the capabilities and qualifications described in Sections 3 and 5, including without limitation the following:

- **Be capable of providing the services required by the Committee;**
- **Provide documentation that it is authorized to do business in this State; and**
- **Complete the Official Proposal Price Sheet in Attachment A.**

BKD acknowledges and agrees with the statements above.

Throughout this proposal, BKD will demonstrate our ability to provide the services required by the Committee. As documentation that we are authorized to do business in the state of Arkansas, our license with the Arkansas State Board of Public Accountancy is provided in the Appendix. A completed Official Proposal Price Sheet (Attachment A) is provided under separate cover.

### 1.30 Negotiations

**As provided in this RFP, discussions may be conducted by the Executive Subcommittee and the BLR with a responsible Vendor who submits proposals determined to be reasonably susceptible of being selected for award for the purpose of obtaining clarification of proposal responses and negotiation for best and final offers.**

BKD acknowledges and agrees with the statements above.

### 1.31 Licenses and Permits

**During the term of the Contract, the Vendor shall be responsible for obtaining, and maintaining in good standing, all licenses (including professional licenses, if any), permits, inspections, and related fees for each or any such licenses, permits, and/or inspections required by the state, county, city, or other government entity or unit to accomplish the work specified in this solicitation and the contract.**

BKD acknowledges and agrees with the statements above.

### 1.32 Ownership of Data & Materials

**All data, material, and documentation prepared for the Committee pursuant to the Contract shall belong exclusively to the BLR, for the use of the Committee and other committees of the Arkansas General Assembly, as authorized by the Committee.**

**An official authorized to bind the Vendor to any resulting Contract must sign the Official Proposal Price Sheet.**

BKD acknowledges and agrees with the statements above. This proposal and the required forms, including the price sheet under separate cover, have been signed by an authorized partner in the firm.

## Section 2. Overview

### 2.0 Act 876 of 2021 Overview

Act 876 of 2021 (the "Act"), enacted by the 93<sup>rd</sup> General Assembly of the State of Arkansas, requires the Secretary of the Department of Finance and Administration to provide the BLR with "direct access to nonconfidential aggregate and statistical information derived from state tax collection and administration records for use in state budgeting and forecasting and the preparation of fiscal impact statements on proposed legislation." The Act further provides that the BLR may provide access to this information to "any consultant retained by the Bureau of Legislative Research." The Act has an effective date of January 1, 2022.

BKD acknowledges and understands the statements above.

### 2.1 Objectives

It is the objective of the Committee, by entering into a Contract for consultant services, to provide to the members of the Arkansas General Assembly detailed and accurate information concerning state budgeting and forecasting matters, including without limitation access to budgeting and forecasting analysis, research, and recommendations, as well as fiscal impact reports on proposed legislation. This will assist the General Assembly to better serve the fiscal needs of the state.

This Request for Proposal is designed to obtain a Contract to provide State Budgeting and Revenue Forecasting Consulting Services to the Committee. All responses to this RFP shall reflect the overall goals and objectives stated herein.

BKD acknowledges and understands the statements above.

## Section 3. State Budgeting & Revenue Forecasting Consulting Services

### 3.0 Scope of Work / Specifications

It will be the responsibility of the Vendor to provide the Committee, and ultimately, the members of the Arkansas General Assembly, with accurate and detailed reports, guidance, and opinions, including without limitation, information set forth in Section 2.1, above, and in this Section 3.0, including without limitation the following services:

- Prepare fiscal impact reports for proposed legislation, including dynamic scoring;
- Provide revenue forecasting and analysis;
- Provide consultation and advisory services regarding proposed legislation;
- Provide budgeting and forecasting research and analysis, as requested, including reports regarding updates to state and federal laws, and best practices in state budgeting;
- Attend meetings of the Committee, as requested, or of other legislative committees as authorized by the Committee co-chairs;
- Be readily accessible to Committee members and BLR staff; and
- Be available for periodic education discussions with Committee members and staff.

In the event that services in addition to those described in Sections 2.1 and 3.0 are required during the term of the Contract, the Committee shall vote to authorize additional work, subject to the approval of the Legislative Council co-chairs, who shall have the power to approve the additional services and an additional fee for those services in an amount not to exceed ten percent (10%) of the total contract amount.

BKD acknowledges and agrees with the statements above. More detailed information about our services is found in Sections 5.4 and 5.5.

### 3.1 Consulting Capabilities

It should be expected that the Committee may require other details, reports, guidance, and information as part of the final work product under this RFP. It is not possible to capture all variables and discussion points that may be required by the members of the Committee or the legislative body at large so the prospective

Vendor should take this opportunity to provide any comparative experience to the scope of work envisioned herein to fully and completely communicate their ability to succeed.

In this Section 3.1, Vendor should detail all capabilities, ideas, guidance, and other information to fully demonstrate the capabilities of the prospective Vendor.

We have a dedicated team of state and local tax professionals that are CPAs, attorneys, and practitioners. This team has extensive training in tax accounting, tax law, compliance, audit, and economic development benefits. We track legislations changes, complete national legislative trend analysis, available to present on fiscal impact on proposed bills, we are data-driven to forecast impact of proposed legislation. Furthermore, we can provide suggested language for intended fiscal impact. As we understand tax laws in all states, our ability to provide guidance on state's legislation language, tax rates, and other matters to advise BLR.

You may be paying too much in use tax as well as paying too much for and spending too much time on compliance. Our sales and use tax professionals can evaluate your use tax system and provide solutions to accurately identify your use tax due to state. We use statistical sampling methods to develop accurate and easy-to-use monthly percentages often known as sales and use tax compliance agreements (SUTCA). These efficient solutions can save you time while retaining a high degree of accuracy.

## 3.2 State Budgeting and Revenue Forecasting Consulting

**The Successful Vendor will be evaluated based on a clear and confident understanding of the goals and deliverables addressed in Section 2 and Section 3. To be evaluated as a complete response to this RFP, each prospective vendor must detail their experience, understanding, and potential path of success for each item addressed above.**

**Vendor's response to this Request for Proposal should be comprehensive and address each individual item of section 3.0 to the Vendor's fullest extent to communicate their understanding of the requirement and how best the Vendor will meet this requirement. All pertinent information regarding the Vendor's proposed solution, team, actuarial resources, technical infrastructure, or other details must be provided to the items in 3.0 and 3.1**

**The consulting services provided by the successful Vendor pursuant to this Request for Proposal must address the stated specifications and requirements. These services will be provided to the Committee and other legislative committees, as approved.**

**As requested, the Vendor must attend various meetings of the Committee and other legislative committees of the Arkansas General Assembly. Hourly compensation will be paid for meeting times. The Vendor shall explain any anticipated limitations in its ability to attend meetings of the Committee or other legislative committees or to provide any of the services described in Section 3.0.**

**All projects shall be paid pursuant to the fee schedule. The Vendor shall submit itemized invoices to the BLR, which will pay the invoices on a monthly basis.**

**The BLR does not grant the Vendor with exclusive rights to all State Budgeting and Revenue Forecasting Consulting Services contemplated under this RFP. In the event that the Committee decides that acquisition of these services by another Vendor is in the Committee's best interests, the BLR reserves the right to contract and purchase State Budgeting and Revenue Forecasting Consulting Services from a different source outside of the contract resulting from this RFP, and the Committee's action to procure services outside of the Contract does not infringe upon, nor terminate, the contract resulting from this Request for Proposal.**

BKD acknowledges and agrees with the statements above.

BKD will coordinate our efforts with the BLR to help meet your deadlines and provide the required services. Your BKD team will be available to attend meetings of the Committee or other legislative committees. BKD and Foster & Foster are confident in our abilities to provide the services described in Section 3.0.

We will submit itemized invoices monthly as BLR has requested.

## 3.3 Procurement of Goods and Services

**If the Vendor anticipates the need to procure additional goods or services in order to provide the consulting services requested in their RFP, the Vendor must identify the goods and / or services that may be procured, the reason the procurement is necessary, the name of the vendor for whom the goods or services are to be procured, and the anticipated cost of the goods and/or services to be procured.**

BKD acknowledges and agrees with the statements above.

## Section 4. Cost Proposal

### 4.0 Compensation

Compensation for State Budgeting and Revenue Forecasting Consulting Services shall be paid based upon the work performed as specified in this RFP. A Vendor seeking consideration shall submit a compensation proposal for State Budgeting and Revenue Forecasting Consulting Services as provided throughout the RFP.

The fee schedule will cover the time spent in the completion of the requested task or project, as well as other administrative costs (including, but not limited to, secretarial, bookkeeping, budget preparation, monitoring and auditing services, travel expenses, etc.). The fee schedule will cover the time expended inclusive of all overhead or any other costs associated with the particular individuals who may be performing the services.

BKD acknowledges and agrees with the statements above.

### 4.1 Payment Schedule

The BLR shall pay the Vendor based on the hours expended for approved projects on a monthly basis or as otherwise may be agreed to in writing by the parties. The BLR may request and the Vendor shall provide timesheets or other documentation as may be directed by the BLR prior to the payment for any services rendered. Failure to provide appropriate and satisfactory documentation will be sufficient grounds to withhold payment for the disputed amount, but other nondisputed amounts must be paid in a timely manner.

BKD acknowledges and agrees with the statements above.

### 4.2 Travel, Lodging, and Meals

The Successful Vendor may submit invoices and receive reimbursement for actual travel expenses allowed by law related to attending meetings of the Committee and other legislative committees of the Arkansas General Assembly, or other travel related to work under the Contract as approved by the co-chairs of the Committee. Reimbursement of travel expenses will be included in the total maximum contract amount.

Estimates of expenses as allowed by law for travel related to field work required by the Contract and this RFP should be included by the Vendor in the fee schedule, as required by Section 4.0.

BKD acknowledges and agrees with the statements above.

# Section 5. Additional Vendor Requirements

## 5.0 Comprehensive Vendor Information

All proposals should be complete and carefully worded and should convey all of the information requested by the Executive Subcommittee and the BLR. If significant errors are found in the Vendor’s proposal, or if the proposal fails to conform to the essential requirements of the RFP, the Executive Subcommittee will be the sole judge as to whether that variance is significant enough to reject the proposal. Proposals should be prepared simply and economically, providing a straightforward, concise description of the Vendor’s capabilities to satisfy the requirements of the RFP. Emphasis should be on completeness and clarity of the content. Proposals that include either modifications to any of the contractual requirements of the RFP or a Vendor’s standard terms and conditions may be deemed non-responsive and therefore not considered for award.

BKD acknowledges and agrees with the statements above.

## 5.1 Vendor Profile

In addition to information requested in other sections of the RFP, the Vendor shall submit the following:

	<b>Prime</b>	<b>Subcontractor</b>
• <b>Business Name</b>	<b>BKD, LLP</b>	Foster & Foster Consulting Actuaries, Inc
• <b>Business Address;</b>	400 West Capitol Avenue Suite 2500 Little Rock, AR 72201	184 Shuman Boulevard, Suite 305, Naperville, IL 60563
• <b>Alternate Business Address;</b>	National Office 910 East St. Louis Street Suite 400 Springfield, MO 65806	N/A
• <b>Primary Contact Name, Title, Telephone, Fax, and E-mail Address;</b>	Robert (Bob) T. Johnson, Jr. Partner 1201 Walnut Street, Suite 1700 Kansas City, MO 64106-2246 816.221.6300 FAX: 816.221.6380 bjohnson@bkd.com	Jason Franken, Principal -- FSA/EA/MAAA 184 Shuman Boulevard, Suite 305, Naperville, IL 60563 630.620.0200 jason.franken@foster-foster.com
• <b>How many years this company has been in this type of business;</b>	98 years	42 years

- **Proof that the Vendor is qualified to do business in the State of Arkansas;**

BKD is properly licensed to practice public accounting in the state of Arkansas. All key professionals who would be assigned to your engagement are properly registered/licensed to practice or able to practice in the state due to mobility laws, without the requirement to obtain an individual license.

Please see the Appendix for a copy of our Arkansas State Board of Public Accountancy license.

- **A disclosure of the Vendor’s name and address and, as applicable, the names and addresses of the following: If the Vendor is a corporation, the officers, directors, and each stockholder of more than a ten percent (10%) interest in the corporation. However, in the case of owners of equity securities of a publicly traded corporation, only the names and addresses of those known to the corporation to own beneficially five percent (5%) or more of the securities need be disclosed; if the Vendor is a trust, the trustee and all persons entitled to receive income or benefits from the trust; if the Vendor is an association, the members, officers, and directors; and if the Vendor is a partnership or joint venture, all of the general partners, limited partners, or joint venturers;**

## Vendor’s Name & Address

### **BKD, LLP**

400 West Capitol Avenue | Suite 2500  
Little Rock, AR 72201

- **A disclosure of all the states and jurisdictions in which the Vendor does business and the nature of the business for each state or jurisdiction;**

BKD is properly licensed to practice public accounting in the following states; however, BKD serves clients in all 50 states:

Alaska	Kansas	Nebraska	Pennsylvania
Arkansas	Kentucky	Nevada	South Dakota
California	Louisiana	New Hampshire	Tennessee
Colorado	Maine	New Jersey	Texas
Connecticut	Maryland	New Mexico	Vermont
Florida	Massachusetts	New York	Virgin Islands
Georgia	Michigan	North Carolina	Washington
Hawaii	Minnesota	North Dakota	West Virginia
Illinois	Mississippi	Ohio	Wisconsin
Indiana	Missouri	Oklahoma	Wyoming
Iowa	Montana	Oregon	

- **A disclosure of all the states and jurisdictions in which the Vendor has contracts to supply the type of services requested under this RFP and the nature of the goods or services involved for each state or jurisdiction;**

We are not providing tax reform consulting services to any states or jurisdictions at this time; however, BKD provides tax services to clients in all 50 states. In addition to our preparation and filing of tax forms, our advisors provide a variety of services, including:

- Analysis to determine the tax implications of *McGirt v. Oklahoma*, 591 U.S for an Indian Tribe
- Payroll withholding and unemployment tax requirements related to remote workers for several public universities
- Applicability of Employee Retention Credit for a public university

- Analysis of property tax implications for a cooperative operating in the State of Oklahoma
- Consulting and compliance services to address implications for a State and their sales as a result of Supreme Court decision in *South Dakota v. Wayfair*
- Drafted language for Illinois Manufacturers' association to introduce during Illinois 2021 legislation for reciprocal tax agreement.

Our understanding and working knowledge of tax laws differentiates BKD from other firms. As a national firm, our clients conduct business in all 50 states. Therefore, we have to be experts in the area of tax law to navigate tax implications for our clients. Furthermore, we have a dedicated team that monitors legislation changes for all taxing jurisdictions. Our commitment to be on the forefront of these changes allows our clients to remain in compliance with various taxing jurisdictions.

- **A disclosure of the details of any finding or plea, conviction, or adjudication of guilt in a state or federal court of the Vendor for any felony or any other criminal offense other than a traffic violation committed by the persons identified as management, supervisory, or key personnel;**

With operations spanning more than 90 years, we are not aware of and do not believe that any partner, officer, or key employee of BKD has ever been charged with and/or convicted of a criminal offense.

As part of our hiring policy, BKD employees have been subject to appropriate background checks through a third-party vendor, Barada Associates, Inc. Each investigation is carefully reviewed and evaluated in the context of the position, the nature of the issues, and identified and relevant laws. Upon request, background checks may be confirmed for the individuals assigned to this engagement

- **A disclosure of the details of any bankruptcy, insolvency, reorganization, or corporate or individual purchase or takeover of another corporation, including without limitation bonded indebtedness, and any pending litigation of the Vendor;**

BKD has never declared bankruptcy, suffered insolvency, or bonded indebtedness, or undergone a corporate or individual takeover by another corporation.

BKD's emphasis on quality has rewarded the firm with an excellent track record regarding claims related to professional services. Underwriters of professional liability insurance for accounting firms have informed us that we have one of the best litigation histories in the accounting profession. To avoid litigation, BKD maintains an extensive risk management program addressing a multitude of issues ranging from client acceptance to final working paper and financial statement review. However, as with any firm our size, the firm does experience litigation from time to time. Details of litigation cannot be disclosed pursuant to confidentiality agreements; however the results of litigation have never been material to the firm. Currently, there is no substantial litigation outstanding.

- **A disclosure of any conflicts of interest on the part of the Vendor or its personnel that will be working on this project.**

BKD has not had a professional relationship with BLR or the Committee. No relationship exists that would constitute a conflict of interest relative to performing the proposed services.

- **Additional disclosures and information that the Executive Subcommittee may determine to be appropriate for the procurement involved.**

Please see section 5.2 General Information for additional information.

## 5.2 General Information

Vendor shall submit any additional information for consideration such as specialized services, staffs available, or other pertinent information the Vendor may wish to include.

### Why Choose BKD

#### Delivering Value

Monitoring expenditures and receiving exceptional value for your investments is important, but informed consumers understand value is about more than just price. Value from a professional CPA and advisory firm is about the quality of the work and the merit of the advice. Expect BKD's work to be accurate and insightful. We stand behind it.

As evidenced by our inclusion in the **INSIDE Public Accounting Best of the Best Firms** list for the last 10 years, we also offer long-term consistency, exceptional performance and a national network of support and resources. BKD is large enough to help BLR address a variety of financial issues. At the same time, we pride ourselves on hard work and low overhead, which keep our fees competitive. With our reputation, size, service, and experience, you can consider us a good value.



#### Commitment to Serving the Public Sector

As part of our commitment to remaining at the forefront of the public sector, leaders across our national governmental practice created the BKD Public Sector Center of Excellence. This group of professionals meets regularly to discuss important developments, legislative updates and challenges affecting governmental entities similar to BLR.

In addition, our public sector involvement has enabled us to establish connections with numerous regulatory and auditing organizations, including:

- ▶ AICPA Governmental Audit Quality Center, as a member
- ▶ Government Finance Officers Association (GFOA)
- ▶ Governmental Accounting Standards Board (GASB)
- ▶ Office of Management and Budget (OMB)
- ▶ U.S. Government Accountability Office



We look forward to communicating best practices and forward-looking strategies to help BLR thoughtfully consider the areas important to fulfilling your fiduciary responsibilities.

#### National & Local Government Expertise

Professionals in BKD's Arkansas offices provide services to multiple cities, their component units and other local government units, including airports, public employee pension plans, public libraries, transit and port authorities and utilities, as well as multiple state agencies. Services to the nonprofit and government industry constitute a large portion of our Arkansas practice. We understand and have experience with Arkansas laws and other regulations to which our governmental clients must adhere.

## Thought Leadership

BKD advisors are serious about reinforcing their positions as thought leaders in the industries they serve. To help keep you informed about emerging issues in your industry, as well as changes in regulations and accounting and tax methods, we provide **BKD Thoughtware**<sup>®</sup> webinars, seminars, tailored training sessions, podcasts and articles. Many of these are eligible for continuing professional education (CPE) credit. Recent topics include:

- ▶ State & Local Tax Impacts of COVID-19 for New York 2021
- ▶ Louisiana Increasing Revenue Through Sales & Us Tax Legislation
- ▶ Revenue Raisers Trending in 2021 Illinois Legislation
- ▶ Texas Margin Tax Revenue Sourcing Changes Adopted

We encourage you to view these and a wide array of other resources available on **bkd.com**.

## Unmatched Client Service<sup>®</sup>

You want trusted advisors who will deliver exceptional client service, focus on your needs, and take the time to address your unique challenges. BKD understands. We take our commitment so seriously, we penned five standards of Unmatched Client Service and supporting guidelines in **The BKD Experience: Unmatched Client Service**, a book that articulates the firm's philosophy and sets expectations for serving clients. Our five standards are:

### Integrity First

We work hard to do what is right for you. You can rely on us to tell you what you need to hear.

### True Expertise

From BKD, you can expect trained, capable staff and a high level of supervision by partners and experienced personnel.

### Professional Demeanor

You can depend on prepared and attentive advisors to help meet your needs and provide new ideas.

### Responsive Reliability

Accurate and thorough work combined with timely delivery is what you require. At BKD, we do not want it any other way.

### Principled Innovation

We want you to succeed. For BLR, that means looking for new ideas to streamline a process, better document work, train your staff and improve your effectiveness.

You can count on BKD's commitment to our five standards of **Unmatched Client Service<sup>®</sup>**:



Integrity First



True Expertise



Professional Demeanor



Responsive Reliability



Principled Innovation

## 5.3 Disclosure of Litigation

A Vendor shall include in its Proposal a complete disclosure of any civil or criminal litigation or indictment involving such Vendor. A Vendor shall also disclose any civil or criminal litigation or indictment involving any of its joint ventures, strategic partners, prime contractor team members, and subcontractors. This disclosure requirement is a continuing obligation, and any litigation commenced after a Vendor has submitted a Proposal under this RFP must be disclosed to the BLR in writing within five (5) days after the litigation is commenced.

BKD's emphasis on quality has rewarded the firm with an excellent track record regarding claims related to professional services. Underwriters of professional liability insurance for accounting firms have informed us that we have one of the best litigation histories in the accounting profession. To avoid litigation, BKD maintains an extensive risk management program addressing a multitude of issues ranging from client acceptance to final working paper and financial statement review. However, as with any firm our size, the firm does experience litigation from time to time. Details of litigation cannot be disclosed pursuant to confidentiality agreements; however, the results of litigation have never been material to the firm. Currently, there is no substantial litigation outstanding.

## 5.4 Executive Summary

A Vendor must provide a summary overview and an implementation plan for the entire project being proposed. The intent of this requirement is to provide the Executive Subcommittee with a concise but functional summary of the discussion of each phase of the Vendor's plan in the order of progression. While the Executive Subcommittee expects a Vendor to provide full details in each of the sections in other areas of the RFP relating to its plan, the Executive Summary will provide a "map" for the Executive Subcommittee to use while reviewing the Proposal.

Each area summarized must be listed in chronological order, beginning with the date of Contract execution, to provide a clear indication of the flow and duration of the project. A Vendor may use graphics, charts, pre-printed reports, or other enhancements as a part of this section to support the chronology or add to the presentation. Any such materials must be included in the original and each copy of the Proposal.

## State Income Tax Consulting Services

BKD prepares thousands of state income and franchise tax returns each year, including hundreds of Arkansas income tax and sales and use tax returns in our local offices. We also help our clients comply with state tax laws and strategically plan for their tax liability, as well as provide other specialty tax services. Our goal is to know the state tax laws and help keep our clients compliant.

Tax laws, court decisions and regulatory guidance change rapidly. At BKD, our tax professionals continually work to keep up with these changes. We develop strategies to help clients take advantage of the benefits within the tax law and can use our professional judgment and experience to advise our clients.

Our SALT professionals participate in state committees and industry-specific groups to help provide practical working knowledge of tax laws or pending legislation and the resulting impact on taxpayers. Our participation often provides guidance and comparative insight on what other states are doing from a state and local tax standpoint.

### Phase 1: Planning

Upon execution of the engagement letter, we will be available to begin the project as soon as possible. As we want to work closely with the Committee to meet your objectives for the engagement, BKD would like to have a kickoff meeting with the Committee to discuss your vision of the project. We will review current tax laws and this vision with our team and outline an efficient and effective approach with the team to best use our time and experience. We will have the resources in place to focus on various aspects of the project. Our team consists of

local advisors, as well as firmwide tax thought leaders, including SALT specialists. We will work from our local office or a location the Committee chooses.

### Phase 2: Research/Information Gathering

BKD already has an in-depth knowledge of current Arkansas and other states' tax laws. We will use this knowledge, experience and data inquiries to assist the Committee with its objectives. During this phase, we will develop and document areas that we believe will assist the Committee in meeting its objectives.

BKD will be present at monthly Committee meetings to provide status updates, including answering questions and discussing further work requested by the Committee. We also will be available to attend other legislative committees of the Arkansas General Assembly.

### Phase 3: Preliminary Report & Communications Delivery

A cornerstone of the quality of our tax consulting projects is the use of a tax theory reviewer before the issuance of any reports. Another member of our tax consulting team will review the preliminary findings and report before submission to the Committee. Our commitment to a smooth engagement also includes the timely delivery of our report. We will adhere to the preliminary report due date noted in the RFP. We anticipate the preliminary report to include, but not be limited to, current Arkansas tax law, the value of the current system and tax savings ideas for the future.

### Phase 4: Interim Period Between Preliminary & Final Report

We expect the Committee and other legislative committees to review the preliminary report and have several follow-up questions and research assignments for us. We will be available to attend required meetings to ultimately assist the Committee with your objectives. We will revise our preliminary report, as necessary, as more research and questions are answered from this process.

### Phase 5: Final Report & Communications Delivery

As the project comes to an end, we will continue to provide unmatched client service to the Committee and finalize the report by the final report deadline noted in the RFP.

### Areas of Expertise

Beyond our consulting services, we provide a variety of tax planning and compliance services. Our tax professionals have expertise in areas such as:

- ▶ Federal, state, and local tax services for individuals and businesses
- ▶ Tax credit studies
- ▶ Tax accounting methods analysis

## 5.5 Vendor's Qualifications

**A Vendor shall provide resumes or short biographies and qualifications of all management, supervisory, and key personnel to be involved in performing the services contemplated under this RFP. The resumes shall present the personnel in sufficient detail to provide the Executive Subcommittee with evidence that the personnel involved can perform the work specified in the RFP.**

The most critical factor in providing high-quality service is choosing your engagement team. We take team selection seriously and have the appropriate team of advisors to meet your needs.

## Engagement Team Experience

BKD



**Robert T. Johnson Jr.**  
Principal

A leader in BKD's State & Local Tax Services (SALT) division, Bob has more than 25 years of experience in all areas of state and local tax, including income, franchise, sales, use, controversy, credits, incentives, employment, and general property tax. His experience covers state and local tax issues in all 50 states and includes strategy, mergers, acquisitions, structuring, identifying refund opportunities and exposures, filing methodology, sourcing, apportionment, nexus, private letter rulings, audit defense, credits and incentives and administrative appeals.

Bob has provided multistate tax consulting for various industries, such as agriculture, construction, health care, manufacturing, oil, gas, telecommunications, software technology, transportation, retail, and wholesale. He has worked with and identified tax savings opportunities for multiple SEC, Fortune 500 and large closely held companies. He also has Canadian and value-added tax experience.

Bob is a member of the Institute for Professionals in Taxation®.

He is a 1996 graduate of Northwest Missouri State University, Maryville, with a B.S. degree in accounting.



**Colleen S. Whiting, J.D.**  
Senior Tax Consultant

Colleen is a member of BKD's State and Local Tax (SALT) Services division. Before joining BKD, she worked as a tax policy counsel for the State of Indiana Department of Revenue and in the Governor of Indiana's office.

Colleen is a 2016 graduate of DePauw University, Greencastle, Indiana, with a B.A. degree in political science and philosophy and a 2019 graduate of Indiana University McKinney

School of Law, Indianapolis, with a J.D. degree. She is a licensed attorney in the State of Indiana.



**Tarek M. "Rick" Najjar, J.D.**  
Managing Consultant

Rick is a member of BKD's State & Local Tax Services division. He is primarily responsible for state and local tax controversy engagements, nexus determinations and taxability studies.

He has had articles published by State Tax Notes, The Journal of Multistate Taxation and Incentives, the Journal of Banking and Regulation and Bloomberg Law.

Rick is a graduate of University of Colorado, Denver, with a B.S. degree in accounting, and a graduate of University of Miami School of Law, Coral Gables, Florida, with a J.D. degree.

**Colette Sutton, J.D., LL.M.**  
Consultant

As a member of BKD's State and Local Tax Services division, Colette primarily focuses on state and local taxability studies.

Colette is a member of The Missouri Bar Association and the Kansas City Metropolitan Bar Association (KCMBA).

She is a graduate of Washington University, St. Louis, with a LL.M. in Taxation degree; a graduate of University of Missouri, Kansas City, with a J.D. degree; and a graduate of Kansas State University, Manhattan, with a Bachelor of Architecture degree.



**Chris J. Doolittle, CPA**  
Partner

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A member of BKD National Commercial Services Group, Chris has more than 15 years of public accounting experience. He specializes in providing tax planning services to clients in the manufacturing, distribution, and service industries. He interprets the latest tax laws, helps clients reduce their tax liability and provides guidance on the tax implications of business opportunities.

He previously served as a national tax assistant director in BKD's National Office in Springfield, Missouri, where he performed tax consultations with the firm's offices and quality control reviews. He also contributed to various efficiency and quality control initiatives by developing standardized tax workpapers, engagement letters and checklists.

In 2010, Chris served as director of Camp BKD, the firm's multiday training and orientation program for new audit and tax staff. He spearheaded a redesign of the curriculum for new hires and worked closely with a team of instructors to teach in-depth technical proficiency and leadership skills.

He is a member of the American Institute of CPAs and Arkansas Society of Certified Public Accountants.

Chris was selected as University of Arkansas Outstanding Alumni for the month of October 2010 and was Outstanding Graduating Senior for the Walton School of Business in 2001. He was named one of "Little Rock's Finest" by the Cystic Fibrosis Foundation. He is a board member with the Arkansas chapter of the American Red Cross and the Catholic High School Foundation.

Chris is a 2001 graduate of University of Arkansas, Fayetteville, with a B.S. degree in accounting, and a 2002 graduate of University of Arkansas at Little Rock, with an M.B.A. degree.



**J. Ernie Skyrme, CPA**  
Partner

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Ernie has more than 18 years of experience providing tax services to financial institutions, nonprofit organizations, small businesses, and individuals. He is responsible for proactive tax planning and reviewing tax returns to assist clients in meeting governmental reporting or other regulatory financial disclosure requirements. He also has been the in-charge on numerous audit engagements.

He is a member of the American Institute of CPAs and Arkansas Society of Certified Public Accountants. Ernie serves on the board of directors for Arkansas Symphony Orchestra. He also is a member of the Arkansas State University Accounting Advisory Board.

Ernie is a 2001 graduate of Arkansas State University, Jonesboro, with a B.S. degree in accounting and a 2003 graduate of the University of Arkansas, Little Rock, with an M.B.A. degree.

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## Foster & Foster

The following information is provided by Foster & Foster and is intended for informational purposes only.

### Jason Franken, FSA, EA, MAAA Principal

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Jason has nearly 25 years of actuarial pension experience, and is one of a few thousand actuaries worldwide who is both a Fellow of the Society of Actuaries and an Enrolled Actuary per ERISA. He is also a Member of the American Academy of Actuaries. Jason consults to public pension and Taft-Hartley clients on a wide range of retirement plan issues, including statutory funding requirements, Financial Accounting Standards Board (FASB) and Governmental Accounting Standards Board (GASB) accounting for pension and post-retirement medical plans, plan administration, experience studies and plan design. Jason is a frequent speaker at pension conferences across the country and has worked with retirement programs of all shapes and sizes.

### Travis Smith Principal

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Travis is currently the President of the Health & Welfare division of Foster & Foster. Travis has nearly 25 years of consulting experience working with plans of all sizes including experience with Taft Hartley Multiemployer plans, public plans, and Fortune 500 clients. As Principal, Travis is responsible for developing solutions that will drive financial results to improve all of the Foster & Foster health and welfare clients. He is considered an expert in understanding the Affordable Care Act (ACA) and has spoken at both regional and national conferences regarding the impact of ACA on plans. Travis's background includes a variety of consulting roles including research, strategic planning, financial engineering, and overall client management. Prior to joining Foster & Foster, Travis was a Principal with Hewitt Associates, LLC where he led the Dallas Healthcare Practice and worked with Fortune 500 clients and their benefit plans. Travis has a degree in Actuarial Science from the University of Iowa.

### Jonathan R. Davidson, Esquire Chief Legal Officer

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As Chief Legal Officer at Foster & Foster, Inc., Mr. Davidson is responsible for overseeing the Firm's Legal Department and corporate governance policies and procedures, as well as assisting in all Firm operations and strategic initiatives. Prior to joining Foster & Foster, Inc., Mr. Davidson was a partner at Kessler Topaz Meltzer & Check, LLP, where he concentrated his practice in the area of securities litigation and was involved in dozens of successfully concluded matters recovering hundreds of millions of dollars on behalf of shareholders.

Mr. Davidson is a frequent lecturer on issues impacting institutional investors -- speaking at conferences around the world each year, Mr. Davidson is also a member of numerous professional and educational organizations, including the National Association of Public Pension Attorneys. Mr. Davidson is a graduate of The George Washington University, where he received his Bachelor of Arts, summa cum laude, in Political Communication. Mr. Davidson received his Juris Doctor and Dispute Resolution Certificate from Pepperdine University School of Law and is licensed to practice law in Pennsylvania and California.

### Paul Baugher, FSA, EA, MAAA Senior Consultant

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Paul is a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, and an Enrolled Actuary under ERISA. Paul has almost 25 years of actuarial consulting experience, servicing public and corporate plans with membership ranging from 50 to over 150,000. He works out of his office in the St. Louis area.

**Sara Carlson, EA, ASA, MAAA**  
Actuarial Consultant

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Sara joined Foster & Foster in July 2011. Sara received a B.S. in Mathematics from the University of Florida, as well as a Masters' degree in Mathematics from the University of North Florida. Sara is both an Associate of the Society of Actuaries and an Enrolled Actuary per ERISA. She works extensively on annual valuations, projections, and special studies.

**Tyler Koftan, EA, MAAA**  
Actuarial Analyst

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Tyler is a 2011 graduate of the University of Iowa with a B.S. in actuarial science. Tyler joined the Foster & Foster team in 2013 as an actuarial student. He is an Enrolled Actuary per ERISA and a Member of the American Academy of Actuaries. Tyler is working toward designation an Associate in the Society of Actuaries.

**Braeleen Scott, ASA, MAAA**  
Actuarial Analyst

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Braeleen joined Foster & Foster full-time in May 2016 after completing a one-year internship with the firm. She is a 2016 graduate of Florida Gulf Coast University with a B.S. in Finance. Braeleen is an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries.

**Luke Schoenhofen, ASA**  
Actuarial Consultant

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Luke joined Foster & Foster in 2016 and attained credentials as an Associate of the Society of Actuaries in 2019. He graduated from Illinois State University with a B.S. in Actuarial Science. Luke assists with data and valuation tasks, and works at the office in Naperville, Ill.,

**Ann Byman, FSA, MAAA**  
Senior Consultant

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Ann joined the firm in December 2018 and has over ten years of experience in general health and welfare actuarial consulting. Prior to joining Foster & Foster, Ann served as an Associate Director/Consulting Actuary at a large consulting firm, servicing Fortune 100 clients on health and welfare benefits. She specializes in pricing and reporting, plan design, employer strategy, PPACA, IBNR, and health care delivery. She has extensive experience with managing the procurement process for fully insured and self-funded partnerships, negotiating significant savings and favorable contracts. Ann is the lead consultant for one of our large school district groups, leading the actuarial consulting for a JPA representing 53 school districts. Ann has attained her credentials as a Fellow of the Society of Actuaries, as well as a Member of the American Academy of Actuaries. She graduated from the University of Michigan with a degree in Applied Mathematics and spent seven years in her own business before joining a large, human resources consulting firm. She spent a short time in the retirement actuarial practice before focusing her career on health and benefits. Her actuarial background achieved both through consulting experience and the Society of Actuaries' credentialing process provides a solid foundation on employer benefits and health care opportunities.

**Kurt Baxley**  
Consultant

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Kurt joined the firm in July 2006, and has over ten years of pension, general health and welfare, and other post-employment benefit consulting experience. While with Foster & Foster, Kurt has become an expert in budget forecasting, comparative benefits analyses, cost containments strategies, and prescription drug analyses. For nearly five years, Kurt has become engrained specifically in pharmacy benefit manager (PBM) bids, contract negotiations, and the ever-changing landscape of prescription drugs. Kurt takes a tailored approach in creating

and presenting reports where he is able to clarify complex information, which proves useful in creating the most cost effective and best suited results for his clients. Kurt graduated from the University of Tampa with a degree in Mathematics.

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**Kylie Chesser**  
Consultant

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Kylie joined the firm in June 2021 and has over five years of experience in health and welfare actuarial consulting. Prior to joining Foster & Foster, Kylie served as an actuarial consultant for primarily private clients of all sizes at a large consulting firm. Her experience includes actuarial and strategic services for hospitality, healthcare, legal, technological, and manufacturing firms, including two Fortune 100 clients. She specializes in reporting, reserve setting, rate development, project management, and trend analysis. She also has experience negotiating financial components of carrier contracts and evaluating cost impacts of strategic programs and plan changes. Kylie is pursuing her credentials as an Associate of the Society of Actuaries and is expected to complete this achievement by year end 2021. She graduated from the University of Texas at Austin with a degree in Actuarial Science and works in the Dallas area.

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**Jacob Nurczyk**  
Actuarial Consultant

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Jake joined the firm in May 2021 and has nearly four years of experience in general health and welfare actuarial consulting working with Taft Hartley multi-employer plans, public plans as well as state and local governments. He comes from a Fortune 500 company where he specialized in healthcare analytics, budgeting, and forecasting. Jake enjoys taking new approaches to solve recurring problems his clients come across. Jake earned an Actuarial Science degree from North Central College and is working towards completion of his MBA from the University of Illinois in the summer of 2022.

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**Nate Wuthrich**  
Actuarial Analyst

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Nate joined the firm in July 2017 and has experience working with public pension, general health and welfare, and other post-employment benefit plans. He graduated from North Central College with a bachelor's degree in Actuarial Science. Nate enjoys using his programming and coding skills to solve problems and present data in easy to understand formats. Nate will assist in creating reports and is available to answer any possible questions relating to client materials.

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**Ashley Mueller, GBA**  
Benefits Analyst

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Ashley joined Foster & Foster in the spring of 2014 and quickly became familiar with the principles of health and welfare benefits. Ashley earned her credentials as a Group Benefits Associate in 2019 and is currently working toward designation as a Certified Employee Benefits Specialist from the International Foundation of Employee Benefit Plans through the Wharton School of the University of Pennsylvania. Ashley focuses mainly on preparing communications materials, assisting with reports, writing amendments, and updating plan documents and summaries.

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**Kristen Backenstoe, EA, MAAA, MSPA**  
Actuarial Consultant

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Kristen has over 10 years of pension and employee benefits consulting experience in the multiemployer and municipal plan areas. In addition to consulting responsibilities, Kristen has responsibility for overseeing the entry of census data, preliminary review and reconciliation of census and asset data, determination of accrued and projected benefits for actuarial valuation purposes, application of funding methods and assumptions, and the drafting of actuarial valuation reports and deterministic projections. Her consulting responsibilities are primarily in

the area of multiemployer and municipal pension plans. She graduated with a B.S. in Mathematics from Lebanon Valley College.

Lynn Cornish  
Analyst

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Lynn Cornish joined Foster & Foster in January 2021 as an actuarial analyst in the Pennsylvania office. Lynn has over 20 years of actuarial experience in the health and welfare consulting industry working in the public and multiemployer realms. She has extensive experience valuing other post-employment benefit (OPEB) obligations, as well as developing both active and retiree rates for self-funded plans. She has also taken an active role in developing reports that provide actionable data to determine the drivers of trends and develop strategies to combat high claims. Lynn graduated summa cum laude from Temple University with a B.B.A. in Actuarial Science.

## Vendor History

**A Vendor shall provide a brief history of its company, to include the name and location of the company and any parent/subsidiary affiliation with other entities. If a Vendor is utilizing the services of a subcontractor(s) for any of the service components listed, the Vendor shall include in its proposal response a brief history of the subcontractor's company to include the information requested herein.**

**A Vendor shall provide:**

- **A brief professional history, including the number of years of experience in providing the services required under this RFP or related experience and any professional affiliations and trade affiliations.**

## BKD

On January 2, 1923, three enterprising CPAs—Baird, Kurtz, and Dobson—opened offices in Kansas City and Joplin, Missouri, with \$1,700 in the bank. In 2001, the firm of Baird, Kurtz & Dobson merged with Olive LLP to create BKD, LLP.

For nearly a century, BKD has proudly delivered a variety of financial, operational, and other advisory services to our clients. Today, we are one of the largest national CPA and advisory firms in the United States with 40 offices located in 18 states. Our approximately 2,850 CPAs, advisors and dedicated staff serve more than 37,000 clients located in all 50 states and internationally. BKD and our subsidiaries offer clients a variety of services in accounting, audit and assurance, tax, risk management, technology, forensics and valuation, data analytics, corporate finance, and wealth management. Our professionals combine the insight and ideas of multiple disciplines to provide solutions for clients in a wide range of industries, including not-for-profit, government, higher education, financial services, manufacturing, distribution, health care, and real estate.

As a registered limited liability partnership under Missouri law, we have approximately 300 partners and principals, in offices across the country, with an ownership interest in BKD. Our Governing Board is the policy-making body of the firm, made up of the chief executive officer, four regional managing partners and six partners who serve three-year terms. Regional managing partners oversee the operations of each of BKD's four regions, and local managing partners oversee the operations of each of BKD's offices.

## BKD Office Locations

Arkansas	Kentucky	Oklahoma
Fort Smith	Bowling Green	Enid
Little Rock	Louisville	Oklahoma City
Rogers	Mississippi	Tulsa
Colorado	Jackson	Pennsylvania
Colorado Springs	Missouri	Erie
Denver	Branson	Pittsburgh
Illinois	Joplin	Tennessee
Chicago	Kansas City	Nashville
Decatur	Springfield	Texas
Oakbrook Terrace	St. Louis	Austin
Indiana	Nebraska	Dallas
Bloomington	Lincoln	Fort Worth
Evansville	Omaha	Houston
Fort Wayne	New York	San Antonio
Indianapolis	New York City	Waco
Iowa	Ohio	Utah
Des Moines	Cincinnati	Salt Lake City
Kansas		Wisconsin
Wichita		Madison

## BKD Subsidiaries

**BKD Capital Advisors, LLC** provides merger and acquisition, sales, management buyout, employee stock ownership plan (ESOP), recapitalization and financing services. Member Financial Industry Regulatory Authority (FINRA) and Securities Investor Protection Corporation (SIPC).

**BKD Foundation** is our 501(c)(3) nonprofit foundation that enriches BKD's local communities with financial support and our commitment of time.

**BKD Wealth Advisors, LLC** is an investment advisory firm registered with the SEC, providing the wealth management solutions of personal wealth planning, investment management and estate planning.

## Affiliations

BKD's firm and other professional affiliations include:

**International Solutions** – BKD is one of the largest U.S. members of Praxity, AISBL<sup>1</sup>, a global alliance of independent firms. We offer multinational clients a gateway to the global marketplace with services delivered by alliance firms that are committed to the highest standards required in international business.

<sup>1</sup> Praxity, AISBL, is a global alliance of independent firms. Organised as an international not-for-profit entity under Belgium law, Praxity has its executive office in Epsom. Praxity – Global Alliance Limited is a not-for-profit company registered in England and Wales, limited by guarantee, and has its registered office in England. As an Alliance, Praxity does not practice the profession of public accountancy or provide audit, tax, consulting or other professional services of any type

**Professional Affiliations** – As a member of the American Institute of CPAs (AICPA), BKD also is a member of its PCPS (Private Companies Practice Section) Firm Practice Center, and its three quality centers: Center for Audit Quality, Governmental Audit Quality Center and Employee Benefit Plan Audit Quality Center. BKD also is registered with the Public Company Accounting Oversight Board (PCAOB), which is required to serve as an independent auditor of public companies.

## Foster & Foster

Foster & Foster is a nationwide actuarial consulting firm that has been providing actuarial services to public entities since 1979. The Firm is headquartered in Fort Myers, Florida, and has offices in Cape Coral and Tampa, Florida, as well as Georgia, Texas, Illinois, Arizona, Michigan, and Pennsylvania. Our firm is comprised of 86 consultants and professional staff, including 28 credentialed actuaries, eight of which are Fellows of the Society of Actuaries (FSA), the highest distinction an actuary can obtain, and our consultants have a combined 600-plus years of public sector actuarial experience.

We are members of the Government Finance Officers Association (GFOA); the Society of Actuaries (SOA); the Conference of Consulting Actuaries (CCA); the National Conference of Public Employee Retirement Systems (NCPERS); the State and Local Government Benefits Association (SALGBA); the Illinois Public Pension Fund Association (IPPPA); the Associated Fire Fighters of Illinois (AFFI); the Illinois Government Finance Officers' Association (IGFOA); the Georgia Association of Public Pension Trustees (GAPPT); the Louisiana Association of Public Employees' Retirement System (LAPERS); MAPERS of Michigan; MAPERS of Missouri; the Texas Local Fire Fighters' Retirement Act (TLFFRA); the Texas Association of Public Employee Retirement Systems (TEXPERS); the Florida Public Pension Trustee Association (FPPTA); and the Pennsylvania State Association of County Controllers (PSACC).

Foster & Foster derives 100 percent of our revenue from actuarial consulting services – advising public pension funds at the state, county and municipal level, state and local governmental health programs, state legislatures and other public entities. We currently provide actuarial services to over 1,000 public sector plans/entities nationwide, representing millions of participants and billions of dollars of assets under management. We consider ourselves to be experts in all phases of public retirement and other post-employment benefit (OPEB) plan design and administration of these programs. Furthermore, the work we've done for our clients across the country over the years has exposed us to a multitude of different projects and challenges, equipping us with a broad array of ideas and solutions to serve the BLR and the Committee.

## Clients

- **A listing of current accounts and the longevity of those accounts.**

## BKD

BKD has approximately 37,020 clients and listing all of them would be too voluminous to include. Thus the longevity can vary, but many of our clients have been with us for multiple decades. Examples of these clients include Colorado Department of Revenue, Choctaw Nation Housing Authority, City Utilities of Springfield, Indianapolis Airport Authority, Nebraska Lottery, State Universities Retirement System of Illinois and recently University of Arkansas Systems. This is a small sample size of the many clients BKD provides services.

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to third parties. The Alliance does not constitute a joint venture, partnership or network between participating firms. Because the Alliance firms are independent, Praxity does not guarantee the services or the quality of services provided by participating firms.

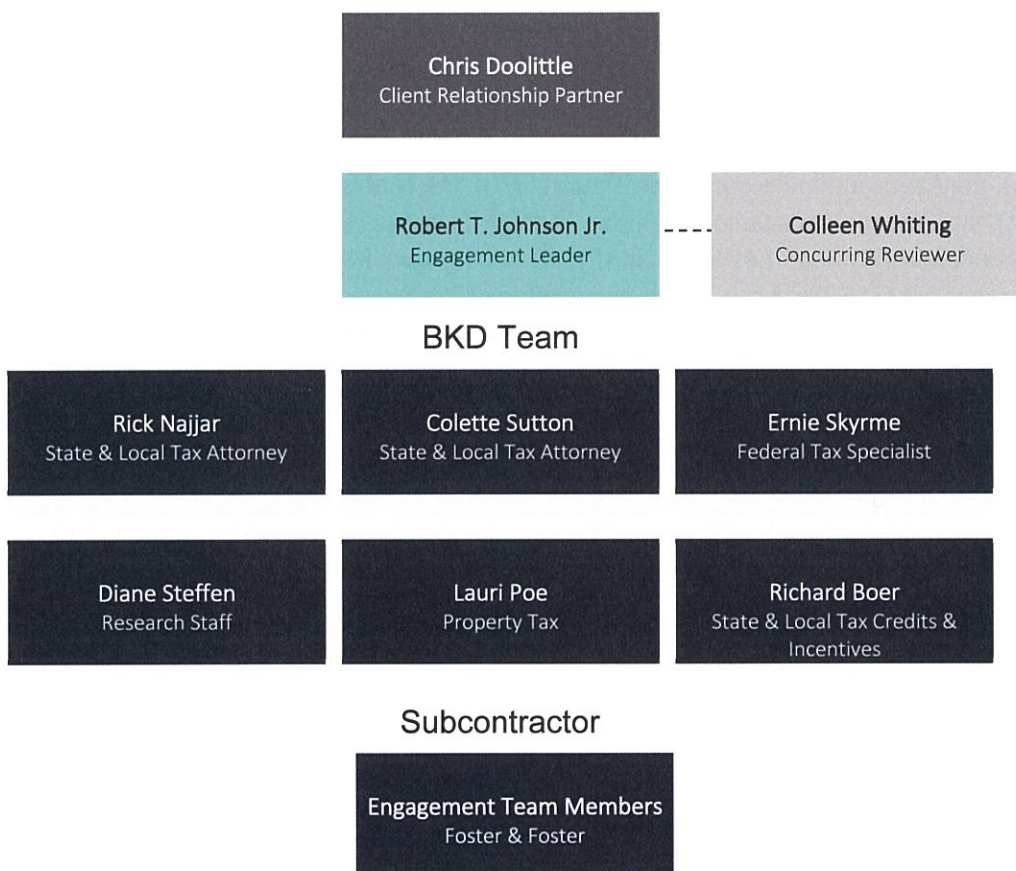
## Foster & Foster

Please find Foster & Foster’s complete client list in the Appendix. Given this listing is several hundred clients in length, we hope it is sufficient to say that our representation of public sector plans/departments and other non-public entities dates back 40-plus years in many instances, and that our firm has seen steady growth over the last 15-plus years on an annual basis under our current ownership structure.

## Organizational Chart

- An organizational chart highlighting the names/positions that will be involved in the contract, including the individual who will be primarily responsible for managing the account on a day-to-day basis.

## Engagement Team Organizational Chart



## Detailed Plan for Assisting the Committee

- A detailed description of the plan for assisting the Committee in meeting its goals and objectives, including how the requirements will be met and what assurances of efficiency and success the proposed approach will provide.

In working with organizations similar to BLR and the Committee, we have developed an efficient approach that avoids wasted effort. We plan our work to leverage our existing research to help control costs, reduce unnecessary disruptions and meet deadlines.

The Committee plays a major role in timely completion of the engagement. The periodic meetings with the Committee and other legislative committees will serve as not only a status update meeting but will drive further research and recommendations.

### Phase 1: Planning

On the contract execution date, we will be available to begin the project as soon as possible. We will have our partners, directors, managers and associates ready to assign to the project. We envision a kickoff meeting with the Committee to discuss its vision of the project would be beneficial to our team and the Committee. It will allow the Committee and BKD to learn more about one another and improve the focus of the project.

We will revisit current tax laws and vision of the project with our team in various meetings at the beginning of the project. We will outline an efficient and effective approach with the team to best use our time and various experience levels. We envision each person being assigned a specific research project focusing on a specific segment of tax initially. We will work from our local office or a location the Committee chooses.

### Phase 2: Research/Information Gathering

BKD will be able to leverage our existing in-depth knowledge of current Arkansas and surrounding states' tax laws. Our SALT experts will be able to brainstorm tax savings ideas that have been successful in other states. We will research these further as we dive deeper into specific statutes of Arkansas and other states' tax law. We will use our existing knowledge, additional research, and data inquiries to assist the Committee with its objectives. We also will be mindful of special requests from the Committee or other legislative committees, such as researching a potential tax cut in a department of the state. During this phase, we will develop and document areas that we believe will assist the Committee in meeting its objectives.

BKD will be present at monthly Committee meetings to provide status updates, including answering questions and discussing further work requested by the Committee. We also will be available to attend other legislative committees of the Arkansas General Assembly.

### Phase 3: Preliminary Report & Communications Delivery

We will develop a preliminary report that will first be reviewed by our quality control team. Our commitment to a smooth engagement also includes the timely delivery of our report. We will adhere to the preliminary report due date noted in the RFP. We anticipate the preliminary report to include, but not be limited to, current Arkansas tax law, the value of the current system and tax savings ideas for the future. Our dedicated team will be available to discuss the preliminary report at the Committee's request.

### Phase 4: Interim Period Between Preliminary & Final Report

We expect the Committee and other legislative committees to review the preliminary report and have several follow-up questions and research assignments for us. We will be available to attend required meetings to ultimately assist the Committee with its objectives. We will revise our preliminary report as necessary as more research and questions are answered from this process. While we expect regularly scheduled meetings to occur during this time, we also will be respectful of the Committee's time during the upcoming fiscal session in early 2018.

### Phase 5: Final Report & Communications Delivery

After we wrap up final revisions of the report, we will adhere to the final report due date noted in the RFP. Our dedicated team will be available to discuss the preliminary report at the Committee's request. BKD's goal is to present the Committee with several tax reductions ideas to take to the 2019 regular session and meet its goals and objectives.

An indication of how soon after the contract award the personnel named would be available and indicate any possible scheduling conflicts that might exist during the period of the contract. Any other limitations on the availability to perform under this RFP or to attend meetings must be fully explained.

We expect to be available immediately after the contract award and foresee no scheduling conflicts. We will have the resources to allow the project to progress as expected and ultimately meet the schedule of events date.

Furthermore, Foster & Foster commits to working side-by-side with BKD to provide exemplary service to the Committee for the duration of the contract. Given their work with numerous governmental entities on projects of this nature, Foster & Foster is confident the collective approach proposed herein will meet and/or exceed the Committee’s expectations.

## Timeframe

- **An indication of the timeframe the Vendor would require to assist the Committee in meeting its goals and objectives.**

BKD believes establishing a timeline will assist the Committee in meeting its goals and objectives. As discussed herein, BKD has extensive experience dealing with State entities and the short turn-around nature of the work that is often required of us, particularly during the legislative session. We are confident we can meet all deadlines the Committee will impose for the projects assigned during this contract.

If awarded this opportunity, BKD would meet with the Committee to establish a timeline that best meets the Committee’s needs and expectations. We believe in being fluid and adapting to meet your timelines. BKD and Foster & Foster are prepared to meet the deadlines outlined in your RFP.

Phase	Estimated Completion Date
Planning	TBD by Committee
Research / Information Gathering	TBD by Committee
Preliminary Report & Communications Delivery	TBD by Committee
Interim Period Between Preliminary & Final Report	TBD by Committee
Final Report & Communication Delivery	TBD by Committee

## Vendor Experience

- **A detailed, narrative statement listing the three (3) most recent, comparable contracts (including contact information) that the Vendor has performed and the general history and experience of its organization.**

### BKD

BKD has been performing professional audit services since we were founded in 1923 and has been serving governmental entities since 1970. Geographically spread throughout the United States, our significant client base reflects the diversity of the governmental industry, in both size and type of organization. The following graphs demonstrate the clients we serve and the services we provide.

**BKD Public Sector Clients****BKD Public Sector Services**

To reinforce our commitment to the governmental sector, our advisors routinely attend conferences focused on industry issues and trends. They also receive continuing professional education (CPE) to stay informed of industry regulatory updates and other general accounting issues, averaging approximately 60 hours of formal training annually. This dedication also extends to involvement on national industry committees, such as GASB and American Institute of CPAs (AICPA).

Our clients are our best ambassadors, and we encourage you to contact them about their satisfaction with our services. BKD has provided similar services to budgeting and forecasting analysis, research, and recommendations, as well as fiscal impact reports for decades. Three recent, comparable contracts include the following entities: **REDACTED**

The following information is provided by Foster & Foster and is intended for informational purposes only.

## Foster & Foster

Foster & Foster will excel at working with the BLR and the Committee in this engagement, as we have significant experience working with State entities on similar projects. Below, please find three recent examples of the work we have performed that is comparable to the work being requested under this contract (please note: all of these engagements were “quick turn-around” assignments, either to coincide with a legislative initiative or a State-mandated deadline). We are all too familiar with having projects thrown into our laps and then turning around professional work product in a timely fashion. Furthermore, we take the time to explain the results of our research/work with our clients to allow them to make informed decisions on how best to proceed on a particular matter. Finally, we will gladly appear before any governmental body, as requested, to answer questions and provide further assistance in the legislative process.

**REDACTED**

## Vendor References

- **At least three (3) references from entities that have recent (within the last three (3) years) contract experience with the Vendor and are able to attest to the Vendor’s work experience and qualifications relevant to this RFP.**

The following clients have consented to discussing BKD’s services and service delivery with you at your convenience.

BKD	Foster & Foster
REDACTED	

## Vendor Client Information

- **A list of every business for which Vendor has performed, at any time during the past three (3) years, services substantially similar to those sought with this solicitation. Err on the side of inclusion; by submitting an offer, Vendor represents that the list is complete.**

### BKD

Of our approximate 37,020 clients, we perform state tax compliance and consulting work for thousands of them. The above mentioned clients are just a sample of the assistance we have provided to our clients on this subject matter.

### Foster & Foster

As discussed herein, Foster & Foster currently works with over 1,000 public sector plans/governmental entities and other non-public clients across the country, including State entities in Illinois, Florida, Georgia, Louisiana, Ohio, Arizona, and Puerto Rico – providing all aspects of actuarial consulting services. In the Appendix, please find our complete client list.

- **List of failed projects, suspensions, debarments, and significant litigation.**

To our knowledge, we have not failed to complete an engagement due to lack of ability on our part to perform the engagement. Neither BKD nor our partners or principals are currently or have ever been debarred, suspended or proposed for debarment by the federal government. As previously mentioned, details of litigation cannot be disclosed pursuant to confidentiality agreements; however, the results of litigation have never been material to the firm. Currently, there is no substantial litigation outstanding.

## Other Vendor Information

- **An outline or other information relating to why the Vendor's experience qualifies in meeting the specifications stated in Section 3 of this RFP.**

### BKD

Because virtually every decision the Committee makes can have tax implications, it is critical to work with an advisor who can help you accurately reflect the Committee's mission and operations. Beyond preparing thousands of state income and franchise tax returns annually, including hundreds of Arkansas income and sales and use tax returns for Arkansas businesses and individuals, BKD's tax professionals can accurately analyze various states' tax laws to assist the Committee in meeting its goals and objectives.

Our tax advisors routinely monitor legislative activity, judicial rulings and regulatory guidance for changes that could affect you and provide timely alerts. This forward-looking approach can allow the Committee to confidently plan for the future.

### Foster & Foster

As discussed herein, Foster & Foster has extensive experience working with State entities, providing actuarial consulting services to assist our clients in the evaluation of proposed legislation, revenue forecasting research and analysis, analysis of changes to both state and federal law, and ultimately, assist in the preparation of fiscal impact reporting. Foster & Foster has put forward a significant team of professionals that stand ready to respond to all inquiries from the BLR and the Committee. Further, Foster & Foster is prepared to attend any and all meetings or other educational opportunities requested by the Committee and/or the Arkansas General Assembly, with no limitations. In sum, Foster & Foster is confident the thorough and thoughtful plan BKD has laid out to assist the Committee meet its goals and objectives will provide a roadmap for success in this engagement.

**A Vendor shall provide information on any conflict of interest with the objectives and goals of the Committee that could result from other projects in which the Vendor is involved. Failure to disclose any such conflict may be cause for Contract termination or disqualification of the response.**

As previously mentioned, BKD and Foster & Foster have not had any professional relationship with BLR or the Committee. No relationship exists that would constitute a conflict of interest relative to performing the proposed services.

**A Vendor or its subcontractor(s) must list all clients that were lost between June 2018 and the present and the reason for the loss. The Executive Subcommittee reserves the right to contact any accounts listed in this section. A Vendor must describe any contract disputes involving an amount of thirty-five thousand dollars (\$35,000) or more that the Vendor, or its subcontractor(s), has been involved in within the past two (2) years. Please indicate if the dispute(s) have been successfully resolved.**

## BKD

Similar to any service provider, we will from time to time lose a client. This usually occurs when a company changes ownership or when an entity requires a rotation of audit firms after a set number of years. To help protect the confidentiality of BKD clients, we are unable to disclose the names of specific former clients.

## Foster & Foster

Over the past three years, Foster & Foster has grown dramatically by adding hundreds of public sector clients, while losing just six. Please see the table below for the list of clients who terminated our services and the reason for doing so. In our entire 42-year existence, Foster & Foster has a proud record of never having lost a client for cause.

Name	Terminated	Reason
Division of Retirement Chapter Plans	2018	Competitive Bid Process, Contract Ended
Austin Police	2019	Competitive Bid Process, Contract Ended
Beaumont Fire	2019	Competitive Bid Process, Contract Ended
Leesburg Fire	2019	Competitive Bid Process, Contract Ended
St. Lucie County Fire	2019	Competitive Bid Process, Contract Ended
Umatilla Police	2019	Competitive Bid Process, Contract Ended

### 5.5.1 Background Investigation

**Vendors must allow the BLR to perform an investigation of the financial responsibility, security, and integrity of a Vendor submitting a bid, if required by the Executive Subcommittee.**

BKD acknowledges and agrees with the statements above.

## Section 6. Evaluation Criteria for Selection

### 6.0 Generally

The Vendor should address each item listed in this RFP to be guaranteed a complete evaluation. After initial qualification of proposals, selection of the Successful Vendor will be determined in a meeting of the Executive Subcommittee by evaluation of several factors.

The Executive Subcommittee has developed evaluation criteria that will be used by the Executive Subcommittee and that is incorporated in Section 6.1 of this RFP. Other agents of the Executive Subcommittee may also examine documents.

Submission of a proposal implies Vendor acceptance of the evaluation technique and Vendor recognition that subjective judgments must be made by the Executive Subcommittee during the evaluation of the proposals.

The Executive Subcommittee reserves, and a Vendor by submitting a Proposal grants to the Executive Subcommittee, the right to obtain any information from any lawful source regarding the past business history, practices, and abilities of Vendor, its officers, directors, employees, owners, team members, partners, and/or subcontractors.

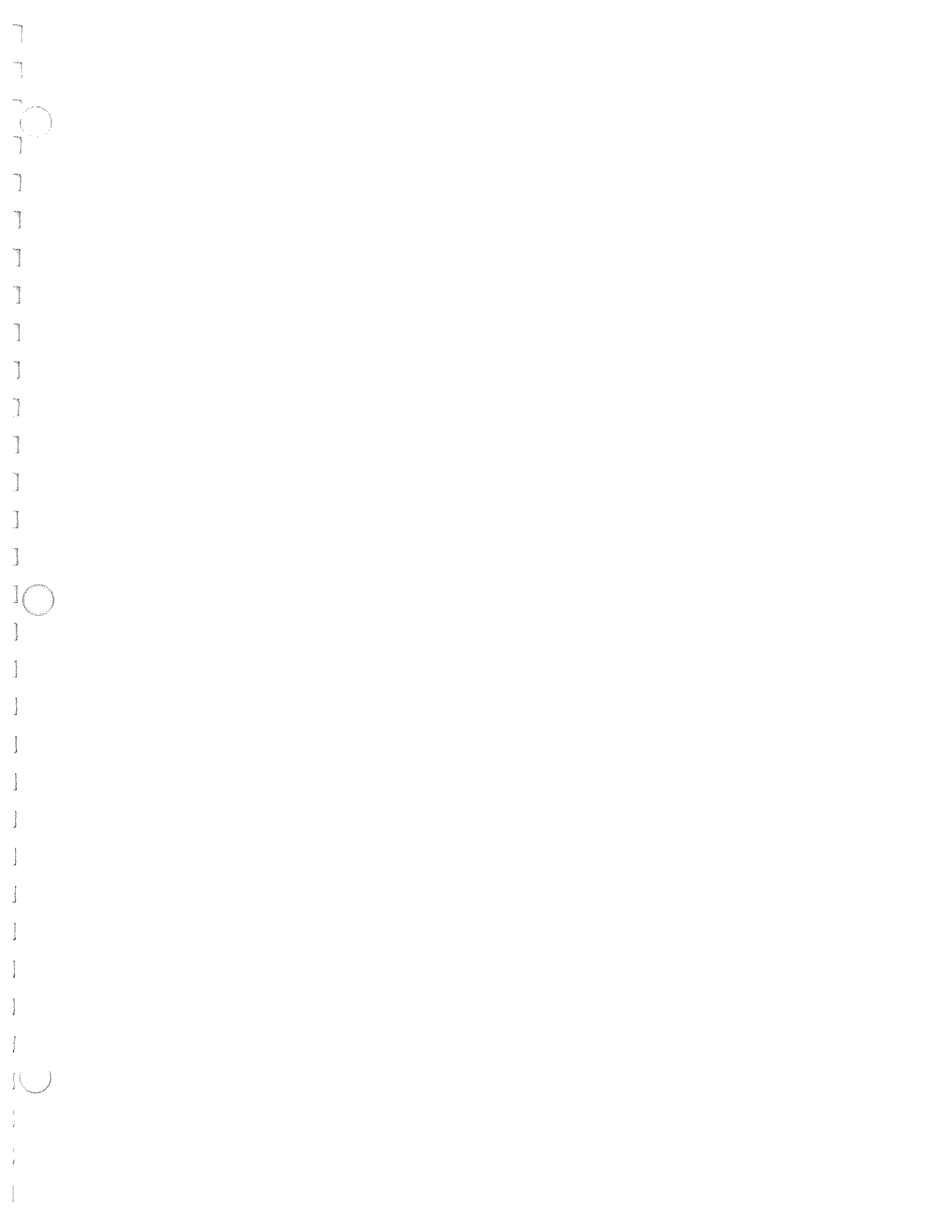
BKD acknowledges and agrees with the statements above.

### 6.1 Evaluation Criteria

The following evaluation criteria are listed according to their relative importance; however, the difference between the importance assigned to any one criterion and the criteria immediately preceding and following is small:

- Directly related experience;
- Pricing;
- Plan for providing services;
- Proposed schedule for providing services;
- Proposed personnel and the credentials of those assigned;
- Compliance with the requirements of the RFP; and
- Past performance.

BKD acknowledges and agrees with the statements above.



“ Our Unmatched Client Service standards form the foundation of our culture. Our PRIDE values enable us to continuously deliver on this commitment. ”



**Thomas W. Watson, CPA, FHFMA**  
Chief Executive Officer | BKD

# APPENDIX

## Request for Proposal (page 1)



**State of Arkansas**  
**Bureau of**  
**Legislative Research**

Marty Garrity, Director  
 Kevin Anderson, Assistant Director  
 for Fiscal Services  
 Tim Carlock, Assistant Director  
 for Information Technology  
 Matthew Miller, Assistant Director  
 for Legal Services  
 Estella Smith, Assistant Director  
 for Research Services

**REQUEST FOR PROPOSAL**

RFP Number: BLR-210002	
Commodity: <b>State Budgeting and Revenue Forecasting Consulting Services</b>	Proposal Opening Date: <b>August 30, 2021</b>
Date: <b>June 21, 2021</b>	Proposal Opening Time: <b>4:00 P.M. CDT</b>

PROPOSALS SHALL BE SUBMITTED IN HARD COPY AND ELECTRONIC FORMAT AND WILL BE ACCEPTED UNTIL THE TIME AND DATE SPECIFIED ABOVE. THE PROPOSAL ENVELOPE MUST BE SEALED AND SHOULD BE PROPERLY MARKED WITH THE PROPOSAL NUMBER, DATE AND HOUR OF PROPOSAL OPENING, AND VENDOR'S RETURN ADDRESS. THE ELECTRONIC SUBMISSIONS SHOULD BE CLEARLY MARKED AS A PROPOSAL IN RESPONSE TO RFP NO. BLR-210002. IT IS NOT NECESSARY TO RETURN "NO BIDS" TO THE BUREAU OF LEGISLATIVE RESEARCH.

**Vendors are responsible for delivery of their proposal documents to the Bureau of Legislative Research prior to the scheduled time for opening of the particular proposal. When appropriate, Vendors should consult with delivery providers to determine whether the proposal documents will be delivered to the Bureau of Legislative Research office street address prior to the scheduled time for proposal opening. Delivery providers, USPS, UPS, FedEx, and DHL, deliver mail to our street address, 500 Woodlane Street, State Capitol Building, Room 315, Little Rock, Arkansas 72201, on a schedule determined by each individual provider. These providers will deliver to our offices based solely on our street address.**

MAILING ADDRESS: 500 Woodlane Street State Capitol Building, Room 315 Little Rock, Arkansas 72201	PROPOSAL OPENING LOCATION: Bureau of Legislative Research Director's Office State Capitol Building, Room 315
E-MAIL: thayerj@blr.arkansas.gov	
TELEPHONE: (501) 682-1937	

Company Name: BKD, LLP

Name (type or print): Chris Doolittle

Title: Partner

Address: 400 West Capital Avenue, Suite 2500, Little Rock, AR 72201

Telephone Number: 501.372.1040

Fax Number: 501.372.1250

E-Mail Address: cdoolittle@bkd.com



Identification:	BKD, LLP
Federal Employer ID Number	Social Security Number
44-0160260	

**FAILURE TO PROVIDE TAXPAYER IDENTIFICATION NUMBER MAY  
RESULT IN PROPOSAL REJECTION**

Business Designation (check one):	Individual [ ]	Sole Proprietorship [ ]	Public Service Corp [ ]
	Partnership [X]	Corporation [ ]	Government/ Nonprofit [ ]

GENERAL DESCRIPTION:	State Budgeting and Revenue Forecasting Consulting Services
TYPE OF CONTRACT:	Term

**MINORITY BUSINESS POLICY**

Participation by minority businesses is encouraged in procurements by state agencies, and although it is not required, the Bureau of Legislative Research ("BLR") supports that policy. "Minority" is defined at Arkansas Code Annotated § 15-4-303 as "a lawful permanent resident of this state who is: (A) African American; (B) Hispanic American; (C) American Indian; (D) Asian American; (E) Pacific Islander American; or (F) A service-disabled veteran as designated by the United States Department of Veteran Affairs". "Minority business enterprise" is defined at Arkansas Code Annotated § 15-4-303 as "a business that is at least fifty-one percent (51%) owned by one (1) or more minority persons". The Arkansas Economic Development Commission conducts a certification process for minority businesses. Vendors unable to include minority-owned businesses as subcontractors may explain the circumstances preventing minority inclusion.

**EQUAL EMPLOYMENT OPPORTUNITY POLICY**

The Vendor shall submit a copy of the Vendor's Equal Opportunity Policy. EO Policies shall be submitted in hard copy and electronic format to the Bureau of Legislative Research accompanying the solicitation response. The Bureau of Legislative Research will maintain a file of all Vendor EO policies submitted in response to this solicitation. The submission is a one-time requirement, but Vendors are responsible for providing updates or changes to their respective policies.

**EMPLOYMENT OF ILLEGAL IMMIGRANTS**

The Vendor shall certify prior to award of the contract that it does not employ or contract with any illegal immigrants in its contract with the Bureau of Legislative Research. Vendors shall certify on the Proposal Signature Page and online at <https://www.ark.org/dfa/immigrant/index.php/disclosure/submit/new>. Any subcontractors used by the Vendor at the time of the Vendor's certification shall also certify that they do not employ or contract with any illegal immigrant. Certification by the subcontractors shall be submitted within thirty (30) days after contract execution.

**RESTRICTION OF BOYCOTT OF ISRAEL**

Pursuant to Arkansas Code § 25-1-503, a public entity shall not enter into a contract with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of Israel. This prohibition does not apply to a company which offers to provide the goods or services for at least twenty percent (20%) less than the lowest certifying business.

By checking the designated box on the Proposal Signature Page, the Vendor agrees and certifies that they do not, and will not for the duration of the contract boycott Israel.

## Equal Opportunity Policy Statement

# BKD

### AFFIRMATIVE ACTION AND EQUAL EMPLOYMENT OPPORTUNITY POLICY

**BKD, LLP** (BKD) reaffirms its belief and commitment in equal employment opportunity for all employees and applicants for employment in all terms and conditions of employment.

BKD has developed and maintained a written Affirmative Action Program (AAP). BKD's Chief Executive Officer, Theodore D. Dickman, CPA, supports the affirmative action program and urges each employee to commit to carrying out the intent of this policy. BKD maintains an audit and reporting system to determine overall compliance with its equal employment opportunity mandates. The EEO Administrator, Rebecca Curry, oversees the affirmative action plan development, modification, implementation, effectiveness, reporting requirements and conducts management updates. BKD invites any applicant and/or employee to review its written Affirmative Action Plan. This plan is available for inspection upon request during the hours of 8 a.m.–5 p.m., Monday through Friday in the Human Resources department.

As part of BKD's commitment to this overall process, it will seek to ensure that all aspects of employment, including recruitment, selection, job assignment, training, compensation, benefits, discipline, promotion, transfer, layoff and termination processes remain free of illegal discrimination based upon age, race, color, sex, sexual orientation, gender identity, national origin, religion, genetic information, disability (as defined under Section 503 of the *Rehabilitation Act of 1973*) or protected veteran status (as defined under *Vietnam Era Veterans' Readjustment Assistance Act of 1974*) other protected classifications. BKD ensures that all employment decisions are based only on valid job requirements. Regular review helps to ensure compliance with this policy.

BKD will ensure that employees and applicants shall not be subjected to harassment due to their status described above, or any harassment, intimidation, threats, coercion or discrimination because they have engaged in or may engage in any of the following activities; (1) filing a complaint with BKD or with federal, state, or local agencies regarding status covered under this AAP, (2) assisting or participating in any investigation, compliance review, hearing, or any other activity related to the administration of any federal, state, or local equal employment opportunity or affirmative action statute pertaining to the status covered under this AAP, (3) opposing any act or practice made unlawful by section 503 and/or VEVRAA and (4) exercising any other right protected by section 503 and/or VEVRAA or its implementing regulations in this part.

BKD will not discharge or in any other manner discriminate against employees or applicants because they have inquired about, discussed or disclosed their own pay or the pay of another employee or applicant. However, employees who have access to the compensation information of other employees or applicants as a part of their essential job functions cannot disclose the pay of other employees or applicants to individuals who do not otherwise have access to compensation information, unless the disclosure is (a) in response to a formal complaint or charge, (b) in furtherance of an investigation, proceeding, hearing or action, including an investigation conducted by the employer or (c) consistent with the contractor's legal duty to furnish information.

HR152  
2/27/18

# Proposal Signature Page

## PROPOSAL SIGNATURE PAGE

Type or Print the following information:

### Prospective Contractor Contact Information

Contact Person: Robert (Bob) T. Johnson Jr Title: Partner  
 Phone: 816.701.0283 Alternate Phone: 816.665.8827  
 Email: bjohnson@bkd.com

### Confirmation of Redacted Copy

- YES, a redacted copy of proposal documents is enclosed.
- NO, a redacted copy of submission documents is not enclosed. I understand a full copy of non-redacted submission documents will be released if requested.

*Note: If a redacted copy of the proposal documents is not provided with the Vendor's proposal, and neither box is checked a copy of the unredacted documents will be released in response to any request made under the Arkansas Freedom of Information Act (FOIA).*

### Illegal Immigrant Confirmation

By signing and submitting a response to this RFP and by certifying online at <https://www.ark.org/dfa/immigrant/index.php/disclosure/submit/new>, the Vendor agrees and certifies that they do not employ or contract with illegal immigrants. If selected, the Vendor certifies that they will not employ or contract with illegal immigrants during the aggregate term of the contract.

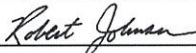
### Israel Boycott Restriction Confirmation

By checking the box below, the Vendor agrees and certifies that they do not boycott Israel, and if selected, will not boycott Israel during the aggregate term of the contract.

- Vendor does not and will not boycott Israel.

***An official authorized to bind the Vendor to a resultant contract shall sign below.***

The Signature below signifies agreement that any exception that conflicts with the requirements of this RFP will cause the Vendor's proposal to be disqualified.

Authorized Signature:  Title: Partner  
 Printed/Typed Name: Robert Johnson Date: August 26, 2021

# Contract & Grant Disclosure & Certification Form

## CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM

Failure to complete all of the following information may result in a delay in obtaining a contract, lease, purchase agreement, or grant award with any Arkansas State Agency.

SUBCONTRACTOR NAME: \_\_\_\_\_

Yes  No

IS THIS FOR:  Goods?  Services?  Both?

TAXPAYER ID NAME: 44-0160260

YOUR LAST NAME: Doolittle FIRST NAME: Chris M.I.: \_\_\_\_\_

AD.RESS: 400 W. Capitol Avenue, Suite 2500

CITY: Little Rock STATE: AR ZIP CODE: 72203 COUNTRY: U.S.A.

**AS A CONDITION OF OBTAINING, EXTENDING, AMENDING, OR RENEWING A CONTRACT, LEASE, PURCHASE AGREEMENT, OR GRANT AWARD WITH ANY ARKANSAS STATE AGENCY, THE FOLLOWING INFORMATION MUST BE DISCLOSED:**

### FOR INDIVIDUALS \*

Indicate below if: you, your spouse or the brother, sister, parent, or child of you or your spouse is a current or former: member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee:

Position Held	Mark (✓)		Name of Position of Job Held [senator, representative, name of board/commission, data entry, etc.]	For How Long?		What is the person(s) name and how are they related to you? [i.e., Jane Q. Public, spouse, John Q. Public, Jr., child, etc.]	Relation
	Current	Former		From MM/YY	To MM/YY		
General Assembly							
Constitutional Officer							
State Board or Commission Member							
State Employee							

None of the above applies

### FOR AN ENTITY (BUSINESS) \*

Indicate below if any of the following persons, current or former, hold any position of control or hold any ownership interest of 10% or greater in the entity: member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee. Position of control means the power to direct the purchasing policies or influence the management of the entity.

Position Held	Mark (✓)		Name of Position of Job Held [senator, representative, name of board/commission, data entry, etc.]	For How Long?		What is the person(s) name and what is his/her % of ownership interest and/or what is his/her position of control?	Ownership Interest (%)	Position of Control
	Current	Former		From MM/YY	To MM/YY			
General Assembly								
Constitutional Officer								
State Board or Commission Member								
State Employee								

None of the above applies

**Contract and Grant Disclosure and Certification Form**

*Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this contract. Any contractor, whether an individual or entity, who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the agency.*

As an additional condition of obtaining, extending, amending, or renewing a contract with a state agency I agree as follows:

1. Prior to entering into any agreement with any subcontractor, prior or subsequent to the contract date, I will require the subcontractor to complete a **CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM**. Subcontractor shall mean any person or entity with whom I enter an agreement whereby I assign or otherwise delegate to the person or entity, for consideration, all, or any part, of the performance required of me under the terms of my contract with the state agency.
2. I will include the following language as a part of any agreement with a subcontractor:  
*Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this subcontract. The party who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the contractor.*
3. No later than ten (10) days after entering into any agreement with a subcontractor, whether prior or subsequent to the contract date, I will mail a copy of the **CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM** completed by the subcontractor and a statement containing the dollar amount of the subcontract to the state agency.

**I certify under penalty of perjury, to the best of my knowledge and belief, all of the above information is true and correct and that I agree to the subcontractor disclosure conditions stated herein.**

Signature Chris Doolittle Title Partner Date August 26, 2021  
 Vendor Contact Person Chris Doolittle Title Partner Phone No. 501.372.1040

*Agency use only*  
 Agency Number \_\_\_\_\_ Agency Name \_\_\_\_\_ Agency Contact Person \_\_\_\_\_ Agency Contact Phone No. \_\_\_\_\_  
 Contract \_\_\_\_\_ or Grant No. \_\_\_\_\_

Arkansas State Board of Public Accountancy License

**Arkansas State Board of Public Accountancy**

101 East Capitol, Suite 450, Little Rock, AR 72201-1201

**LICENSE**

as an entity of **CERTIFIED PUBLIC ACCOUNTANTS** for the calendar year 2021

BKD, LLP 28LP  
P.O. BOX 1900  
SPRINGFIELD, MO 65801



Issue Date: 12/28/2020  
Issue Type: Main Office  
License Expires 12/31/2021

## Partners & Principals

BKD is a limited liability partnership under Missouri law. BKD's partners and principals include in the Appendix.

Office Address	Partners / Principals		
<b>Austin</b> 500 N. Capital of Texas Highway Building 4-100 Austin, TX 78746-3401	Tricia Teegardin Kendall R Haulotte		
<b>Bloomington</b> 475 N. College Avenue P.O. Box 3040 Bloomington, IN 47402-3040 (47404)	Isabel M Porrata-Doria Santner		
<b>Bowling Green</b> 360 E. 8th Avenue, Suite 201 P.O. Box 1196 Bowling Green, KY 42102-1196 (42101)	Ann Puckett Matt S Coffey Cara L Benningfield Chad C Lewis		
<b>Branson</b> Building III, Suite LL 800 State Highway 248 Branson, MO 65616-4172	Derek L Smith		
<b>Chicago</b> 1901 S. Meyers Road, Suite 500 Oakbrook Terrace, IL 60181-5209	Joel Dziedzic Jody Gauthier Timothy M Hughes Michael Senko	Andrew Klemens David Kot Russell Romanelli Scott Termine	
<b>Chicago - downtown</b> 130 E. Randolph Street, Suite 1900 Chicago, IL 60601-6223	Damien R Martin Thomas B Murtagh Tim Eischeid	Brian J Pavona Scott A Bormet	
<b>Cincinnati</b> 312 Walnut Street, Suite 3000 P.O. Box 5367 Cincinnati, OH 45201-5367 (45202)	Cary D Hines Chris M Linck Tony M Perazzo	Kelly A Postlewaite Jim E Creeden Jr Brian J Mischel	
<b>Colorado Springs</b> 111 S. Tejon Street, Suite 800 Colorado Springs, CO 80903-2286	Tammy J Rivera David S Mason Christopher J Telli		
<b>Dallas (</b> 14241 Dallas Parkway, Suite 1100 Dallas, TX 75254-2961	Todd Lisle Michelle Brekken Kevin Kemp Matt Klauser Eric S Mies Chris C Clark Tom Watson	Scott A Humphrey Keith Foster Barry Adamson Tim A Jackson Dale C Johnston Connie C Benten Cagle	Kerry L Fitzgerald Howard Hong John Griffin Neely D Duncan Dan Barron Ben D Kohnle

Office Address	Partners / Principals		
<b>Decatur</b> 225 N. Water Street, Suite 400 Decatur, IL 62523-2326	Gary Genenbacher Kraig Ritter Bob M Swartz		
<b>Denver</b> 1801 California Street, Suite 2900 Denver, CO 80202-2606	Jeff M Ronsse Travis S Hudson Rob MaCoy	Brian L Beiser Joe Nelson Bud S Hollenkamp	Omar Yassine Brian L Myeroff Robert W Conner
<b>Des Moines</b> 1401 50th Street, Suite 350 West Des Moines, IA 50266-5935	Marv W Debner Jon D Harris Jeff R Naig	Todd E Thorson Cheryl A Clauson Marty J Fredericks	Paul M Koster Jessica R Richter
<b>Enid</b> Triangle Business Center 205 W. Maple Avenue, Suite 200 Enid, OK 73701-4032	Jon P Redelsperger		
<b>Erie</b> 410 Cranberry Street, Suite 210 Erie, PA 16507-1090	Bill G Finnecy		
<b>Evansville</b> 400 Cross Pointe Boulevard P.O. Box 628 Evansville, IN 47704-0628 (47715)	Derek J Adams Dave S Freeman Trish M Neidig Rick R Carrier Jr		
<b>Fort Smith</b> 5000 Rogers Avenue, Suite 700 Fort Smith, AR 72903-2070	Don DeSoto		
<b>Fort Wayne</b> 200 E. Main Street, Suite 700 Fort Wayne, IN 46802-1900	Matt P Stout Wally Wetherill Jeremy D Carnahan Gwyn M Eastom	Adam W Smith Michael R Earls Luke P Sermersheim	
<b>Fort Worth</b> 777 Main Street, Suite 2000 Fort Worth, TX 76102-5332	Brian D Matlock Kelly R Hein Rob E Opitz Sara E Grenier		
<b>Houston</b> 2700 Post Oak Boulevard, Suite 1500 Houston, TX 77056-5829	John Steffes Sherri Greenwood Jon Unroe Toug T Plilar Tim J Adler Kimberly McKay	Trent E Parten Tracy G Young III Chip S Storey Bob L Lamb Angie K Dunlap	Justin S Stenberg Brian D West Debbie Scanlon Gordon J Dobner Amanda E Eaves

Office Address	Partners / Principals		
<p><b>Indianapolis</b>            201 N. Illinois Street, Suite 700            P.O. Box 44998            Indianapolis, IN 46244-0998 (46204)</p>	<p>Chad W Back            Joanna F Simek            Shaun P Duffin            Randy A Biernat            Bryan Callahan            Craig D            Kuechenberg            Chad M Garber            Donald J Rawe            David C Rabb            Jason A Myers            Bob Brandenburg</p>	<p>Kevin J Hamernik            Ken W Taylor            Steve W LaFrance            Amy D Frizzell            Rob Wagner            Justin D McNabb            Julie R Hipsky            Robert J Pruitt            Dave Leising            Kevin Pahud</p>	<p>Holly Pantzer            Troy Gilstorf            Greg D Rexing            Rick T Wittgren            Bryan Wright            John Bourquard            John E Curry            Scott C Dowling            Mike A Ososki            Andy A Rinzel</p>
<p><b>Jackson</b>            1400 Meadowbrook Road, Suite 300            Jackson, MS 39211-6349</p>	<p>Andy M Williams            Donna W Bruce            Lance M Davis            Jerry M Goolsby            Trey W Turnage</p>		
<p><b>Joplin</b>            3230 Hammons Boulevard, Suite A            P.O. Box 1824            Joplin, MO 64802-1824 (64804)</p>	<p>Troy E Hill            Mike Gray</p>		
<p><b>Kansas City</b>            1201 Walnut Street, Suite 1700            Kansas City, MO 64106-2246</p>	<p>Joe R Herting            Todd J Kenney            Sue Brammer            Jim Still            Eric M DeCoursey            Joe Watt            Kieth T McGovern            Joe E Roos            Bill Rasmussen IV            Randy Oberdiek</p>	<p>Lyle Alexander            John Kmetz            Travis J Truesdell            Abe Cole            Mark A Wilkerson            Bob T Johnson Jr            Adam B Zieren            Rachel R Dwigginns            Tondeé L Lutterman</p>	<p>Brian T Mall            Mike J Engle            Kevin Morey            Angela M Miratsky            Steve Toomey            Daniel D Gaston            Chad E Gassen            Julee A Fox            Scott D Austin</p>
<p><b>Lincoln</b>            Wells Fargo Center            1248 O Street, Suite 1040            Lincoln, NE 68508-1461</p>	<p>Chris J Lindner            Randy F Throener            Aaron J Wiegert            Jason W Bombeck            James M Anderson</p>		
<p><b>Little Rock</b>            400 W. Capitol Avenue, Suite 2500            P.O. Box 3667            Little Rock, AR 72203-3667 (72201)</p>	<p>Ernie E Skyrme            Chris J Doolittle            Gary A Edwards            Corey Jennings            Ryan Underwood</p>	<p>Susan M Davenport            Derek R Pierce            Kevin G Horn            Cindy Boyle</p>	<p>Scotty White            Shawn R Grotte            Meagan E Clark            Jaye L Waynick</p>
<p><b>Louisville</b>            600 N. Hurstbourne Parkway, Suite 350            P.O. Box 22127            Louisville, KY 40252-0127 (40222)</p>	<p>Jennifer M Sanders            Mary E McKinley            Ben D Howard</p>	<p>Chris J Kramer            Jerry Henderson            David E Tate</p>	<p>Chris J Woosley            Melissa M Pozniak</p>

Office Address	Partners / Principals		
<p><b>Madison</b> 8517 Excelsior Drive, Suite 301 Madison, WI 53717-2910</p>	<p>Dave A Weber Matthew P Macdonald Tony J Balistreri</p>		
<p><b>Nashville</b> Two American Center 3102 West End Avenue, Suite 1050 Nashville, TN 37203-1301</p>	<p>Brooke R Simpson Jim P Regnier</p>		
<p><b>New York</b> 1155 Avenue of the Americas, Suite 1200 New York, NY 10036-2711</p>	<p>Jeremy R Goss Ryan S Reiff Ken L Stephens Richard A Cole Sal Shah</p>	<p>Joseph R Blatt Allan M Blum Monica Fraczek Bryant B Macaraeg</p>	<p>Brian S O'Reilly Anna Shaferova Koy K Dever Lindsey Richards</p>
<p><b>Oklahoma City</b> Two Leadership Square South Tower 211 N. Robinson Avenue, Suite 600 Oklahoma City, OK 73102-9421</p>	<p>Geron O Morgan Chad M Moore Doug Van Meter Todd J Pefferman</p>		
<p><b>Omaha</b> 1120 S. 101st Street, Suite 410 Omaha, NE 68124-1088</p>	<p>Tim J Wilson Justin A Roberts Chris M Van Long</p>	<p>Nate L Scott Anthony J Pasternak Mike D McDevitt</p>	
<p><b>Pittsburgh</b> 30 Isabella Street, Suite 107 Pittsburgh, PA 15212-5859</p>	<p>Peter Kern Jeff Deane David Bluemling</p>		
<p><b>Rogers</b> 809 S. 52nd Street, Suite A P.O. Box 1893 Rogers, AR 72757-1893 (72758)</p>	<p>Mark Lundy David M Coleman</p>		
<p><b>Salt Lake City</b> 510 S. 200 W., Suite 200 Salt Lake City, UT 84101-2320</p>	<p>Dave B DeMille Steve M Hanni Neal Hansen Jeff Q Johnson</p>		
<p><b>San Antonio</b> 8200 W. Interstate 10, Suite 900 San Antonio, TX 78230-3806</p>	<p>Jon M McDowell John R Bruce Todd Burchett Nancy E Ozuna Patricia Quintana-Perron Clint R Langford</p>		
<p><b>Springfield</b> 910 E. St. Louis Street, Suite 200 P.O. Box 1190 Springfield, MO 65801-1190 (65806)</p>	<p>Justin M Kensinger Eric M Rogers Angela R Morelock Jeff A Layman Kyle G Hesemann</p>	<p>Scott W Gold Ryan A Sivill Gary W Schafer Brian D Todd Brad K Brotherton</p>	<p>Amber J Popek Jason Rader Camille Lockhart Mark P Sharp Lindsey D Oakley</p>

Office Address	Partners / Principals		
	David C Fields Juli C Pascoe Tim L Chitwood Stephanie C Weis Jeff Allen Jamie J McDonald	Brandy N Buckler Kristen G Bright Jean M Nyberg Erica L Smith David S Taylor Jim R Ashley	Jesse L Palmer Travis Webb Mike Wolfe Doug Bennett Bryan B Bodnar Georgia L Salinas
<b>St. Louis</b> One Metropolitan Square 211 N. Broadway, Suite 600 St. Louis, MO 63102-2733	Eric M Darr Thomas F Wheeland Danielle N Solomon Chris Dalton Will D James	Steve J Sears Donna M Doerhoff Bert E Purdy Kurt B Berry Francis Godfrey	John Mather Tony Spratte Fred Helfrich Leslie Wilson
<b>Tulsa</b> 110 North Elgin Avenue, Suite 400 Tulsa, OK 74120-1490	Robyn Devore Kevin Gore Chris Murphy Carley Williams Rob G Haight Steve Holden		
<b>Waco</b> 510 N. Valley Mills Drive, Suite 200 Waco, TX 76710-6075	Deborah Whitley		
<b>Wichita</b> 1551 N. Waterfront Parkway, Suite 300 Wichita, KS 67206-6601	Anthony D Kruse Jennifer J Wold Michael C Gerber Jenifer J Hitschmann	Matt M Morris Bill Pickert Steve Webb Matt List	

## Past Performance Documentation

REDACTED

# BKD Firm Profile

BKD CPAs & Advisors can help individuals and businesses realize their goals. Our dedicated professionals offer solutions for clients in all 50 states and internationally. BKD and its subsidiaries provide a variety of services, combining the insight and ideas of multiple disciplines in a wide range of industries.

## About BKD



### Unmatched Client Service®

You want industry expertise delivered by someone who speaks your language and understands your issues. Someone who can help you solve problems with a formula that's equal parts integrity, innovation, excellence and passion. BKD understands. We're so committed to providing Unmatched Client Service that we wrote a book about it—**The BKD Experience: Unmatched Client Service**.



### International Solutions

BKD is one of the largest North American members of Praxity, AISBL\*, a global alliance of independent firms serving clients in approximately 110 countries. We offer multinational clients a gateway to the global marketplace with services delivered by alliance firms committed to the highest standards required in international business.



### Professional Affiliations

BKD is a member of the American Institute of CPAs and its three quality centers: Center for Audit Quality, Employee Benefit Plan Audit Quality Center and Governmental Audit Quality Center.

BKD is registered with the Public Company Accounting Oversight Board, which is required to serve as an independent auditor of public companies. BKD audits approximately 70 SEC registrants, including approximately 30 benefit plans.



### Mission Statement

The mission of BKD is to always strive for excellence in providing services to clients, create rewarding career opportunities and maintain sound professional, business and financial standards.



### Quick Facts

- Clients: Individuals and private and publicly traded businesses in the health care, manufacturing, distribution, financial services, construction and real estate industries, as well as nonprofit and governmental entities
- Total Personnel: Approximately 2,850
- Partners & Principals: Approximately 300
- Net Revenues: \$695 million
- Fiscal Year-End: May 31
- Founded: 1923
- Locations: 40 offices serving clients in all 50 states and internationally

\*Praxity, AISBL is a global alliance of independent firms. Organised as an international not-for-profit entity under Belgium law, Praxity has its executive office in Epsom. Praxity – Global Alliance Limited is a not-for-profit company registered in England and Wales, limited by guarantee, and has its registered office in England. As an Alliance, Praxity does not practice the profession of public accountancy or provide audit, tax, consulting or other professional services of any type to third parties. The Alliance does not constitute a joint venture, partnership or network between participating firms. Because the Alliance firms are independent, Praxity does not guarantee the services or the quality of services provided by participating firms.

## BKD Services

- |                                |                                    |                                    |
|--------------------------------|------------------------------------|------------------------------------|
| • Audit & Assurance            | • Employee Benefit Plans           | • State, Local & International Tax |
| • Tax                          | • Forensics & Valuation Consulting | • Wealth Management                |
| • Business Succession Planning | • Information Technology           | • And More                         |
|                                | • Risk Management                  |                                    |

## Facing Risk with Confidence

When choosing an audit, tax or other professional services provider, your decision may partly depend on whether a prospective firm has the resources to go beyond your current needs. At BKD CPAs & Advisors, we're committed to consistently expanding and enhancing our services, technology and expertise so we can help our clients with their most pressing concerns, even as those concerns change daily. Beyond our proposed services, BKD's Risk Advisory Services division can help with an extensive range of risk consulting resources, including:

- **Data Analytics Consulting** – From identifying important trends and opportunities for operational improvements to reducing risk and preventing fraud, our experienced data analysts can help you get more value from your data.
- **BKD WhiteHat Services** – This monthly subscription offers access to a suite of cybersecurity services, including cyber awareness training, penetration and social engineering testing, a confidential fraud hotline and other risk management tools.
- **DEFCON CYBER™** – This risk assessment tool delivers a weekly report, which includes a cybersecurity score to help measure risk and cyber preparedness, as well as steps you can take to help address these risks and strengthen security.
- **Construction Audit** – An effective construction audit is designed to function as a cost management tool by helping to prevent overcharges, contract noncompliance, conflicting charges and other issues common to construction projects.
- **Enterprise Risk Management (ERM)** – ERM consulting can help you review existing risk management activities, develop a unified vision to enhance these activities and more effectively integrate risk management into your culture and daily operations.
- **Forensics & Valuation Services (FVS)** – BKD's FVS professionals can help clients with fraud prevention, detection, response and recovery. With services including **IntegraReport™**, our anonymous fraud reporting hotline, data analyses and assessments to help identify fraud, as well as investigations, litigation support and expert testimony, we have the tools and expertise needed to help clients address fraud concerns from beginning to end.

## BKD PRIDE Values

## PRIDE VALUES

**WHAT'S IMPORTANT TO YOU?**

The role of trust in business can't be oversold. But a trusted advisor is more than someone you lean on for professional expertise. At BKD, we believe being an advisor who's earned your trust is as much about character as it is know-how. These are the traits we share.

P

**A PASSION FOR HELPING, LEARNING AND IMPROVING**

Our dedication and enthusiasm for making tomorrow better than today can help you make informed decisions to improve business and financial outcomes.

R

**RESPECT FOR EACH OTHER AND THOSE WE SERVE**

Our respect for diversity can provide a variety of skills and talents to meet your needs. By respecting the lessons of our legacy and yours, we can help you build on the opportunities that arise from inevitable change.

I

**INTEGRITY TO DO THE RIGHT THING—NO MATTER WHAT**

Our trustworthiness and objectivity can help you make smart business decisions. A trusted advisor tells you what you need to know, not just what you want to hear.

D

**DISCIPLINE TO GET IT RIGHT THE FIRST TIME**

Our well-established procedures and low-risk approach can help resolve issues and advance your goals. We're dedicated to getting the job done without cutting corners.

E

**A NO-HOLDS-BARRED STANDARD OF EXCELLENCE**

Our ambition and knowledge, along with our commitment to lifelong learning and improving our technical and analytical skills, will consistently surpass your expectations.

This combination of qualities represents what we strive for every day when helping your organization move forward with confidence.

Everyone needs a trusted advisor.

Who's yours?

**BKD**  
CPAs & Advisors

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**State Budgeting and Revenue Forecasting Consultant Services**  
**Summary of Response to RFP**

**Evaluation Criteria:**

<p><b>Directly Related Experience:</b></p>	<ul style="list-style-type: none"> <li>• <u>State of Utah</u>: Dr. Young worked as a Sr. Economist for the State of Utah Legislature for 17 years</li> <li>• <u>Microsoft</u>: Econometrics provided economic forecasting for Microsoft</li> <li>• <u>BOE Securities</u>: Econometrics prepared economic forecasting</li> <li>• <i>See</i> “Selected Related Projects”, at p. 2 of proposal.</li> <li>• <i>See also</i> Tasks 1-7 under “Scope of Work”, at pp. 5-6 of proposal.</li> <li>• <i>See also</i> Work Samples at end of proposal.</li> </ul>
<p><b>Price:</b></p>	<p><u>Total Max Bid</u>: \$29,500</p> <p><i>See</i> attached Official Proposal Price Sheet and Price Comparison Table.</p>
<p><b>Plan/Schedule:</b></p>	<p><u>Plan</u>:</p> <ul style="list-style-type: none"> <li>• Gather historical information on revenue sources – January 8, 2022;</li> <li>• Develop time-series forecasting models for large revenue sources – January 15, 2022;</li> <li>• Compare models of the Arkansas economy and revenue picture – January 29, 2022</li> <li>• <i>See</i> Executive Summary, at pp. 8-9 of proposal; and Vendor’s Qualifications, at pp. 9-10 of proposal.</li> <li>• <i>See also</i> Scope of Work, at pp. 5-6 of proposal.</li> </ul>
<p><b>Availability:</b></p>	<ul style="list-style-type: none"> <li>• Available to attend legislative meetings as requested, see Task 5, at p. 6 of proposal.</li> </ul>

**Econometrics (Cont'd)**

	<ul style="list-style-type: none"><li>• <i>See also</i> Response to #’d paragraphs, submitted separately, at p. 12, Section 3.0, where Dr. Young indicates he is available “by text, cell phone call, or email.”</li></ul>
<b>Personnel:</b>	<ul style="list-style-type: none"><li>• Dr. Thomas Young, PhD. – Project Lead</li><li>• Dr. Andre Baksh – Economist</li> <li>• <i>See</i> Project Team Bios, at pp. 1-4 of proposal.</li></ul>
<b>Past Performance:</b>	<ul style="list-style-type: none"><li>• Econometrics has been performing this type of work for 10 years, with Dr. Young, as an individual working as an individual for the Utah Legislature for 15 years, <i>See</i> Vendor Profile at p. 7 of proposal.</li> <li>• Work Samples – beginning at p. 16 of proposal.</li><li>• Client List – at p. 10 of proposal.</li> <li>• <i>See also</i> References Table (References – p. 10 of proposal).</li></ul>
<b>Compliance with RFP Requirements:</b>	See Attached Checklist.
<b>Subcontractors:</b>	<ul style="list-style-type: none"><li>• None.</li></ul>

Econometric Studios, LLC  
1675 Devonshire Drive  
SLC, UT 84108  
801-647-4979  
econometricstudios.com

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Arkansas General Assembly  
State Budgeting and  
Revenue Forecasting  
Consultant Services

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*For: Arkansas General Assembly*

*From: Econometric Studios, LLC*

*Date: August 30, 2021*

# Contents

Project Background .....	1
About Econometric Studios, LLC Consulting .....	1
Project Team Bios.....	1
Scope of Work .....	5
Project Overview .....	5
Task 1: Prepare fiscal impact reports for proposed legislation, including dynamic scoring .....	5
Task 2: Provide revenue forecasting and analysis.....	5
Task 3: Provide consultation and advisory services regarding proposed legislation .....	5
Task 4: Provide budgeting and forecasting research analysis, as requested, including reports regarding updates to state and federal laws, and best practices in state budgeting .....	6
Task 5: Attend meetings of the Committee, as requested, or of other legislative committees as authorized by the Committee co-chairs .....	6
Task 6: Be readily accessible to Committee members and BLR staff .....	6
Task 7: Be available for periodic education discussions with Committee members and staff.....	6
Consulting Capabilities.....	6
Budget & Timeline.....	6
Budget.....	6

## Project Background

Econometric Studios (ES) recognizes that the Arkansas General Assembly is seeking to establish a contractual service agreement with a company to provide state budgeting and revenue forecasting consulting services. Over the past 15 years, Dr. Young has completed numerous revenue forecasts, fiscal impact reports, dynamic scoring, revenue monitoring, and analysis projects related to state government revenue. Attached to this response are examples of reports Dr. Young has authored, including monthly revenue monitoring, examples of dynamic fiscal notes, and other revenue/economics related work with the Utah Legislature. Dr. Young has led the development of consensus taxable sales tables, assumptions behind revenue forecasting, and revenue impacts from tax law changes. He is well-known as the top economist on Utah's Capitol Hill for his rigor and knowledge of revenue associated with tax law. The following bios and selected project experience lists outline the relevant experience of the project team.

## About Econometric Studios, LLC Consulting

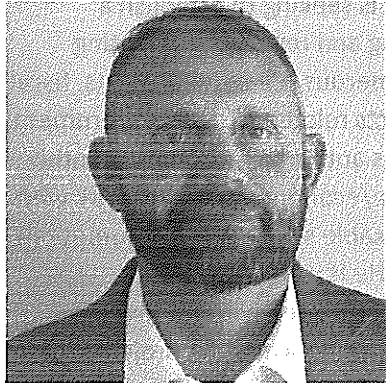
At Econometric Studios (ES) we believe in the power of intuition mixed with advanced analytics to predict the world around us. Now more than ever, deep subject matter knowledge combined with world-class analytics offers a realistic view of the future.

We partner with the very best in model building and tax law to produce forecasts that supersede competitors' outdated modeling frameworks. The company is 51% minority owned.

## Project Team Bios

Dr. Thomas Young will serve as project lead on this engagement. Econometric Studios has worked with a wide variety of analysts, economists, and financial experts to complete its projects for elected representatives and the business executives. Dr. Young will be joined by Dr. Baksh, a professional economist with 25-years of experience forecasting revenues at the state and county level.

Thomas Young, Principal | Chief Economist



Over the past 17 years, Dr. Young has performed thousands of revenue forecasts for the fastest growing state in the country – the State of Utah. He is well-known as the top economist on Capitol Hill. In addition, he has helped hundreds of companies improve their forecasting through unique intuition and insightful data mining. His public policy work has been presented at the National Conference of State Legislatures, the Federation of Tax Administrators, the Regional Economic Models Incorporated Annual Conference, and the UETN Technical Summit, to name a few. He has successfully managed many of the high-profile issues facing the Utah Legislature. He is also on the cutting-edge of many other economics issues, including dynamic fiscal notes, budget stress testing, survey weighting, and economic impact analyses, to name a few. He writes frequently on the economy and brings a passion to offering objective and accurate advice.

Through his career thus far, in addition to leading the economic forecasting process with the Utah Legislature, Dr. Young has worked with companies and organizations operating across over 60 industries, including Microsoft (forecasting), Tata Consultancy, and Wells Fargo, among others.

## Selected Related Projects

*A Study of the Optimal Tax Systems*  
Utah Legislature (UT)

*Stress Testing the State Budget*  
Governor's Office of Planning and Budget and the Utah Legislative Fiscal Analyst (UT)

*The Economic Impact of the Goldan Hospitality Development*  
Goldan Hospitality (WV)

*An Evaluation of Social Impact Bonding for At-Risk Students*  
Graduation Alliance (UT)

*Economic Pressure Points – What Matters for Growth?*  
Utah Legislature (UT)

*Looking at the Relationship Between Airbnb Growth and Hotel Performance in Austin, Texas*  
BNB Shield, LLC (TX)

*Identifying Ways to Reduce Length of Survey by Looking at Funnel Metrics, Perception Metrics, and Experience Metrics*  
Microsoft (WA)

*Economic Impact Analysis of the Life Insurance Industry*  
Provision Corporation, LLC (NY)

*An Economic Impact Analysis of a New Oil & Gas Technology Company in New Orleans*  
Greenaate Plans (LA)

## Work Experience

*Principal | Econometric Studios, LLC, Salt Lake City, Utah (2004- present) (FT/PT dependent)*

*Senior Economist | Utah Legislature, Salt Lake City, Utah (2006-2021)*

*Director of Investments | Thatcher Chemical, Salt Lake City, Utah (2005-2006)*

*Chief Investments Officer (PT) | Intuitive Funding Group, Salt Lake City, Utah (2012 - 2015)*

## Education

*Doctor of Philosophy in Economics | University of Utah (2009)*

*Bachelor of Science in Applied Physics | University of Utah (2004)*


*Bachelor of Arts in Economics | University of Utah (2004)*


## Professional Affiliations


*Board of Directors Member, American Preparatory Academy*


*Board of Governors Member, Salt Lake Chamber of Commerce*

# Andre Baksh

3691 South 2235 East 

Salt Lake City, Utah 84109 

slbaksh@msn.com 

<https://www.linkedin.com/in/andre-baksh-60b80387> 

## Skills

- Econometric/economic modeling (translog, quadratic and Cobb Douglas, price elasticity studies)
- Forecasting and time series Modeling (ARIMA, MARIMA, Statespace modeling, VAR, BVAR)
- Cross sectional modeling (logistic regression, ordinary least square, generalized linear modeling)
- Research design, data analytics, predictive analytics
- Simulation (Monte Carlo, Markov Chain Monte Carlo, sampling methods)
- Meta-analysis
- Health economic outcomes research (Cost-effective analysis, cost-utility analysis, return-on-investment analysis)
- Highly proficient in SAS, R, SPSS, SQL (for database access) and Microsoft products (Excel, Word, Publisher, PowerPoint, and SharePoint)

## Experience

12/2012– 9/2018

**Health Economist / Division of Medicaid and Health Financing, Utah Department of Health**

- Forecast Medicaid enrollment using time series and other econometric methods
- Conduct health economics outcome analyses (ROI and CEA)
- Collaborate with multiple agencies to develop and produce outcomes analyses
- Provide subject matter expertise and mentoring in population health projects evaluation and delivery
- Develop and implement economic modeling and conduct meta-analyses

11/2006– 12/2012

**Senior Economist / Utah State Tax Commission**

- Forecast sales and use tax revenues

- Design and conduct revenue impact studies utilizing econometric and economic modelling
- Develop and maintain tax databases
- Represent the Tax Commission in national forums and conferences
- Compute and prepare fiscal notes for the Utah State Legislature

07/2002– 11/2006

#### Economist / Salt County Auditor's Office

- Forecast sales and property tax revenues
- Developed and generated Salt Lake County leading and coincident indexes
- Produced Salt Lake County economic conditions report and presented to county council
- Conduct feasibility studies and present results to large audiences

### Education

June 2006

#### Economics Ph.D. / University of Utah

Fields: Healthcare Economics, Industrial Organization and Econometrics

### Papers and publications

"Application of the Markov Chain Monte Carlo Method to predict allowance for doubtful accounts." (2010). Policy paper.

*Salt Lake County Economic Indexes Report.* (2002-2006). Salt Lake County, Auditor's Office.

"Efficiency gains from privatizing the Salt Lake County jail." (2005). Policy paper.

Baksh, A. and Hoyt, J. "The effect of academic scholarships on college attendance." *College and University*, 76(4): 3-8

## Scope of Work

### Project Overview

ES understands that the Arkansas General Assembly is looking for an objective third-party economist to produce revenue forecasts and analysis, develop fiscal impact models, perform dynamic scoring, and act as a resource for the Committee. Dr. Young has extensive experience in all aspects of revenue forecasting, fiscal notes, dynamic scoring, tax law and its effect on revenue, and best practices in revenue-related policies. He is well-known for this and has presented on these topics at the National Conference of State Legislatures, the Federation for Tax Administrators, among others.

Attached to this report are examples of Dr. Young's work.

### Task 1: Prepare fiscal impact reports for proposed legislation, including dynamic scoring

For the past 15 years, Dr. Young has been doing fiscal notes of proposed legislation. He is versed in doing fiscal impact estimates for income tax, sales tax, corporate tax, insurance premium taxes, cigarette and tobacco taxes, liquor profits, severance taxes, among many others. He is also versed in the expenditure side of the balance sheet, having provided budget oversight for the Utah State Tax Commission, the Department of Transportation, the State Board of Education, the Utah Science and Technology Research Initiative, the Utah Education and Telehealth Network, among others. He has presented his work to hundreds of legislative committees and at national conferences. Dr. Young was the first to develop dynamic scoring with the Utah Legislature, and examples of his work are attached to this bid.

### Task 2: Provide revenue forecasting and analysis

For the past 10 years, Dr. Young has provided the Utah Legislature with monthly and (at times) daily revenue updates. In addition to what was mentioned above, he has significant experience controlling for monthly anomalies in the data (such as the recent shift in income tax revenue stemming from the filing delay) and controls for many factors in his forecasting methodologies. In addition to alternative methods and intuition, Dr. Young uses cutting-edge data sources (such as SafeGraph cell phone tracking) and traditional sources (such as Global Insight and Oxford) to perform his monthly and semi-annual revenue targets. Attached to this report are examples of his monthly revenue reports and a quarterly revenue update.

### Task 3: Provide consultation and advisory services regarding proposed legislation

Dr. Young views the role as a professional "options offeror". Over many years, Dr. Young has learned that the best type of consultant is one who offers options to decision makers. He puts numbers to potential options and offers advice on likely outcomes from selected options. In this role, Dr. Young will offer advice on what other states are doing, what best practices might be, and how options might play out over time.

Task 4: Provide budgeting and forecasting research analysis, as requested, including reports regarding updates to state and federal laws, and best practices in state budgeting

Dr. Young has 15 years of experience negotiating revenue forecasts among executive and legislative branch economists. He comes to the table with an independent, complete picture of the likely revenue outlook and is able to discuss details of revenue forecasts. Over these 15 years, he has frequently updated revenue forecasts for state and federal tax law changes, including the most recent federal tax law changes. In addition, his work on stress testing state budgets, defining one-time and ongoing revenue trends, dynamic fiscal notes, tax revenue simulations, evaluations of tax incentives, and long-term budget outlooks have been used by legislators and presented at national conferences.

Task 5: Attend meetings of the Committee, as requested, or of other legislative committees as authorized by the Committee co-chairs

Dr. Young enjoys attending legislative meetings and will attend when requested.

Task 6: Be readily accessible to Committee members and BLR staff

Dr. Young will provide his cell phone and email address to all Committee members and BLR staff. He will be available for discussion 24/7.

Task 7: Be available for periodic education discussions with Committee members and staff

Dr. Young developed the consensus public education forecasting process for the State of Utah and is well-versed in educational funding equity and education policy options. He also serves as a member of the Board of Directors for one of the nation's largest charter schools – American Preparatory Academy.

### Consulting Capabilities

In addition to the traditional modeling capabilities of most economics firms, Dr. Young and his team are versed in cutting-edge revenue analysis using such tools as cell phone tracking visits data to project revenue (SafeGraph) and sentiment analysis of Twitter data for predicting revenue. Additionally, ES has experience in projecting public education enrollment growth, Medicaid enrollment and cost estimates, property tax, and many other forecasts. ES is also versed in other tools used for dynamic scoring, such as REMI, IMPLAN, RIMS-II, and big data modeling tools such as Spark. Additionally, ES is also experienced in the use of other firms' forecasting services, such as Global Insight, Oxford, and Macroeconomic Advisers.

## Budget & Timeline

### Budget

The above-described scope of work can be completed by ES for the cost ranging from \$75 per hour to \$150 per hour. Additionally, ES requires a retainer of \$5,000 and reimbursement for actual travel, lodging, and documented expenses. The cost for each task is broken out in the following table. The second table that follows presents the bid in the format presented in the RFP format.

Task	Budget
Activity	Cost
Retainer	\$5,000
Travel, lodging, and meals reimbursement	Actual cost
Prepare fiscal impact reports for proposed legislation, including dynamic scoring	\$100/hr.
Provide revenue forecasting and analysis	\$75/hr.
Provide consultation and advisory services regarding proposed legislation	\$150/hr.
Provide budgeting and forecasting research and analysis, as requested, including reports regarding updates to state and federal laws, and best practices in state budgeting	\$150/hr.
Attend meetings of the Committee, as requested, or of other legislative committees as authorized by the Committee co-chairs	\$150/hr.
Be readily accessible to Committee members and BLR staff	\$150/hr.
Overall	\$75 - \$150/hr.

Description	Price per hour	Number of positions
Supervisor	\$150	1
Other Professional Staff (List by Position) (only if needed, an analyst)	\$75	0.10
Support Staff	\$25	0.05
Description	Price per unit (if applicable)	Total Price
Subcontractors (if any)	N/A	N/A
Travel	Actual cost	0
Any Additional Goods & Services (List Individually)	\$5,000 retainer	
Retainer (\$5,000)		
If needed, specialized software such as REMI, IMPLAN, or RIMS-II	\$275 and up	
Total Maximum Amount of Bid		\$29,500

## Vendor Profile

**Business Name:** Econometric Studios, LLC

**Business Address:** 1675 Devonshire Drive, SLC, UT 84108

**Primary Contact Information:** Thomas Young, Chief Economist, 801-647-4979,  
[Thomas.young@econometricstudios.com](mailto:Thomas.young@econometricstudios.com)

**How many years has this company been in this type of business:** 10 years. Thomas has 15 years of experience in this type of work.

**Owners of Econometric Studios, LLC:** Andre Baksh and Thomas Young.

**A disclosure of all the states and jurisdictions in which the Vendor does business and the nature of the business for each state or jurisdiction:** The company offers its services in all 50 states and other countries. The nature of the business is forecasting and model building.

**A disclosure of all the states and jurisdictions in which the Vendor has contracts to supply the type of services requested under this RFP and the nature of the goods or services involved for each state or jurisdiction:** The company provides modeling services for private companies ranging from real estate investors to equity analysts. Dr. Young has provided directly related services as an employee of the Utah Legislature for 15 years but is no longer an employee of the Legislature.

**A disclosure of the details of any finding or plea, conviction, or adjudication of guilt in a state or federal court of the Vendor for any felony or any other criminal offense other than a traffic violation committed by the persons identified as management, supervisory, or key personnel:** None.

**A disclosure of the details of any bankruptcy, insolvency, reorganization, or corporate or individual purchase or takeover of another corporation, including without limitation bonded indebtedness, and any pending litigation of the Vendor:** None.

**A disclosure of any conflicts of interest on the part of the Vendor or its personnel that will be working on this project:** None.

**Additional disclosures and information that the Executive Subcommittee may determine to be appropriate for the procurement involved:** None.

**Specialized services:** Dr. Young is well-versed in traditional and cutting-edge analytical tools and data sources, such as cell-phone tracking for revenue forecasting and Twitter sentiment for revenue forecasting. These cutting-edge tools are combined with deep subject matter knowledge of tax law and traditional forecasting tools, such as vector autoregression, autoregressive integrated moving average, and many other time-series analysis tools. Dr. Young brings a unique ability to simplify trends and forecasts into figures and explanations that are easy to understand.

**Disclosure of Litigation:** None

**Executive Summary:**

- Gather historical information on revenue sources by month, quarter, year, and if possible, daily.
  - Due: January 8, 2022
- Develop time-series forecasting models for large revenue sources
  - Due: January 15, 2022
- Compare models of the Arkansas economy and revenue picture using dynamic, general equilibrium modeling structure
  - Due January 29, 2022
- At this point, and considering the consultant's long history in fiscal notes and economic impact analyses, the consultant should have a working understanding of how best to assist the

Committee in its desire for an independent static and dynamic fiscal noting process. Dr. Young will be available for questions and modeling once the contract starts.

**Vendor's Qualifications:**

**A brief professional history, including the number of years of experience in providing the services required under this RFP or related experience and any professional affiliations and trade affiliations:**

Dr. Young has 15 years of experience working with the Utah Legislature and the Utah State Tax Commission on directly related work. Dr. Baksh has 25 years of experience doing forecasting work within state and local governments. Dr. Young is a certified FINRA arbitrator, a member of the American Economic Association, the National Association for Business Economics, a member of the Board of Directors of American Preparatory Academy, and a pending member of the Board of Governors of the Salt Lake Chamber of Commerce.

**A listing of current accounts and the longevity of those accounts: years are in parentheses.**

Microsoft (5), BOE Securities (7 years), HM Enterprises (4 years), ValueWalk (8 years), Intuit (1 year), Kitley Tech (1 year), SafeGraph (2 years), Points Consulting (1 year), Zest Tea (1 year), Gravis Marketing (7 years)

**An organizational chart highlighting the names/positions that will be involved in the contract, including the individual who will be primarily responsible for managing the account on a day-to-day basis:** Dr. Young will be the primary contact managing the contract. Dr. Young acts as the Chief Executive of Econometric Studios, LLC.

**A detailed description of the plan for assisting the Committee in meeting its goals and objectives, including how the requirements will be met and what assurances of efficiency and success the proposed approach will provide:**

- Gather historical information on revenue sources by month, quarter, year, and if possible, daily.
  - Due: January 8, 2022
- Develop time-series forecasting models for large revenue sources
  - Due: January 15, 2022
- Compare models of the Arkansas economy and revenue picture using dynamic, general equilibrium modeling structure
  - Due January 29, 2022
- At this point, and considering the consultant's long history in fiscal notes and economic impact analyses, the consultant should have a working understanding of how best to assist the Committee in its desire for an independent static and dynamic fiscal noting process. Dr. Young will be available for questions and modeling once the contract starts.

**An indication of the timeframe the Vendor would require to assist the Committee in meeting its goals and objectives:** The RFP states January 1, 2022 as the contract begin date. As such, below is ES's timeline:

- Gather historical information on revenue sources by month, quarter, year, and if possible, daily.

- Due: January 8, 2022
- Develop time-series forecasting models for large revenue sources
  - Due: January 15, 2022
- Compare models of the Arkansas economy and revenue picture using dynamic, general equilibrium modeling structure
  - Due January 29, 2022
- At this point, and considering the consultant's long history in fiscal notes and economic impact analyses, the consultant should have a working understanding of how best to assist the Committee in its desire for an independent static and dynamic fiscal noting process. Dr. Young will be available for questions and modeling once the contract starts.

**A detailed, narrative statement listing the three (3) most recent, comparable contracts (including contact information) that the Vendor has performed and the general history and experience of its organization:**

- (1) Utah Legislature: Dr. Young was a senior economist with the Utah Legislature, performing substantially similar work.
  - a. Nate Talley, Governor's Chief Economist, 801-699-1889
- (2) Microsoft: Prepared confidential forecasting.
  - a. Amanda Lankford, 202-386-6347
- (3) BOE Securities: Prepared economic forecasting.
  - a. Bufus Outlaw, 609-216-3094

**At least three (3) references from entities that have recent (within the last three (3) years) contract experience with the Vendor and are able to attest to the Vendor's work experience and qualifications relevant to this RFP:**

- (1) Utah Legislature: Dr. Young was a senior economist with the Utah Legislature, performing substantially similar work.
  - a. Nate Talley, Governor's Chief Economist, 801-699-1889
- (2) Microsoft: Prepared confidential forecasting.
  - a. Amanda Lankford, 202-386-6347
- (3) BOE Securities: Prepared economic forecasting.
  - a. Bufus Outlaw, 609-216-3094

**A list of every business for which Vendor has performed, at any time during the past three (3) years, services substantially similar to those sought with this solicitation. Err on the side of inclusion; by submitting an offer, Vendor represents that the list is complete:**

Utah Legislature, Microsoft, BOE Securities, HM Enterprises, ValueWalk, Intuit, Western Governors University, University of Utah, Dataforce, Gratia Group, Ascend, Kessman Engineering, Rutherford International, Kitley Tech, SafeGraph, Points Consulting, The Valley Economic Alliance, Zest Tea, Southeastern Company Police, Gravis Marketing, Tata Consultancy

**List of failed projects, suspensions, debarments, and significant litigation: None.**

**An outline or other information relating to why the Vendor's experience qualifies in meeting the specifications stated in Section 3 of this RFP: Dr. Young has 15 years of experience doing substantively the same work. He has pushed the envelope in terms of using economic analysis for improving the state budgeting process with the Utah Legislature. His experience includes:**

- (1) Revenue forecasting.
- (2) Revenue monitoring.
- (3) Appropriations limits.
- (4) Budget management.
- (5) Economic incentives evaluations.
- (6) Long-term budgeting.
- (7) Monthly revenue updates.
- (8) Revenue and budget stress testing.
- (9) Developing a public-facing tax revenue simulator.
- (10) Revenue volatility.



**State of Arkansas**  
**Bureau of**  
**Legislative Research**

Marty Garrity, Director  
 Kevin Anderson, Assistant Director  
 for Fiscal Services  
 Tim Carlock, Assistant Director  
 for Information Technology  
 Matthew Miller, Assistant Director  
 for Legal Services  
 Estella Smith, Assistant Director  
 for Research Services

**REQUEST FOR PROPOSAL**

RFP Number: BLR-210002	
Commodity: <b>State Budgeting and Revenue Forecasting Consulting Services</b>	Proposal Opening Date: <b>August 30, 2021</b>
Date: <b>June 21, 2021</b>	Proposal Opening Time: <b>4:00 P.M. CDT</b>

PROPOSALS SHALL BE SUBMITTED IN HARD COPY AND ELECTRONIC FORMAT AND WILL BE ACCEPTED UNTIL THE TIME AND DATE SPECIFIED ABOVE. THE PROPOSAL ENVELOPE MUST BE SEALED AND SHOULD BE PROPERLY MARKED WITH THE PROPOSAL NUMBER, DATE AND HOUR OF PROPOSAL OPENING, AND VENDOR'S RETURN ADDRESS. THE ELECTRONIC SUBMISSIONS SHOULD BE CLEARLY MARKED AS A PROPOSAL IN RESPONSE TO RFP NO. BLR-210002. IT IS NOT NECESSARY TO RETURN "NO BIDS" TO THE BUREAU OF LEGISLATIVE RESEARCH.

Vendors are responsible for delivery of their proposal documents to the Bureau of Legislative Research prior to the scheduled time for opening of the particular proposal. When appropriate, Vendors should consult with delivery providers to determine whether the proposal documents will be delivered to the Bureau of Legislative Research office street address prior to the scheduled time for proposal opening. Delivery providers, USPS, UPS, FedEx, and DHL, deliver mail to our street address, 500 Woodlane Street, State Capitol Building, Room 315, Little Rock, Arkansas 72201, on a schedule determined by each individual provider. These providers will deliver to our offices based solely on our street address.

MAILING ADDRESS: 500 Woodlane Street State Capitol Building, Room 315 Little Rock, Arkansas 72201	PROPOSAL OPENING LOCATION: Bureau of Legislative Research Director's Office State Capitol Building, Room 315
E-MAIL: thayerj@blr.arkansas.gov	
TELEPHONE: (501) 682-1937	

Company Name: Econometric Studios

Name (type or print): Thomas Young

Title: CEO

Address: 1675 Devonshire Drive

Telephone Number: 801-647-4974

Fax Number: \_\_\_\_\_

E-Mail Address: thomas.young@econometr  
icstudios.  
com

Identification: 46-1896331  
 Federal Employer ID Number \_\_\_\_\_ Social Security Number 529 637300

**FAILURE TO PROVIDE TAXPAYER IDENTIFICATION NUMBER MAY  
 RESULT IN PROPOSAL REJECTION**

Business Designation (check one):	Individual <input type="checkbox"/>	Sole Proprietorship <input type="checkbox"/>	Public Service Corp <input type="checkbox"/>
	Partnership <input type="checkbox"/>	<del>Corporation</del> <input checked="" type="checkbox"/>	Government/ Nonprofit <input type="checkbox"/>

GENERAL DESCRIPTION:	State Budgeting and Revenue Forecasting Consulting Services
TYPE OF CONTRACT:	Term

**MINORITY BUSINESS POLICY**

Participation by minority businesses is encouraged in procurements by state agencies, and although it is not required, the Bureau of Legislative Research ("BLR") supports that policy. "Minority" is defined at Arkansas Code Annotated § 15-4-303 as "a lawful permanent resident of this state who is: (A) African American; (B) Hispanic American; (C) American Indian; (D) Asian American; (E) Pacific Islander American; or (F) A service-disabled veteran as designated by the United States Department of Veteran Affairs". "Minority business enterprise" is defined at Arkansas Code Annotated § 15-4-303 as "a business that is at least fifty-one percent (51%) owned by one (1) or more minority persons". The Arkansas Economic Development Commission conducts a certification process for minority businesses. Vendors unable to include minority-owned businesses as subcontractors may explain the circumstances preventing minority inclusion.

**EQUAL EMPLOYMENT OPPORTUNITY POLICY**

The Vendor shall submit a copy of the Vendor's Equal Opportunity Policy. EO Policies shall be submitted in hard copy and electronic format to the Bureau of Legislative Research accompanying the solicitation response. The Bureau of Legislative Research will maintain a file of all Vendor EO policies submitted in response to this solicitation. The submission is a one-time requirement, but Vendors are responsible for providing updates or changes to their respective policies.

**EMPLOYMENT OF ILLEGAL IMMIGRANTS**

The Vendor shall certify prior to award of the contract that it does not employ or contract with any illegal immigrants in its contract with the Bureau of Legislative Research. Vendors shall certify on the Proposal Signature Page and online at <https://www.ark.org/dfa/immigrant/index.php/disclosure/submit/new> . Any subcontractors used by the Vendor at the time of the Vendor's certification shall also certify that they do not employ or contract with any illegal immigrant. Certification by the subcontractors shall be submitted within thirty (30) days after contract execution.

**RESTRICTION OF BOYCOTT OF ISRAEL**

Pursuant to Arkansas Code § 25-1-503, a public entity shall not enter into a contract with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of Israel. This prohibition does not apply to a company which offers to provide the goods or services for at least twenty percent (20%) less than the lowest certifying business.

By checking the designated box on the Proposal Signature Page, the Vendor agrees and certifies that they do not, and will not for the duration of the contract boycott Israel.

**PROPOSAL SIGNATURE PAGE**

Type or Print the following information:

**Prospective Contractor Contact Information**

Contact Person: Thomas Young Title: CEO

Phone: 2014749719 Alternate Phone: \_\_\_\_\_

Email: thomas.young@economemetricstudios.com

**Confirmation of Redacted Copy**

YES, a redacted copy of proposal documents is enclosed.

NO, a redacted copy of submission documents is not enclosed. I understand a full copy of non-redacted submission documents will be released if requested.

*Note: If a redacted copy of the proposal documents is not provided with the Vendor's proposal, and neither box is checked a copy of the unredacted documents will be released in response to any request made under the Arkansas Freedom of Information Act (FOIA).*

**Illegal Immigrant Confirmation**

By signing and submitting a response to this RFP and by certifying online at <https://www.ark.org/dfa/immigrant/index.php/disclosure/submit/new>, the Vendor agrees and certifies that they do not employ or contract with illegal immigrants. If selected, the Vendor certifies that they will not employ or contract with illegal immigrants during the aggregate term of the contract.

**Israel Boycott Restriction Confirmation**

By checking the box below, the Vendor agrees and certifies that they do not boycott Israel, and if selected, will not boycott Israel during the aggregate term of the contract.

Vendor does not and will not boycott Israel.

***An official authorized to bind the Vendor to a resultant contract shall sign below.***

The Signature below signifies agreement that any exception that conflicts with the requirements of this RFP will cause the Vendor's proposal to be disqualified.

Authorized Signature: [Signature] Title: CEO  
Printed/Typed Name: Thomas Young Date: 8/29/21


**ATTACHMENT A  
OFFICIAL PROPOSAL PRICE SHEET**

**Note: The Official Proposal Price Sheet must be submitted in a separate envelope or e-mail. Any reference to pricing in the technical proposal shall be cause for disqualification from further considerations for award.**

1. Bids should provide at least a 180-day acceptance period.
2. By submission of a proposal, the proposer certifies the following:
  - A. Prices in this proposal have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition;
  - B. No attempt has been made nor will be by the proposer to induce any other person or firm to submit a proposal for the purpose of restricting competition;
  - C. The person signing this proposal is authorized to represent the company and is legally responsible for the decision as to the price and supporting documentation provided as a result of this RFP; and
  - D. Prices in this proposal have not been knowingly disclosed by the proposer and will not be prior to award to any other proposer.

**The Official Price Proposal Sheet must be submitted in substantially the following form, allowing for the inclusion of specific information regarding positions, goods, services, etc., and signed by an official authorized to bind the Vendor to a resultant contract.**

DESCRIPTION	PRICE PER HOUR	NUMBER OF POSITIONS
Supervisor	150	1
Other Professional Staff (List by Position)	75	0.1
Support Staff	25	0.05
DESCRIPTION	PRICE PER UNIT (IF APPLICABLE)	TOTAL PRICE
Subcontractors (if any)	N/A	N/A
Travel	@ cost	@ cost
Any Additional Goods & Services (List Individually)	@ cost	@ cost
<b>TOTAL MAXIMUM AMOUNT OF BID:</b>		29,500

 CEO

8/29/21

# EXAMPLES OF DIRECTLY RELATED WORK

# MONTHLY STATE REVENUE SNAPSHOT 5 | 2021

based on the Utah State Tax Commission Monthly Revenue Summary (Report TC-23)

General Fund	Projected Growth	Actual Growth Rate	Projected Range in Collections Through 10 Months	Actual Collections	Condition	Jan-21	Feb-21	Mar-21	Apr-21	May-21
	Rate - May Estimates (Annual) (see Note 1)									
Sales & Use Tax	9.6%	14.4%	\$2,076,000,000 - \$2,174,000,000	\$2,208,546,871	Above target range	10.2%	10.0%	10.3%	11.7%	14.4%
All Other Sources	-5.5%	-15.0%	\$355,000,000 - \$578,000,000	\$430,128,334	On target	-15.4%	-14.9%	-15.7%	-10.9%	-15.0%
Subtotal General Fund	6.6%	8.5%		\$2,638,675,205		5.4%	5.7%	5.7%	7.5%	8.5%
Sales & Use Tax Set-Asides	9.1%	8.8%	\$702,000,000 - \$734,000,000	\$724,219,747	On target	5.9%	7.0%	7.4%	6.6%	8.8%
<b>Education Fund/USF</b>										
Individual Income Tax	44.3%	41.1%	\$4,082,000,000 - \$4,899,000,000	\$4,608,313,573	On target	46.6%	36.0%	41.5%	38.9%	41.1%
Corporate Tax	26.0%	89.5%	\$356,000,000 - \$519,000,000	\$597,035,729	Above target range	44.1%	50.9%	52.1%	45.3%	89.5%
All Other Sources	-30.0%	-21.6%	\$3,000,000 - \$30,000,000	\$19,921,076	On target	-65.0%	-52.5%	-51.5%	-45.2%	-21.6%
Subtotal Education Fund	41.6%	44.9%		\$5,225,270,378		45.7%	36.6%	41.7%	38.9%	44.9%
Subtotal GF/EF	27.9%	30.3%		\$7,863,945,583		29.8%	24.4%	27.1%	26.3%	30.3%
<b>Transportation Fund</b>										
Motor Fuel Tax	4.6%	1.5%	\$299,000,000 - \$323,000,000	\$304,510,098	On target	1.9%	1.7%	1.0%	0.1%	1.5%
Special Fuel Tax	6.7%	6.5%	\$123,000,000 - \$140,000,000	\$136,328,075	On target	5.9%	7.0%	7.0%	6.4%	6.5%
Other	5.8%	8.7%	\$82,000,000 - \$91,000,000	\$91,709,000	Above target range	10.5%	3.1%	6.8%	7.2%	8.7%
Subtotal Transportation Fund	5.3%	3.9%		\$532,547,173		4.2%	3.3%	3.4%	2.8%	3.9%
Total, GF/EF/USF/TF	26.0%	28.3%		\$8,396,492,756		27.7%	22.8%	25.2%	24.3%	28.3%

Note 1: This column is the February 2021 consensus, which assumes a \$770 million shift in income tax payments from FY 2020 to FY 2021.

## SUMMARY

FY 2021 revenue to the General and Education Funds totaled \$7.9 billion through the first ten months, a year-over-year (YoY) increase of 30.3%. This 30.3% is up from April's 26.3%, but down from November's 32.6%, December's 33.7%. The consensus target for the whole fiscal year is 27.9%. Current GF/EF revenue collections are slightly above the point target. The YoY difference in income tax collections may accelerate in the next two months as taxes due in May 2021 are compared to last year when income tax filing was delayed until July. Of note, corporate income tax payments were much stronger than expected in the past month, pushing corporate to 89.5% YoY growth.

## GENERAL FUND

General Fund collections totaled \$2.6 billion through the first ten months of FY 2021, representing a YoY growth rate of 8.5%. The current consensus growth rate is 6.6%. Sales tax is largely behind the General Fund performance, up 14.4%. As it has all year, the sales tax growth rate continues to outperform expectations. Looking over the prior five months, the YoY sales tax growth rate has ranged from 10.0% to 14.4%.

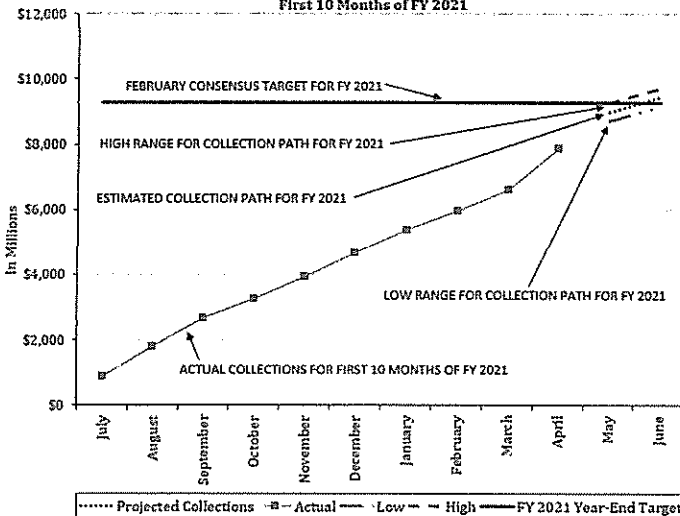
## EDUCATION FUND

Education Fund collections reached \$5.2 billion through the first ten months of FY 2021, representing a YoY increase of 44.9%. The 44.9% increase is largely the result of tax payments occurring in July 2020 instead of April 2020. On the whole, Education Fund collections through April are slightly above target. In the coming month, growth rates associated with collections may accelerate. This may happen because May 2021 final payments will be compared against a period where final payments had not yet been collected due to the shift in the filing deadline to July 2020.

## TRANSPORTATION FUND

Transportation Fund collections reached \$533 million through the first ten months of FY 2021, a rate of 3.9% over the prior year. This is below the consensus target of 5.3%. It is important to note that the next few months will compare gas purchases against March, April and May of 2020 when fuel tax revenues were low. Revenue may accelerate towards the target over the next two months.

Actual and Projected GF/EF Revenue, July through April, FY 2021  
First 10 Months of FY 2021



A Joint Publication of:



Governor's Office of Planning and Budget



Office of the  
Legislative Fiscal Analyst

May 14, 2021

# MONTHLY STATE REVENUE SNAPSHOT

2021

based on the Utah State Tax Commission Monthly Revenue Summary (Report TC-23)

General Fund	Projected Growth	Actual Growth Rate	Projected Range in Collections Through 12 Months		Actual Collections	Condition	Feb-21	Mar-21	Apr-21	May-21	Jun-21
	Rate - May Estimates (Annual) (see Note 1)										
Sales & Use Tax	9.6%	16.5%	\$2,381,000,000 - \$2,506,000,000		\$2,653,424,839	Above target range	10.3%	11.7%	14.4%	16.5%	16.5%
All Other Sources	-5.7%	-7.1%	\$405,000,000 - \$659,000,000		\$507,260,010	On target	-8.6%	-4.6%	-10.7%	-7.4%	-7.1%
<b>Subtotal General Fund</b>	<b>6.5%</b>	<b>11.9%</b>			<b>\$3,160,684,849</b>		<b>7.1%</b>	<b>8.7%</b>	<b>9.5%</b>	<b>11.7%</b>	<b>11.9%</b>
Sales & Use Tax Set-Asides	6.5%	12.5%	\$825,000,000 - \$849,000,000		\$898,936,622	Above target range	7.4%	6.6%	8.7%	10.5%	12.5%
<b>Education Fund/Uniform School Fund</b>											
Individual Income Tax	44.3%	53.3%	\$4,992,000,000 - \$5,991,000,000		\$6,122,845,381	Above target range	41.5%	38.9%	41.1%	58.7%	53.3%
Corporate Tax	26.0%	108.1%	\$404,000,000 - \$589,000,000		\$744,139,115	Above target range	52.1%	45.3%	89.5%	94.4%	108.1%
All Other Sources	-23.5%	-37.1%	\$5,000,000 - \$54,000,000		\$28,397,059	On target	-60.1%	-55.2%	-38.6%	-51.2%	-37.1%
<b>Subtotal Education Fund</b>	<b>41.6%</b>	<b>56.8%</b>			<b>\$6,895,381,555</b>		<b>41.4%</b>	<b>38.6%</b>	<b>44.6%</b>	<b>60.6%</b>	<b>56.8%</b>
<b>Subtotal GF/EF</b>	<b>27.9%</b>	<b>41.3%</b>			<b>\$10,056,066,404</b>		<b>28.8%</b>	<b>27.8%</b>	<b>32.4%</b>	<b>43.4%</b>	<b>41.3%</b>
<b>Transportation Fund</b>											
Motor Fuel Tax	4.6%	7.2%	\$347,000,000 - \$375,000,000		\$373,873,010	On target	1.0%	0.1%	1.5%	5.0%	7.2%
Special Fuel Tax	6.7%	8.9%	\$136,000,000 - \$159,000,000		\$163,550,139	Above target range	7.0%	6.4%	6.5%	7.3%	8.9%
Other	5.8%	10.0%	\$98,000,000 - \$109,000,000		\$110,611,387	Above target range	6.8%	8.9%	8.2%	9.4%	10.0%
<b>Subtotal Transportation Fund</b>	<b>5.3%</b>	<b>8.1%</b>			<b>\$648,034,536</b>		<b>3.4%</b>	<b>3.0%</b>	<b>3.8%</b>	<b>6.3%</b>	<b>8.1%</b>
<b>Total, GF/EF/USF/TF</b>	<b>26.1%</b>	<b>38.7%</b>			<b>\$10,704,100,940</b>		<b>26.7%</b>	<b>25.7%</b>	<b>30.1%</b>	<b>40.4%</b>	<b>38.7%</b>

Note 1: This column is the May 2021 consensus, which assumes a \$770 million shift in income tax payments from FY 2020 to FY 2021.

## SUMMARY

Preliminary total FY 2021 revenue to the General and Education Funds totaled over \$10.0 billion, above the target of \$9.3 billion. This represents a year-over-year (YoY) increase of 41.3%, compared to a target growth rate of 27.9%. While FY 2021 collections appear to be well above target, many adjustments are made between now and the final accounting in the coming months, including diversions to rainy day funds and other contingent appropriations. Thus, a possible surplus will not be known until later in the calendar year. Strong collections represent a recovering economy, but should also be viewed in the context of the historical federal stimulus dollars that flowed into the state throughout the fiscal year, which likely had a significant effect in propping up collections of both sales and income taxes.

## GENERAL FUND

General Fund collections totaled over \$3.1 billion in FY 2021, representing a YoY growth rate of 11.9%. This nearly doubles the target growth rate of 6.5%. Sales tax is largely behind the General Fund performance, up 16.5% compared to the anticipated growth rate of 9.6%. Sales tax outperformed expectations throughout the fiscal year, likely due to federal stimulus dollars and, in more recent months, pent-up demand as the pandemic waned and the economy reopened. Year-end adjustments may alter the final amounts in the coming months.

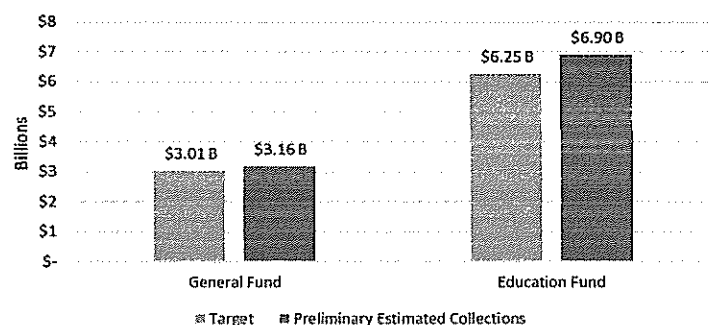
## TRANSPORTATION FUND

Transportation Fund collections reached over \$648 million in FY 2021, a rate of 8.1% YoY. This is above the consensus target of 5.3%. Collections were closer to target until recent weeks, when they accelerated. This may be due to increased consumer confidence, travel and tourism, and returns to traditional workplaces, resulting in longer commutes. Cautious interpretation of the growth rate is warranted, as the YoY comparison looks back to May 2020 fuel consumption, which was depressed due to the pandemic.

## EDUCATION FUND

Education Fund collections reached nearly \$6.9 billion in FY 2021, representing a YoY increase of 56.8%, compared to the target growth rate of 41.6%. Individual income tax growth outperformed expectations by nearly 10 percentage points, but the real standout was corporate income tax, growing at over 108.0% compared to its projected growth of 26.0%. Both categories of collections were likely influenced by federal stimulus, including business loans and individual stimulus checks. Interpretation of these figures requires caution, however, as the 2020 income tax filing deadline was delayed to July. Thus, YoY comparisons do not include all collections for the prior tax year, and so appear artificially high. Year-end adjustments may alter the final amounts in the coming months.

GF/EF Collections Compared to FY21 Target



A Joint Publication of:



Governor's Office of Performance and Budget



Office of the Legislative Fiscal Analyst

July 13, 2021



# REVENUE UPDATE

CONTRIBUTORS: ANDREA WILCO, PHD, AND THOMAS YOUNG, PHD

## PART A: TAX COLLECTIONS

Utah's revenue is expected to grow by 3.0 percent between FY 2015 and FY 2016. We anticipate collections will be very close to the established target. However, there is some downside risk to the forecast: corporate tax is weak and income tax refunds have been more than anticipated, drawing down income tax revenue. Severance tax remains sluggish. Sales tax is growing moderately in light of the relatively stronger employment picture.

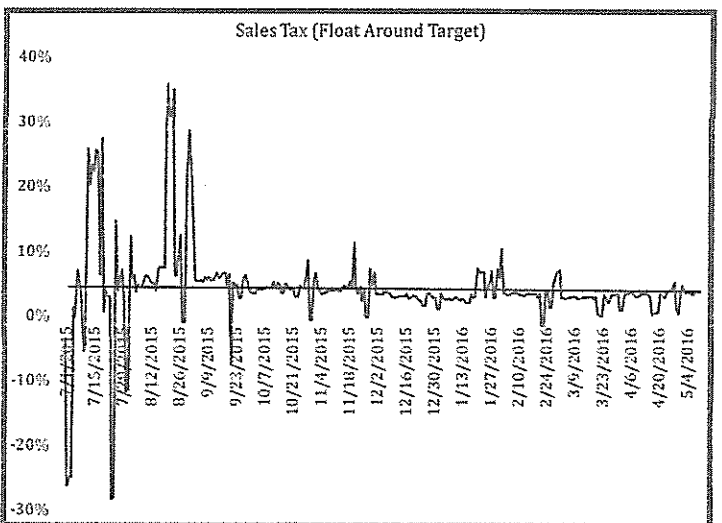
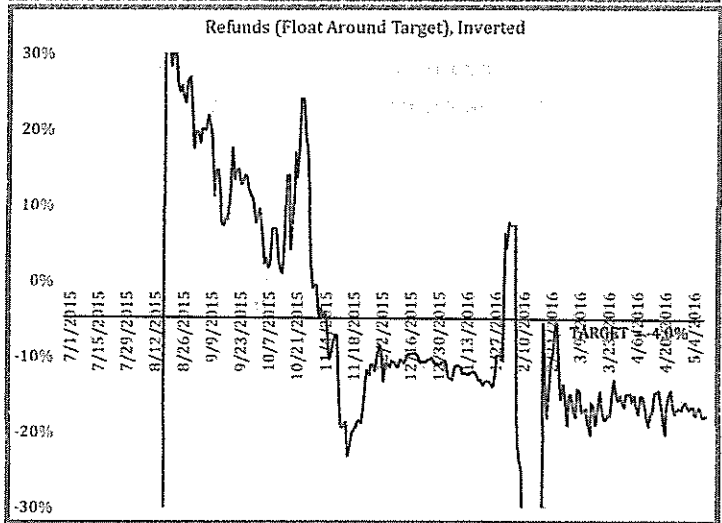
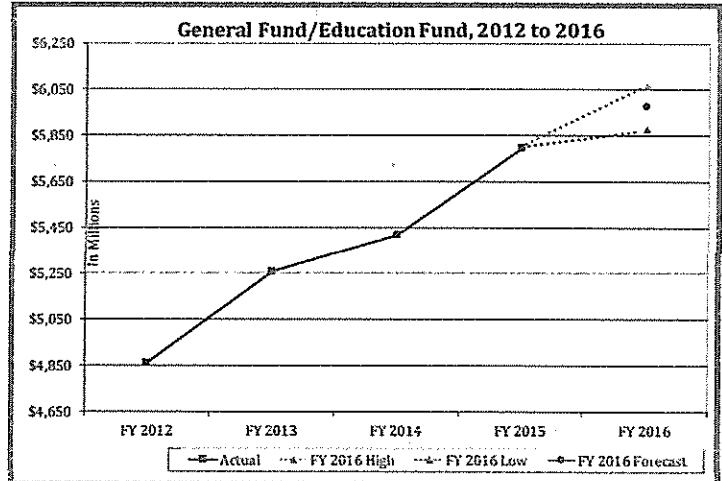
Given current collections and consensus indicators developed by the Revenue Assumptions Working Group, we anticipate FY 2016 General and Education Fund revenues will be in the range of \$100.0 million below to \$85.0 million above May Executive Appropriations targets. We expect the Transportation Fund to be \$5.0 million below to \$15.0 million above the May target.

The current forecast assumes moderately strong growth in several key areas such as employment, wages, construction, and taxable sales. Factors that may influence the direction and magnitude of economic growth in the coming quarters include business investment, household formation, wage growth, commodity prices, interest rates, growth in China and other emerging market economies, equity markets, business and consumer confidence, and other unforeseen events. At the same time, current collections are not keeping pace with expectations.

Through the first half of FY 2016, income tax refunds were running well behind the prior fiscal year. That changed when the October filings started showing up with higher than normal refunds. Refunds have continued on this path for the remainder of the fiscal year, currently floating at around 17.0 percent more than last year's amount. The jump in growth is not anticipated to occur again in the coming year, although refunds are anticipated to come in above their current level. Corporate income tax is also down. The weak corporate profits picture stems from the national corporate earnings recession in the past few quarters. In 2016, corporate profits are anticipated to be down 3.0 percent.

On sales tax, although online sales have been a continued focus, it is not one of the largest factors behind the current moderately positive growth picture. The largest drivers behind sales tax growth moderation are low inflation (\$38.0 million), abnormally weak business investment (\$35.0 million), and relatively subdued wage growth (\$32.0 million). Growth in online sales comes in after these three at \$16.0 million for FY 2016. Looking towards the 2016 calendar year, taxable sales are expected to be up 5.0 percent.

Severance taxes are also quite weak, as the oil and natural gas recession works its way into revenues. Behind the decline in oil and gas severance taxes is the depressed prices and production of oil and natural gas for most of FY 2016. We anticipate further weakness through 2016 of -13.0 percent (oil) and -18.0 percent (natural gas).



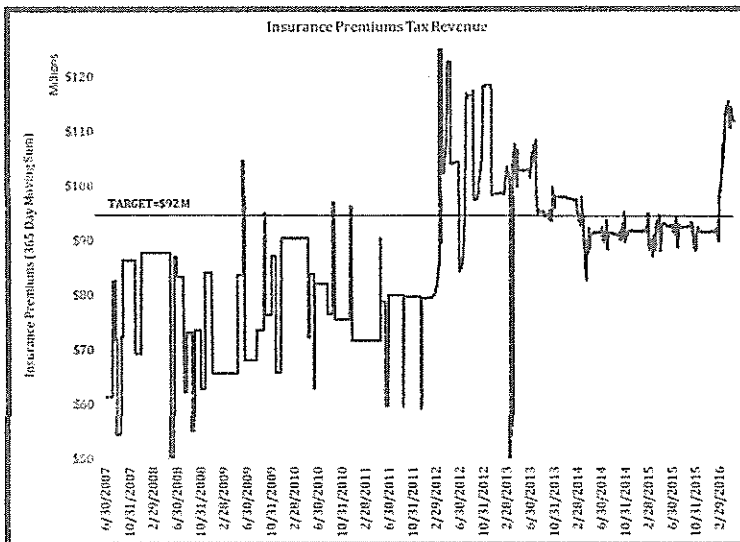
The General Fund is expected to end FY 2016 between \$35.0 million below to \$50.0 million above the latest revenue target.

The downside risk to the General Fund forecast is largely due to sales tax and severance taxes. Revenue from oil and gas severance taxes and sales taxes depend upon the price of oil, natural gas, and inflation in general. When prices are high, nominal revenue is higher. However, because prices were low for most of FY 2016, revenue growth has been sluggish.

Sales tax is experiencing only moderately strong growth for at least four reasons. First, compared to high points of prior two economic expansions, consumer inflation is about 1.5 percent low for this point of the economic cycle. The 1.5 percent equates to about \$38.0 million in forgone sales tax revenue. Second, business investment is abnormally weak. The weakness equates to \$35.0 million in missing sales tax revenue. Third, wage growth is also slow for this point in the economic cycle. The 1.2 percent wage sluggishness equates to about \$32.0 million in forgone sales tax revenue. Fourth, the growth in online sales may forgo about \$16.0 million in sales tax revenue in 2016.

Unfavorable factors to sales tax revenue growth	
Low inflation	\$38 M
Weak business investment	\$35 M
Weak wage growth	\$32 M
Growth in online sales	\$16 M

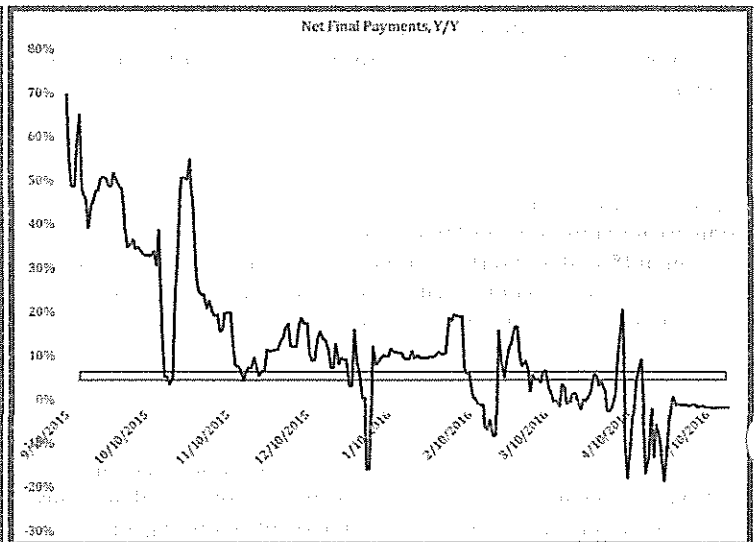
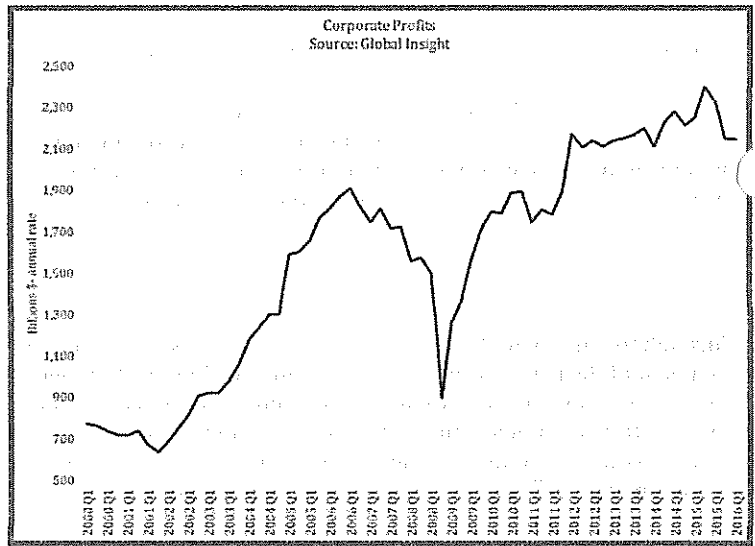
On the up side, insurance premiums appear to be growing well above targets and based on current trends could come in \$10.0 million to \$20.0 million above estimates. Although as the economy grows premiums tend to grow because they are based in most cases on total sales volume, this year's over-performance also stems from prior year and current year reclassification of certain deposits due to tax software changes. Early indications are that the reclassification will probably only slightly reduce the allocation to the General Fund in the current year.



The Education Fund is expected to end FY 2016 within a range of \$65.0 million below to \$35.0 million above the May target.

Every year there are two revenue bumps in April's gross final payments, one from individual income tax payments and the second from corporate income tax payments. This year indications prior to April looked strong on the individual tax side. However, when revenues were calculated in April after the time most final payments typically get posted, the revenue picture came in weaker than expected. Overall, gross final payments and withholding came in moderately strong. The largest factor behind the income tax weakness is refunds. Rather than growing moderately like they had been in previous fiscal years (around \$400.0 million), refunds will likely end the fiscal year with growth between 15.0 percent and 20.0 percent, decreasing individual income tax revenue by around \$60.0 million.

Corporate profits are also weaker than anticipated as a stronger dollar and diminished revenue growth soured the past few quarters' corporate profits.



The Transportation Fund is anticipated to end FY 2016 from \$5.0 million below target to \$15.0 million above target.

Overall, revenue growth is fairly strong, largely due to increased miles traveled aided in part by lower gas prices. The two charts below present the relatively strong picture. The two major sources of revenue to the Transportation Fund are motor fuel tax and special fuel tax. Both are above the growth rate target (horizontal bar on each chart).

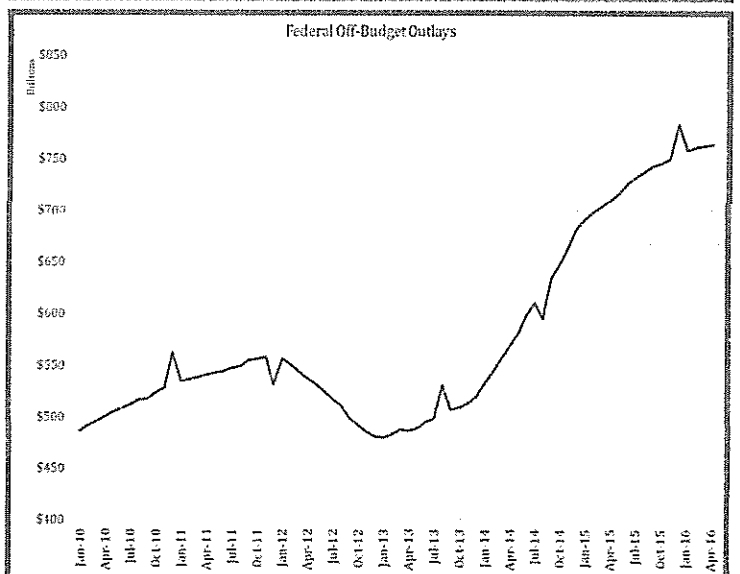
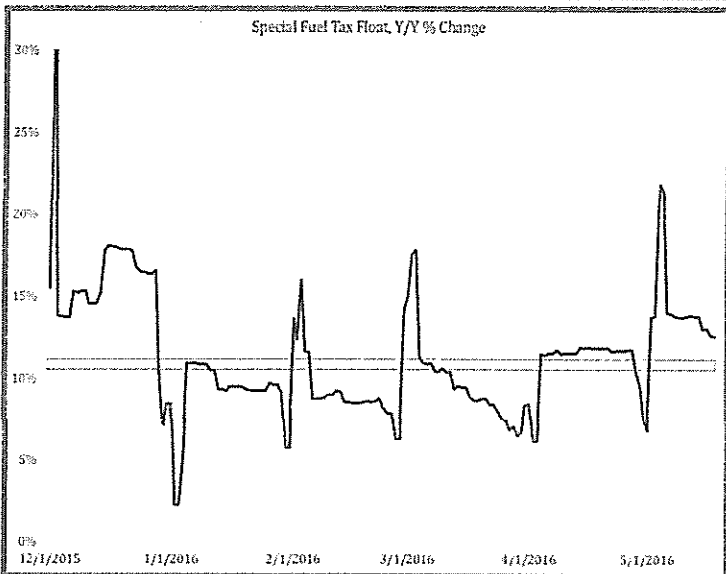
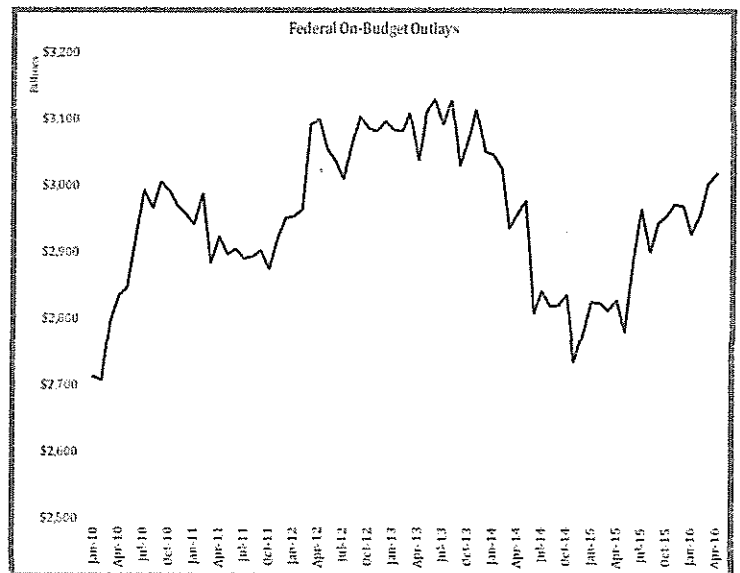
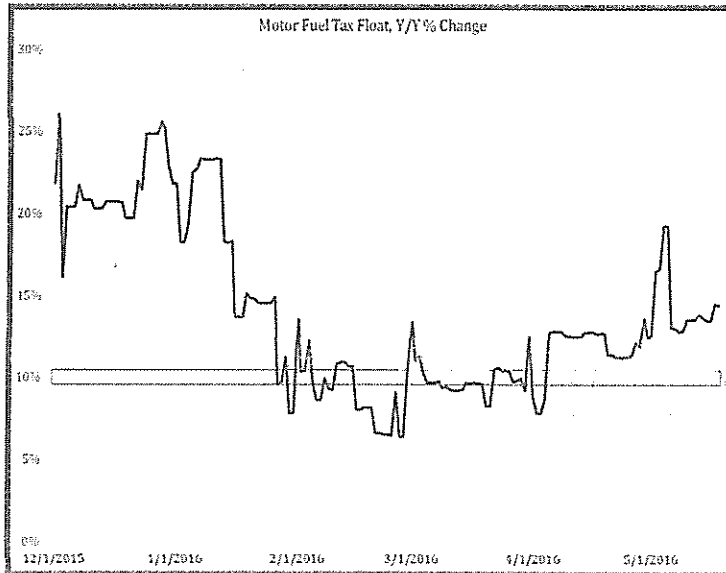
On January 1, 2016 the gas tax was increased by 4.9 cents per gallon. Revenue from the gas tax increase started showing up in March. Early indications are that revenue from the gas tax increase is coming in about on-target, with the over performance largely due to induced-traveling from the low gasoline and diesel prices.

On the recent rise in gas prices, the downward effect on consumer travel and overall gasoline purchases has yet to show up in revenue.

Similar to net individual income and corporate tax receipts in Utah, for April, the U.S. Treasury reported weak tax receipts, largely driven by weaker than anticipated individual and corporate income tax. Because of the ability to deficit finance, the weak receipts have had no effect on the expenditure trends at the federal level.

On federal expenditures, both on-budget and off-budget outlays are now increasing since bottoming in late 2014 (on-budget) or early 2013 (off-budget). The growth in the two since their respective bottoms is quite different. Off-budget spending is up around 59.0 percent since its 2013 bottom, while on-budget spending is up 10.0 percent since its 2014 bottom. The spending growth rates differential stems from the driving forces. Off-budget spending includes Social Security, the Post Office, and Fannie Mae/Freddie Mac.

At the State level, early indications are that federal funds including mineral lease will be close to flat.



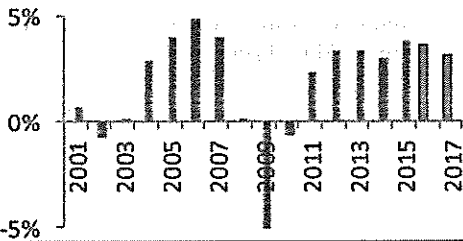
# PART B: ECONOMIC INDICATORS

B1

## REVIEW OF THE ECONOMIC INDICATORS

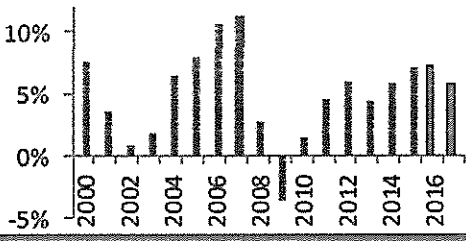
### Nonagricultural Employment

Employment growth in Utah remains one of the strongest in the nation. Current estimates show employment growth at 3.6 percent for 2016, moderating to 3.1 percent for 2017. The labor market in Utah consistently registers in the nation's top 10 for lowest unemployment rate and highest employment growth.



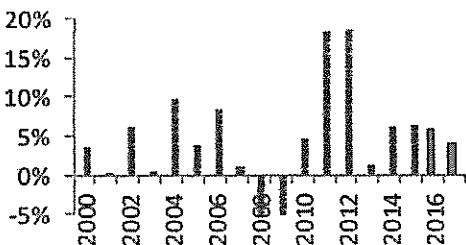
### Nonagricultural Wages

The average annual wage in the State is estimated at \$45,019 in 2016, a projected increase of 3.5 percent over the prior year. Wage growth is expected to remain moderate at 2.5 percent in 2017. This translates to an average annual wage increase of \$1,502 in 2016 and \$1,147 in 2017. Total wage growth is expected to be 7.2 percent for 2016 and 5.8 percent for 2017.



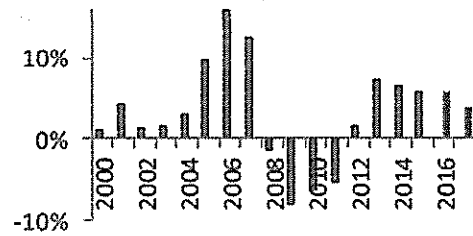
### New Automobiles and Truck Sales

Sales of new automobiles and trucks remains strong in 2016. The new automobile and truck market is anticipated to grow by 5.7 percent and 4.0 percent in 2016 and 2017, respectively.



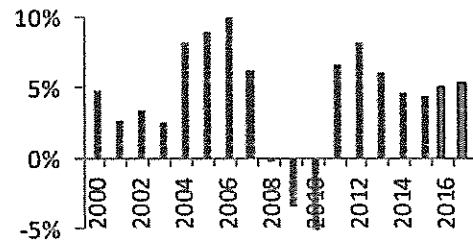
### Housing Prices

Housing prices continue to improve with expected growth for 2016 and 2017 at 5.8 percent and 3.7 percent respectively. The housing prices forecasts are sensitive to interest rates and income expectations. If interest rates rise faster than expected, housing prices could come in lower than expected. Because of the growth in multi-family units the overall price of an average housing unit (i.e. not just single-family homes) has dropped slightly in 2016.



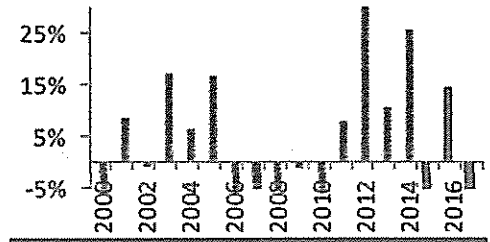
### Retail Sales and Total Taxable Sales

Retail sales growth for 2016 is estimated at 5.5 percent. The growth is expected to moderate in 2017 to 5.2 percent. The universe of taxable transactions (all taxable sales) is estimated to grow at 5.0 percent in 2016 and is expected to grow by 5.3 percent in 2017. The difference is largely attributable to business investment, which remains sluggish.



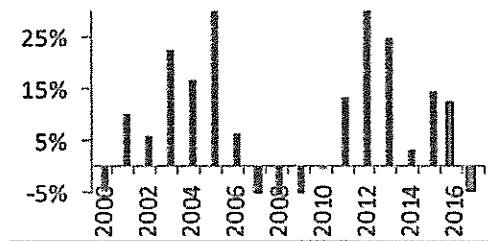
### Dwelling Unit Permits

Dwelling unit permits are expected to end 2016 with an additional 20,000 units permitted, an increase of about 14.3 percent over the 17,500 authorized in 2015. Residential permits are anticipated to continue to grow by an additional 18,000 units in 2017.



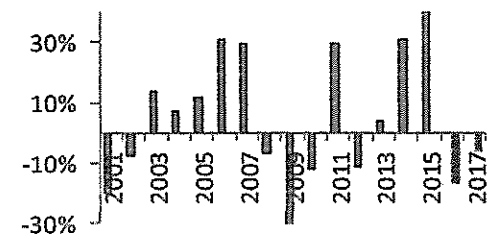
### Residential Permit Value

Dwelling unit permits are correlated with residential permit value. Total residential permit value bottomed out at \$1.7 billion in 2010. Since then, permit values have grown quickly, with total permit value expected to reach \$4.3 billion in 2016 and \$4.1 billion in 2017.



### Nonresidential Permit Value

Nonresidential construction is strong due to several large projects in 2016. Values for 2016 and 2017 are estimated at \$2.0 billion and \$1.7 billion.



The fundamental momentum of business and consumer growth in Utah appears relatively moderate, with the period of strong growth acceleration likely over, and now giving way to cruising speed or decelerating growth. Downside and upside risks are still present, with most of the push largely stemming from external forces.

### Upside Risks

#### Household Formation Re-acceleration

One of the hallmarks of the current economic picture is the demographic shifts that have occurred. In particular, older workers are working much more and younger workers are working much less than prior generations. Should the younger generations (such as Millennials, the largest broad demographic group of the labor market now) gain greater employment opportunities with the broadening economic recovery, they may also begin to demand single family homes typically associated with marriage and family-rearing. An uptick in household formation would almost assuredly provide a broad boost of economic growth.

#### Business Investment Comes to Life

The past few quarters of business investment have been bluntly weak, in particular spending by businesses connected to or operating in the oil, natural gas, and other commodities businesses. With the recent rise in resource prices, business investment could make a strong comeback, boosting revenues connected with such spending.

#### In the Near Term, Wage Growth Reignites

The current economic recovery/boom has been quite subdued when it comes to average wage growth. Should labor demand begin to outpace supply, the competition for labor may reignite wage growth.

#### Commodities Fire Back Up

The question is often asked whether oil prices boost or hinder economic growth. The answer is it depends on location, strength of the price movement, expected duration of the price movement, and level of overall economic growth. In the context of the current economic environment, the rise in commodity prices recently is probably a signal of confidence, something that could strengthen economic growth. Commodity prices also affect employment and revenue in Utah, such as the prices of copper, oil, and natural gas.

### Downside Risks

#### Negative interest rates

Central banks, particularly the European Central Bank and the Bank of Japan, have been experimenting with negative interest rates. These moves, intended to gently force bank business lending and consumer spending, haven't had the intended effects. For example, the Japanese Yen has strengthened rather than weakened. Negative rates could have a contagion effect on conditions in Utah.

#### China Experiences a Hard Landing

Recent results out of China are mixed. Because many prices that affect businesses headquartered in Utah are affected by demand out of China, if growth in China decelerates much more, economic growth could weaken in Utah.

#### A Negative Feedback Loop from Weak Equity Markets Materializes

At times, equity markets respond to perceived weak economic growth prospects negatively, and this weakness has a real effect on actual economic growth. Should a negative feedback loop surface between equity markets and the broader economy, overall business conditions could sour quickly.

#### Consumers and Businesses Lose Confidence

Consumer confidence is high and has been so for a couple of years. Business confidence is more subdued. Any twitching in these two measures could reduce real economic growth.

#### Black Swan Events

Black swan events are unexpected or low probability events that have far reaching consequences when they occur. Given the heightened jitteriness of world markets, any large scale black swan event could have an outsized effect on growth.

#### U.S. Retail and Corporate Profits

At the national level, retail and corporate profits are pre-recessionary. Should the two measures not experience a U-turn, a national recession is likely on the short-term horizon.

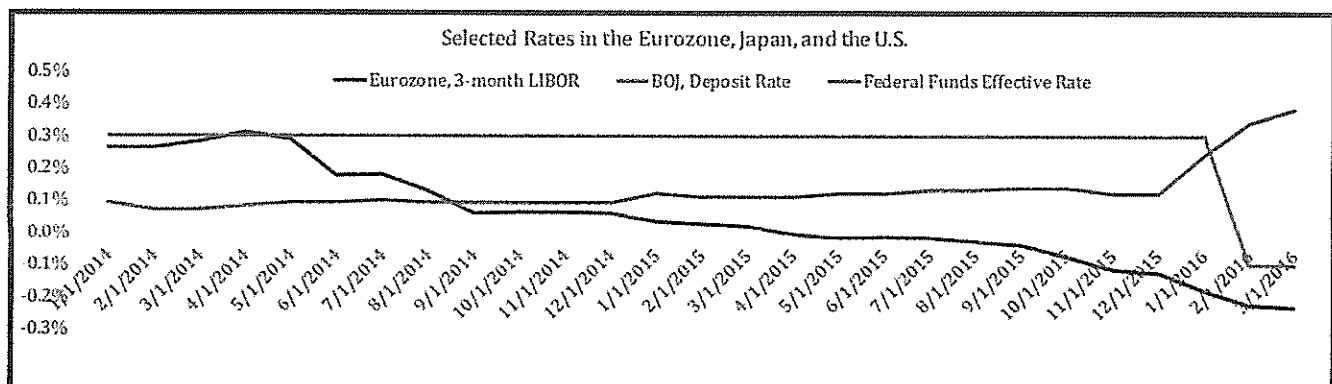


Figure 1: General Fund Trend (Dollars in Millions)

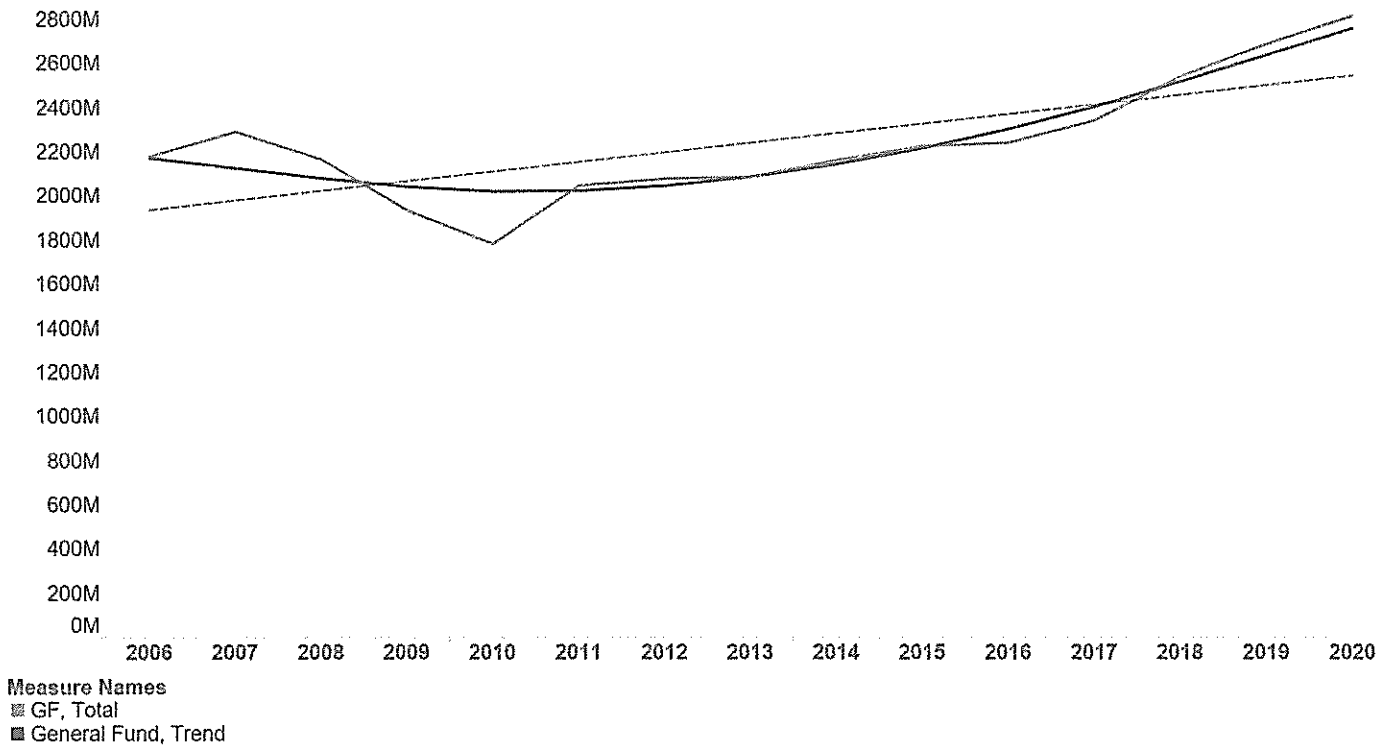
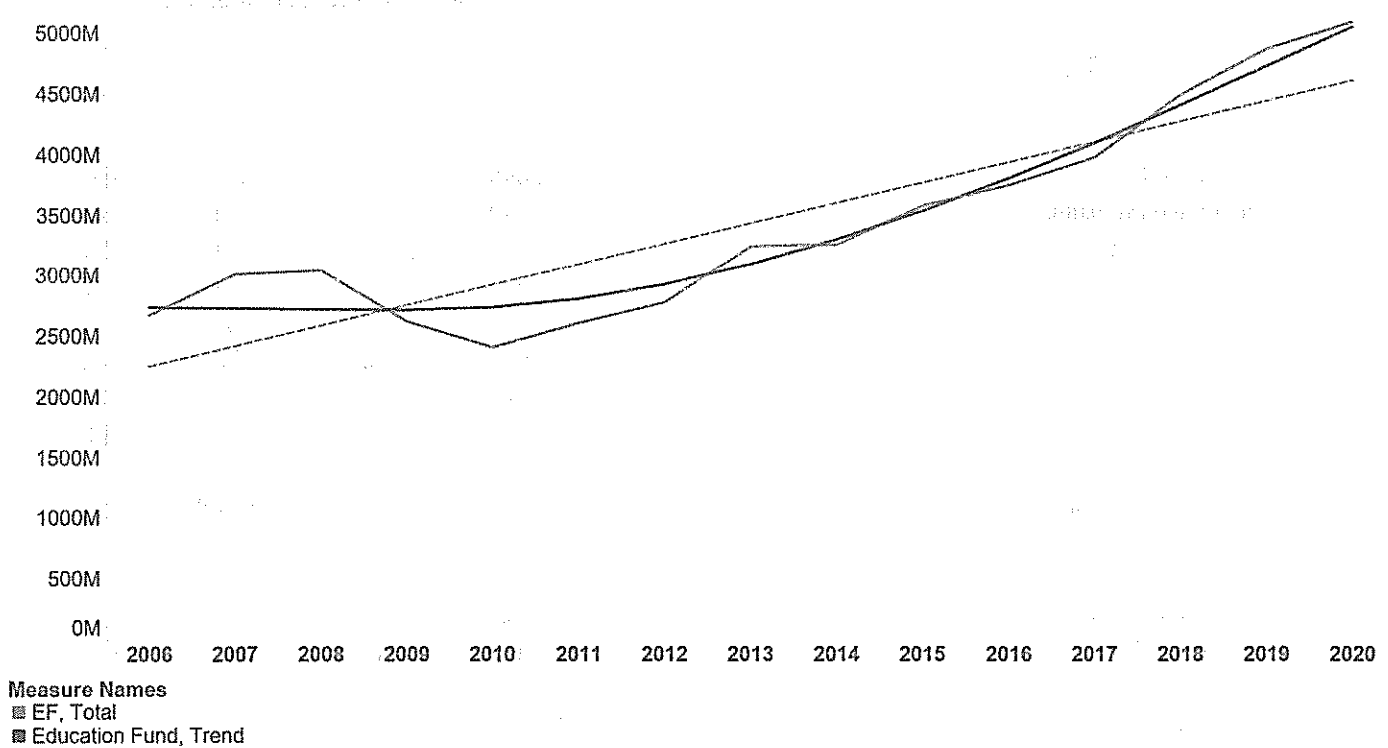


Figure 2: Education Fund Trend (Dollars in Millions)



<sup>i</sup> Utah Code Annotated 36-12-13(2)(a)(i)(A)

<sup>ii</sup> Joint Rule 3-2-402(2)(a)(ii)



# DYNAMIC FISCAL ANALYSIS

HB0147

2017 General Session  
Living Wage Amendments  
by Lynn N. Hemingway



STATIC IMPACT (See fiscal note for details)	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	...	FY 2027
General Fund	-\$509,000	-\$837,500	-\$7,900,000	-\$24,432,000	-\$50,466,000		-\$97,454,000
Education Fund	-\$7,868,800	-\$14,303,100	-\$32,062,000	-\$59,309,000	-\$95,191,000		-\$151,282,000
All Other Funds	-\$2,910,300	-\$6,235,800	-\$20,015,000	-\$46,873,000	-\$86,538,000		-\$154,798,000
<b>Total</b>	<b>-\$11,288,100</b>	<b>-\$21,381,800</b>	<b>-\$59,977,000</b>	<b>-\$130,614,000</b>	<b>-\$232,215,000</b>		<b>-\$403,534,000</b>

## SCENARIO 1: DO NOT IMPLEMENT A \$15 LIVING WAGE

Do not implement the changes proposed in this bill. The cost of the static fiscal note is left in reserve and collects interest. Shown here is the flow, not the accumulating balance.

Dynamic Impact	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	...	FY 2027
General Fund	\$9,300	\$23,300	\$240,600	\$744,000	\$1,537,300		\$2,826,200
Education Fund	\$144,000	\$397,000	\$976,300	\$1,806,000	\$2,888,600		\$4,387,200
<b>Total</b>	<b>\$153,300</b>	<b>\$420,300</b>	<b>\$1,216,900</b>	<b>\$2,550,000</b>	<b>\$4,435,900</b>		<b>\$7,213,400</b>
<b>Diff From Static</b>	<b>\$11,441,400</b>	<b>\$21,802,100</b>	<b>\$61,193,000</b>	<b>\$133,164,000</b>	<b>\$236,650,900</b>		<b>\$410,747,400</b>
Jobs	0	0	0	0	0		0
Wages (millions)	\$0	\$0	\$0	\$0	\$0		\$0
Gross Domestic Product (GDP) (millions)	\$0	\$0	\$0	\$0	\$0		\$0

## SCENARIO 2: GOVERNMENT SPENDING

Do not make the policy change proposed by this bill, but spend on government programs. The multiplier is 0.95. Commonly estimated government spending multipliers ( $\Delta GDP / \Delta$ Government Spending) range from 0.7 to 1.3. The multiplier value depends upon economic conditions, interest rates, expected tax policy, geographic region, past and expected government spending policy, and various other assumptions. The multiplier is on the lower end currently because of higher expected interest rates and strong economic conditions (unemployment rate in Utah is 3.1%). The dynamic revenue stems from the revenue collected through state and local government spending and employment.

Dynamic Impact	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	...	FY 2027
General Fund	\$91,000	\$62,100	\$5,600,000	\$19,532,000	\$42,088,000		\$63,854,000
Education Fund	-\$6,088,800	-\$12,708,100	-\$28,062,000	-\$51,099,000	-\$80,681,000		-\$128,682,000
<b>Total</b>	<b>-\$6,877,800</b>	<b>-\$12,646,000</b>	<b>-\$33,862,000</b>	<b>-\$70,541,000</b>	<b>-\$132,877,000</b>		<b>-\$209,738,000</b>
<b>Diff From Static</b>	<b>\$4,410,300</b>	<b>\$8,735,800</b>	<b>\$26,415,000</b>	<b>\$60,073,000</b>	<b>\$109,238,000</b>		<b>\$193,798,000</b>
Jobs	230	383	918	1,815	2,989		3,718
Wages (millions)	\$30	\$51	\$129	\$266	\$460		\$787
Gross Domestic Product (GDP) (millions)	\$19	\$33	\$82	\$168	\$288		\$434

## SCENARIO 3: IMPLEMENT \$15 MINIMUM WAGE, INCOME RISES FOR SOME AND EMPLOYMENT DROPS FOR OTHERS

Incrementally implement \$15 living wage. Around 500,000 individuals by FY 2023 see an average income increase of between \$875 to \$12,700 per year, overall totalling \$3.3 billion by FY 2023. Employment of lower wage workers declines. Consumer and wholesale prices rise. Overall, the wage increase, employment drop, and price inflation represent a shift from business owners and consumers to lower wage earners. The analysis here follows the pattern presented by the Congressional Budget Office in their 2014 report "The Effects of a Minimum-Wage Increase on Employment and Family Income." Key among the assumptions is the responsiveness of employment to the wage change. The CBO analysis used an elasticity of -0.075 for its national study of the teenager effect and about a third of that for the adult effect. An elasticity of -0.075 means that a 10% increase in the minimum wage reduces employment by 0.75%. Presumed here is an elasticity of approximately -0.075.

Dynamic Impact	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	...	FY 2027
General Fund	\$11,000,000	\$26,300,000	\$41,300,000	\$59,000,000	\$80,000,000		-\$4,000,000
Education Fund	\$18,700,000	\$44,900,000	\$70,200,000	\$100,400,000	\$138,200,000		-\$7,400,000
<b>Total</b>	<b>\$29,700,000</b>	<b>\$71,200,000</b>	<b>\$111,500,000</b>	<b>\$159,400,000</b>	<b>\$218,200,000</b>		<b>-\$11,600,000</b>
<b>Diff From Static</b>	<b>\$40,988,100</b>	<b>\$92,581,800</b>	<b>\$171,477,000</b>	<b>\$299,014,000</b>	<b>\$448,415,000</b>		<b>\$391,934,000</b>
Jobs	-152	722	438	-807	-2,776		-96,087
Wages (millions)	\$599	\$1,438	\$2,253	\$3,219	\$4,367		-\$234
Gross Domestic Product (GDP) (millions)	-\$45	\$36	\$10	-\$111	-\$313		-\$12,188

## SCENARIO 4: SHIFTS FROM OUT-OF-STATE

Incrementally implement \$15 living wage. Around 500,000 individuals by FY 2023 see an average income increase of between \$875 to \$12,700 per year, overall totalling \$3.3 billion by FY 2023. Employment of lower wage workers declines. Consumer and wholesale prices rise. Overall, the wage increase, employment drop, and price inflation represent a shift from business owners and consumers to lower wage earners. The analysis here follows the pattern presented by the Congressional Budget Office in their 2014 report "The Effects of a Minimum-Wage Increase on Employment and Family Income." Key among the assumptions is the responsiveness of employment to the wage change. The CBO analysis used an elasticity of -0.075 for its national study of the teenager effect and about a third of that for the adult effect. An elasticity of -0.075 means that a 10% increase in the minimum wage reduces employment by 0.75%. The elasticity is assumed higher at the state level. Presumed here is an elasticity of approximately -0.075. In addition, assumed here is a demographic response elasticity of 0.04%, assuming that a higher minimum wage causes additional in-migration of 2,509 individuals and the associated increased growth. We have assumed no businesses will leave the state explicitly because of the wage hike, though some economic activity diminishes because of wage pressure.

Dynamic Impact	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	...	FY 2027
General Fund	\$11,200,000	\$26,800,000	\$42,100,000	\$60,300,000	\$81,900,000		\$1,700,000
Education Fund	\$19,000,000	\$45,700,000	\$71,700,000	\$102,600,000	\$139,400,000		\$2,900,000
<b>Total</b>	<b>\$30,200,000</b>	<b>\$72,500,000</b>	<b>\$113,800,000</b>	<b>\$162,900,000</b>	<b>\$221,300,000</b>		<b>\$4,600,000</b>
<b>Diff From Static</b>	<b>\$41,488,100</b>	<b>\$93,881,800</b>	<b>\$173,777,000</b>	<b>\$299,514,000</b>	<b>\$453,615,000</b>		<b>\$408,194,000</b>
Jobs	-22	1,020	940	-73	-1,784		-93,558
Wages (millions)	\$610	\$1,465	\$2,299	\$3,291	\$4,469		\$92
Gross Domestic Product (GDP) (millions)	-\$34	\$61	\$54	-\$45	-\$220		-\$11,906



# DYNAMIC FISCAL ANALYSIS

HB61, 1st Substitute  
2016 General Session

Corporate Franchise and Income Tax Changes  
by John Knotwell



STATIC IMPACT (See fiscal note for details)	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	...	FY 2026
General Fund <sup>1</sup>	-\$2,641,000	-\$2,773,000	-\$2,910,000	-\$3,060,000	-\$3,210,000		-\$4,100,000
Education Fund							
<b>Total</b>	<b>-\$2,641,000</b>	<b>-\$2,773,000</b>	<b>-\$2,910,000</b>	<b>-\$3,060,000</b>	<b>-\$3,210,000</b>		<b>-\$4,100,000</b>

## SCENARIO 1: DO NOTHING

Do not make the tax policy change proposed by this bill, do not spend proceeds on government programs, deposit money in reserve.

Dynamic Impact	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	...	FY 2026
General Fund	\$47,900	\$77,000	\$88,600	\$93,200	\$97,700		\$118,900
Education Fund							
<b>Total</b>	<b>\$47,900</b>	<b>\$77,000</b>	<b>\$88,600</b>	<b>\$93,200</b>	<b>\$97,700</b>		<b>\$118,900</b>
<b>Diff From Static</b>	<b>\$2,688,900</b>	<b>\$2,850,000</b>	<b>\$2,998,600</b>	<b>\$3,153,200</b>	<b>\$3,307,700</b>		<b>\$4,218,900</b>
Jobs	0	0	0	0	0		0
Wages (millions)	\$0	\$0	\$0	\$0	\$0		\$0
Gross Domestic Product (GDP) (millions)	\$0	\$0	\$0	\$0	\$0		\$0

## SCENARIO 2: GOVERNMENT SPENDING

Do not make the tax policy change proposed by this bill but spend collections on government programs. The multiplier is 0.84. Commonly estimated government spending multipliers ( $\Delta GDP / \Delta \text{Government Spending}$ ) range from 0.7 to 1.3. The multiplier value depends upon economic conditions, interest rates, expected tax policy, geographic region, past and expected government spending policy, and various other assumptions. The multiplier is on the lower end currently because of higher expected interest rates and strong economic conditions (unemployment rate in Utah is 3.5%). The dynamic revenue stems from the revenue connected with state government spending.

Dynamic Impact	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	...	FY 2026
General Fund	\$30,300	\$36,600	\$41,700	\$46,100	\$49,900		\$67,100
Education Fund	-\$2,590,300	-\$2,711,800	-\$2,842,200	-\$2,980,900	-\$3,127,600		-\$3,259,700
<b>Total</b>	<b>-\$2,560,000</b>	<b>-\$2,675,200</b>	<b>-\$2,800,500</b>	<b>-\$2,934,800</b>	<b>-\$3,077,700</b>		<b>-\$3,192,600</b>
<b>Diff From Static</b>	<b>\$81,000</b>	<b>\$97,800</b>	<b>\$109,800</b>	<b>\$125,200</b>	<b>\$132,300</b>		<b>\$907,400</b>
Jobs	30	32	34	35	35		37
Wages (millions)	\$1.6	\$2.0	\$2.3	\$2.5	\$2.7		\$3.6
Gross Domestic Product (GDP) (millions)	\$2.2	\$2.5	\$2.7	\$2.9	\$3.0		\$3.6

## SCENARIO 3: MARGINAL BUSINESS RESPONSE

Make tax policy change proposed by this bill. Do not spend on government programs. Utility companies and consumers treat the tax reduction as a cost savings and reinvest the savings in production/output.

Dynamic Impact	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	...	FY 2026
General Fund	\$74,100	\$111,100	\$166,600	\$222,200	\$277,700		\$462,800
Education Fund	-\$2,517,100	-\$2,587,100	-\$2,633,100	-\$2,686,200	-\$2,746,200		-\$2,597,300
<b>Total</b>	<b>-\$2,443,000</b>	<b>-\$2,476,000</b>	<b>-\$2,466,500</b>	<b>-\$2,464,000</b>	<b>-\$2,468,500</b>		<b>-\$2,134,500</b>
<b>Diff From Static</b>	<b>\$198,000</b>	<b>\$297,000</b>	<b>\$443,500</b>	<b>\$596,000</b>	<b>\$741,500</b>		<b>\$1,985,500</b>
Jobs	60	98	130	156	177		218
Wages (millions)	\$4.0	\$6.0	\$9.0	\$12.0	\$15.0		\$25.0
Gross Domestic Product (GDP) (millions)	\$7.0	\$13.0	\$19.0	\$24.0	\$29.0		\$47.0

## SCENARIO 4: STRONG BUSINESS RESPONSE

Make tax policy change proposed by this bill. Do not spend on government programs. Computer and electronic product manufacturers treat the tax reduction as a cost savings, plus savings induces outside investment. The presumed outside investment is \$1.5 billion by semiconductor manufacturers in 2017 and 2018. The computer and electronic product manufacturing industry are assumed to generate ongoing employment of up to 1,200 industry jobs by 2020.

Dynamic Impact	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	...	FY 2026
General Fund	\$13,699,600	\$16,254,400	\$5,294,700	\$9,497,200	\$10,108,100		\$14,458,700
Education Fund	\$20,289,400	\$24,433,600	\$5,950,300	\$12,838,300	\$13,707,900		\$20,828,800
<b>Total</b>	<b>\$33,989,000</b>	<b>\$40,688,000</b>	<b>\$11,245,000</b>	<b>\$22,335,500</b>	<b>\$23,816,000</b>		<b>\$35,287,500</b>
<b>Diff From Static</b>	<b>\$36,630,000</b>	<b>\$43,461,000</b>	<b>\$14,155,000</b>	<b>\$25,395,500</b>	<b>\$27,026,000</b>		<b>\$39,387,500</b>
Jobs	11,628	12,541	2,801	5,325	5,379		6,072
Wages (millions)	\$740.0	\$878.0	\$286.0	\$513.0	\$546.0		\$781.0
Gross Domestic Product (GDP) (millions)	\$997.0	\$1,179.0	\$442.0	\$1,139.0	\$1,215.0		\$1,749.0

<sup>1</sup>Used throughout this note, General Fund includes sales tax earmarks



# DYNAMIC FISCAL ANALYSIS

HB242, 2nd Substitute  
2016 General Session

Alternative Energy Development Tax Amendments  
by Stephen G. Handy



STATIC IMPACT (See fiscal note for details)	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2026
General Fund <sup>1</sup>	-\$190,000	-\$190,000	-\$190,000	-\$190,000	-\$190,000	-\$190,000
Education Fund						
<b>Total</b>	<b>-\$190,000</b>	<b>-\$190,000</b>	<b>-\$190,000</b>	<b>-\$190,000</b>	<b>-\$190,000</b>	<b>-\$190,000</b>

**SCENARIO 1: DO NOTHING**  
Do not make the tax policy change proposed by this bill, do not spend proceeds on government programs, deposit money in reserve.

Dynamic Impact	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2026
General Fund	\$3,400	\$5,300	\$5,800	\$5,800	\$5,800	\$5,500
Education Fund						
<b>Total</b>	<b>\$3,400</b>	<b>\$5,300</b>	<b>\$5,800</b>	<b>\$5,800</b>	<b>\$5,800</b>	<b>\$5,500</b>
<b>Diff From Static</b>	<b>\$193,400</b>	<b>\$195,300</b>	<b>\$195,800</b>	<b>\$195,800</b>	<b>\$195,800</b>	<b>\$195,500</b>
Jobs	0	0	0	0	0	0
Wages (millions)	\$0	\$0	\$0	\$0	\$0	\$0
Gross Domestic Product (GDP) (millions)	\$0	\$0	\$0	\$0	\$0	\$0

**SCENARIO 2: GOVERNMENT SPENDING**  
Do not make the tax policy change proposed by this bill but spend collections on government programs. The multiplier is 0.84. Commonly estimated government spending multipliers ( $\Delta GDP / \Delta \text{Government Spending}$ ) range from 0.7 to 1.3. The multiplier value depends upon economic conditions, interest rates, expected tax policy, geographic region, past and expected government spending policy, and various other assumptions. The multiplier is on the lower end currently because of higher expected interest rates and strong economic conditions (unemployment rate in Utah is 3.5%). The dynamic revenue stems from the revenue connected with state government spending.

Dynamic Impact	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2026
General Fund	-\$187,800	-\$187,500	-\$187,200	-\$187,100	-\$187,000	-\$186,800
Education Fund	\$3,600	\$4,200	\$4,600	\$4,900	\$5,100	\$5,400
<b>Total</b>	<b>-\$184,200</b>	<b>-\$183,300</b>	<b>-\$182,600</b>	<b>-\$182,200</b>	<b>-\$181,900</b>	<b>-\$181,400</b>
<b>Diff From Static</b>	<b>\$5,800</b>	<b>\$6,700</b>	<b>\$7,400</b>	<b>\$7,800</b>	<b>\$8,100</b>	<b>\$8,600</b>
Jobs	2	2	2	2	2	2
Wages (millions)	\$0.1	\$0.1	\$0.1	\$0.2	\$0.2	\$0.2
Gross Domestic Product (GDP) (millions)	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2

**SCENARIO 3: MARGINAL BUSINESS RESPONSE**  
Make tax policy change proposed by this bill. Do not spend on government programs. Utility companies and consumers treat the tax reduction as a cost savings and reinvest the savings in production/output. No construction or business expansion is included directly.

Dynamic Impact	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2026
General Fund	-\$188,600	-\$187,700	-\$186,900	-\$186,300	-\$185,800	-\$184,300
Education Fund	\$2,400	\$3,900	\$5,200	\$6,200	\$7,000	\$9,600
<b>Total</b>	<b>-\$186,200</b>	<b>-\$183,800</b>	<b>-\$181,700</b>	<b>-\$180,100</b>	<b>-\$178,800</b>	<b>-\$174,700</b>
<b>Diff From Static</b>	<b>\$3,800</b>	<b>\$6,200</b>	<b>\$8,300</b>	<b>\$9,900</b>	<b>\$11,200</b>	<b>\$15,300</b>
Jobs	1	2	2	2	3	3
Wages (millions)	\$0.1	\$0.1	\$0.2	\$0.2	\$0.2	\$0.3
Gross Domestic Product (GDP) (millions)	\$0.2	\$0.2	\$0.3	\$0.3	\$0.4	\$0.5

**SCENARIO 4: STRONG BUSINESS RESPONSE**  
Make tax policy change proposed by this bill. Do not spend on government programs. Utility companies and consumers treat the tax reduction as a cost savings, plus savings induces outside investment. The presumed outside investment is \$108 million by energy producers for a 40 megawatt plant and 2 data centers, each at a cost of \$100 million. The solar facility and the data centers are assumed to include ongoing employment.

Dynamic Impact	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2026
General Fund	\$643,100	\$1,753,900	\$439,400	\$846,700	\$806,100	\$661,600
Education Fund	\$1,394,400	\$3,253,600	\$1,053,600	\$1,735,300	\$1,332,400	\$1,425,400
<b>Total</b>	<b>\$2,037,500</b>	<b>\$5,007,500</b>	<b>\$1,493,000</b>	<b>\$2,582,000</b>	<b>\$1,938,500</b>	<b>\$2,087,000</b>
<b>Diff From Static</b>	<b>\$2,227,500</b>	<b>\$5,197,500</b>	<b>\$1,683,000</b>	<b>\$2,772,000</b>	<b>\$2,128,500</b>	<b>\$2,277,000</b>
Jobs	768	1,655	386	725	459	407
Wages (millions)	\$45.0	\$105.0	\$34.0	\$56.0	\$43.0	\$46.0
Gross Domestic Product (GDP) (millions)	\$64.0	\$201.0	\$54.0	\$157.0	\$76.0	\$88.0

<sup>1</sup> Used throughout this note, General Fund includes sales tax earmarks



## REVENUE VOLATILITY REPORT

EXECUTIVE APPROPRIATIONS COMMITTEE  
STAFF: THOMAS YOUNG, PH.D.; BRIAN WIKLE, SENIOR ECONOMIST

ISSUE BRIEF

**SUMMARY**

Every three years the Legislative Fiscal Analyst (LFA) and the Governor's Office of Management and Budget (GOMB) analyze the volatility of Utah's major revenue streams and report to the Executive Appropriations Committee how that volatility informs reserve fund policy. Utah law directs the offices to "recommend changes to the deposit amounts or transfer limits" for the General Fund Budget Reserve Account and the Education Fund Budget Reserve Account, and to present "recommendations for deposit mechanisms considered likely to meet the budget reserve account targets" (UCA 63J-1-205). This report satisfies those requirements for the third time since their inception in 2008. It recommends increasing deposit thresholds for the general rainy-day fund from 9% to 10% of prior fiscal year General Fund appropriations, and for the education rainy-day fund from 11% to 12% of prior year Education Fund appropriations. The report further recommends repaying \$85 million in debt to the rainy-day funds outstanding since fiscal year 2010.

**BUDGET RESERVE ACCOUNTS OVERVIEW****Rainy-day Fund Rationale**

Forty-eight states have a budget stabilization fund, commonly known as a rainy-day fund, to set aside money during more prosperous economic times so that a reserve is available when the economy turns.

By establishing rainy-day funds governments are more assured that their budget plans can be accomplished, and they enhance budget stability thus building taxpayer confidence. The existence of reserves reduces the likelihood that unexpected mid-year budget cuts will be needed and reduces the magnitude of cuts if they cannot be avoided. Rainy-day funds also provide a formal plan for dealing with revenue shortfalls. Prudent financial management requires not only paying today's bills in a timely manner, but also providing for an uncertain future.

*Basic Arguments in Favor of Rainy-day Funds*

- 1) They promote budget stability by allowing state officials to avoid ad hoc budget cuts or tax increases during budget shortfalls.
- 2) They buy time for state officials to make better informed decisions about longer-term solutions to budget problems.
- 3) They serve as repositories of excess revenues, reducing the use of one-time revenues to fund ongoing expenditures.
- 4) They weigh in the state's favor with bond agencies.

*Basic Arguments Against Rainy-day Funds*

- 1) They contain excess revenues that could be returned to taxpayers or used for programs.
- 2) They serve as a temporary crutch to address budget problems, which delays permanent solutions to budget problems.
- 3) They serve as a tempting source of revenue to fund programs before shortfalls occur.
- 4) They may be inaccessible (practically) in cases where bond agencies threaten to lower a state's bond rating for tapping a fund.

**Utah's Rainy-day History**

Utah established its first budget reserve account on July 1, 1986 to create a reserve for operating deficits or other emergencies, and the Legislature required that 25% of any year-end General Fund surplus be transferred to the account. Since the inception of the account, the State has made a number of significant decisions and changes regarding rainy-day funds.

# REVENUE VOLATILITY REPORT

- Originally, appropriations from the rainy-day fund could only be used to cover operating deficits for state government or retroactive tax refunds. In the 1996 Second Special Session, the Legislature allowed for the fund to be used to cover operating deficits in public education when authorized by the Legislature.
- Utah's rainy-day fund was used in 1993 and 1994 to settle a class action lawsuit filed against the State by federal retirees. In 1994 and 1995 the Legislature appropriated a total of \$35 million to replenish the fund. The balance in the fund as of FY 1998 was \$88.5 million, which equated to approximately 2.9% of the General Fund / Uniform School Fund appropriations.
- In the 2002 General Session, the Legislature amended statute to require that in addition to 25% of any surplus being transferred to the rainy-day fund, another 25% of any surplus be transferred to the fund until any payments out of the account for the past 10 years have been repaid. Amounts can be reduced if funds are needed for debt service.
- In the 2003 General Session the Legislature created an education rainy-day fund with the same transfer requirements as authorized for the general rainy-day fund. The Legislature also allowed that the rainy-day funds could be used for certain settlement agreements.
- In the 2008 Second Special Session the Legislature provided that interest from the general rainy-day fund be deposited into the General Fund and that interest from the education rainy-day fund be deposited into the Education Fund.
- The Legislature has changed deposit threshold limits multiple times to account for revenue volatility.

## Evidence-based Deposit Rules

H.B. 49, 2008 General Session and later amendments to Utah Code Annotated 63J-1-205 require a triennial report regarding:

- Volatility of the tax bases and revenue streams that fund the State budget;
- Balances in the General Fund Budget Reserve Account and the Education Fund Budget Reserve Account;
- Adequacy of the balances in the budget reserve accounts relative to the volatility of the revenue streams; and,
- Deposit mechanisms likely to hit targets established via this process.

In 2011, policymakers determined that the Division of Finance should automatically transfer a portion of revenue surpluses into the rainy-day funds until the balances in the funds are sufficient to address revenue volatility and forecast error. At that time, policymakers determined that the automatic transfer threshold for the General Fund should be 8%, and the automatic transfer threshold for the Education Fund should be 9%.

When the Legislature last reviewed rainy-day fund policy in 2014, policymakers set the automatic transfer thresholds at 9% for the General Fund and 11% for the Education Fund, and these transfer thresholds likely would have been adequate to cover legislative session revenue forecast error (around 18 months). Since then, anticipated General Fund and Education Fund forecast errors have increased. Table 1 contains the current FY 2018 and FY 2019 forecast errors according to the amount of time the projection is into the future.

**Table 1 - Downside Forecast Errors**

Time Horizon	GF Forecast Error	EF Forecast Error	FY 2018 GF Amount @ Risk (Millions)	FY 2018 EF Amount @ Risk (Millions)	FY 2018 Total Amount @ Risk (Millions)	FY 2019 GF Amount @ Risk (Millions)	FY 2019 EF Amount @ Risk (Millions)	FY 2019 Total Amount @ Risk (Millions)
<i>Consensus Time Horizon (FY 2015 &amp; FY 2016)</i>								
6 Months	1.5%	2.3%	\$37	\$97	\$134			
18 Months	10%	12%				\$256	\$534	\$790

Consistent with past versions of this report, this year's analysis measured experienced revenue forecasting error rates and calculated an amount of revenue that would be at risk over 18 months should revenue forecasters have their worst day. For FY 2019, this analysis suggests General Fund collections could be as much as 10% lower than anticipated over 18 months. Education Fund collections for the same period could potentially lag by as much as 12% based on past forecast error. To completely hedge against this risk, the State should put aside an amount of money equal to 10% of annual General Fund appropriations and 12% of annual Education Fund appropriations.

### **REVENUE-AT-RISK**

Revenue-at-risk is a measurement tool that identifies how much is needed in reserves to cover potential losses due to unexpected dips in revenue. Revenue-at-risk is an adaptation of the value-at-risk model that the private sector uses to protect banks, companies, and investors against unexpected losses due to natural risk.

Revenue-at-risk is calculated by looking at the expected revenue forecast and the forecast error over a set timeframe at a given confidence level. It answers the question: "How much can I lose with x% probability over a pre-set horizon?" (J.P. Morgan/Reuters (1996). [RiskMetrics – Technical Document](#)). For the purposes of this report, the LFA looks at expected risk over six-month and eighteen-month timeframes at a confidence level of 80%. In other words, in eight out of ten scenarios, the given revenue-at-risk (\$256 for General Fund, 18 months) is the worst amount of loss that the State can be expected to sustain. The remaining 20% of the time, the State could sustain greater losses than the current predicted levels; however, these alternate situations are unlikely. In the private sector, confidence levels are traditionally higher (95%-99%) because time horizons are traditionally shorter (a few hours, a week, or a month) and therefore carry less risk. Because the LFA forecasts revenue over a long timeframe, a lower confidence level is necessary to balance the risk that comes from increased uncertainty.

Revenue-at-risk projections are also directly impacted by revenue forecasting error. A larger forecasting error reflects greater uncertainty in revenue projections, and this uncertainty translates into a larger amount of revenue at risk. This is evident in the disparities between six-month and eighteen-month projections. A six-month projection, because it covers a shorter timeframe, has a lower forecasting error and requires a lower reserve to cover risk. An eighteen-month timeframe naturally has a higher forecasting error and subsequently requires a higher reserve to cover risk.

These figures have a direct impact on the recommended reserve fund transfer thresholds. As the amount of revenue-at-risk increases, the LFA will recommend increasing rainy-day fund transfer thresholds for both the General Fund Budget Reserve Account and the Education Fund Budget Reserve Account. Transfer thresholds help reserve deposits to match amounts of revenue-at-risk and ensure that the State will be covered against potential losses due to revenue volatility.

Currently, the General Fund revenue-at-risk for FY 2018 is \$37 million (a six-month horizon) and through FY 2019 is \$256 million (an eighteen-month horizon). The Education Fund revenue-at-risk is \$97 million for FY 2018 and \$534 million through FY 2019. These numbers represent the worst amount of loss these funds could reasonably expect to face over the course of a six-month or eighteen-month timeframe, given current market conditions and the potential for error in revenue forecasting.

### **STATUS OF UTAH'S GENERAL AND EDUCATION BUDGET RESERVE ACCOUNTS**

At the end of FY 2017, the balance in the General Fund Budget Reserve Account (GFBRA) was \$145.7 million, an increase of \$2.1 million (1.4%) over FY 2016. The FY 2017 year-end balance in the Education Fund Budget Reserve Account (EFBRA) was \$361.8 million, an increase of \$12.3 million (3.5%) over FY 2016. Automatic deposits to the accounts are capped such that the account balances cannot exceed 9% of General Fund appropriations for the GFBRA and 11% of the Education Fund appropriations for the EFBRA in the surplus year. The Legislature may appropriate funds to the accounts regardless of their balances.

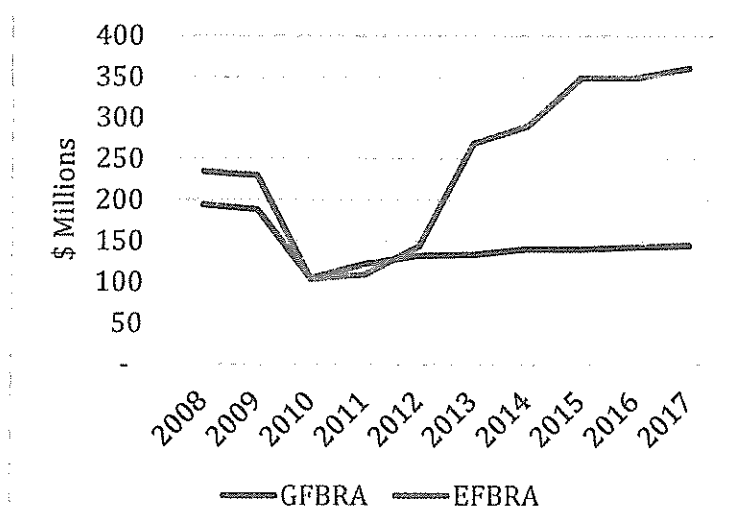
The top panel of Table 2 shows the automatic transfer caps as calculated from current FY 2018 appropriations, the FY 2017 year-end account balances, and the difference. The bottom panel shows the same information but at the analyst's recommended deposit thresholds of 10% and 12% for the General Fund and Education Fund, respectively. Any General Fund or Education Fund supplemental appropriations in FY 2018 would change the transfer caps.

**Table 2 - Recent Rainy-Day Fund Balances and Deposit Thresholds**

	General Fund	Education Fund	Total
<i>Panel 1: Current Automatic Threshold</i>			
	9%	11%	
FY 2018 Transfer Cap	\$214,340,000	\$451,573,000	\$665,913,000
FY 2017 Reserve Balance	\$145,669,000	\$290,454,000	\$436,123,000
Difference	\$68,671,000	\$161,119,000	\$229,790,000
<i>Panel 2: Recommended Automatic Threshold</i>			
	10%	12%	
FY 2018 Transfer Cap	\$238,156,000	\$492,626,000	\$730,782,000
FY 2017 Reserve Balance	\$145,669,000	\$290,454,000	\$436,123,000
Difference	\$92,487,000	\$202,172,000	\$294,659,000

The Legislature tapped the general and education rainy-day funds in FY 2009, FY 2010 and FY 2011 in consequence of the Great Recession. Between FY 2009 and FY 2011, it used \$97 million from the general rainy-day fund. For FY 2009 and FY 2010 combined, it spent \$133 million from the education rainy-day fund. Legislators again accessed the general rainy-day fund in FY 2014, using \$3 million to pay a legal claim. Figure 1 shows the 10-year history of balances in the GFBRA and EFBRA.

**Figure 1 - Rainy-day Fund Balances 10-year History**



Utah statute contemplates repayment within ten-years of any amounts it takes from budget reserve accounts. As discussed earlier, these repayments typically come from a second quarter of revenue surpluses. Since 2011, Utah has experienced several Education Fund surpluses, but General Fund revenue has been very close to forecast, and in one case even below what we anticipated. Another reserve account – the Medicaid Growth Reduction and Budget Stabilization Account – stands in line before the general rainy-day fund for a share of surplus, further reducing potential GFBRA repayments.

The results can be seen in Figure 1. While balances in the education rainy-day fund have rebounded, general rainy-day fund balances have been nearly stagnant since 2011. Of the \$133 million taken from the education rainy-day fund after the Great Recession, all but \$12 million has been repaid. However, more than \$79 million of the \$97 million taken from the general rainy-day fund between FY 2009 and FY 2011 remains unpaid. While all FY 2009 rainy-day loans have been repaid, FY 2019 will be year nine of the ten-year repayment period since FY 2010. Of the FY 2010 withdrawals, \$12 million remains outstanding from the education rainy-day fund and \$73 million is owed to the general rainy-day fund.

Given the aging debt to rainy-day funds, slim margins on General Fund revenue surpluses, and our statutory requirement to recommend deposit mechanisms likely to meet established targets, the Legislative Fiscal Analyst

recommends the Legislature appropriate \$73 million from current year revenue re-estimates to the General Fund Budget Reserve Account, and \$12 million from current year revenue re-estimates to the Education Fund Budget Reserve Account to repay withdrawals from FY 2010.

#### CONCLUSION

Forecasting errors and measures of revenue volatility have increased since the analyst presented the 2014 version of the "Joint Revenue Volatility Report". Legislative staff economists calculate revenue at risk for FY 2019 at 10% of total General Fund revenue and 12% of total Education Fund revenue. This analysis suggests raising the automatic thresholds for depositing revenue surpluses into the budget reserve accounts from the current 9% to 10% for the GFBRA and from the current 11% to 12% for the EFBRA to cover the full 18-month revenue forecast error.

**Recommendation:** The Legislative Fiscal Analyst recommends adjusting the General Fund and Education Fund Budget reserve account automatic transfer caps to 10% and 12%, respectively, in order to cover the amount at risk in the current 18-month revenue forecast.

Based on current FY 2018 General Fund and Education Fund appropriations for operating and capital budgets, the target balances for the GFBRA and EFBRA are \$238.2 million and \$492.6 million, respectively. The FY 2017 year-end balances were \$145.7 million in the GFBRA—\$92.5 million short of the target, and \$361.8 million in the EFBRA—\$130.8 million short of the target. Based on the current consensus revenue figures, the Analyst estimates an extra \$101 million in one-time revenue will be available to lawmakers in the 2018 General Session, and recommends appropriators use \$85 million of that to repay past withdrawals from the GFBRA (\$73 million) and EFBRA (\$12 million). If such repayments were to occur, the amounts remaining to repay past rainy-day fund withdrawals would be \$9 million for the GFBRA and \$0 for the EFBRA.

**Recommendation:** The Legislative Fiscal Analyst recommends the Legislature deposit \$11,991,260 to the Education Fund Budget Reserve Account and \$73,313,177 to the General Fund Budget Reserve Account to repay withdrawals made in the 2010 fiscal year.

Jonathan Ball, Director, Office of Legislative Fiscal Analyst, Utah Legislature

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for Legal Services  
Estella Smith, Assistant Director  
for Research Services

**REQUEST FOR PROPOSAL**

RFP Number: BLR-210002	
Commodity: <b>State Budgeting and Revenue Forecasting Consulting Services</b>	Proposal Opening Date: <b>August 30, 2021</b>
Date: <b>June 21, 2021</b>	Proposal Opening Time: <b>4:00 P.M. CDT</b>

PROPOSALS SHALL BE SUBMITTED IN HARD COPY AND ELECTRONIC FORMAT AND WILL BE ACCEPTED UNTIL THE TIME AND DATE SPECIFIED ABOVE. THE PROPOSAL ENVELOPE MUST BE SEALED AND SHOULD BE PROPERLY MARKED WITH THE PROPOSAL NUMBER, DATE AND HOUR OF PROPOSAL OPENING, AND VENDOR'S RETURN ADDRESS. THE ELECTRONIC SUBMISSIONS SHOULD BE CLEARLY MARKED AS A PROPOSAL IN RESPONSE TO RFP NO. BLR-210002. IT IS NOT NECESSARY TO RETURN "NO BIDS" TO THE BUREAU OF LEGISLATIVE RESEARCH.

**Vendors are responsible for delivery of their proposal documents to the Bureau of Legislative Research prior to the scheduled time for opening of the particular proposal. When appropriate, Vendors should consult with delivery providers to determine whether the proposal documents will be delivered to the Bureau of Legislative Research office street address prior to the scheduled time for proposal opening. Delivery providers, USPS, UPS, FedEx, and DHL, deliver mail to our street address, 500 Woodlane Street, State Capitol Building, Room 315, Little Rock, Arkansas 72201, on a schedule determined by each individual provider. These providers will deliver to our offices based solely on our street address.**

MAILING ADDRESS: 500 Woodlane Street State Capitol Building, Room 315 Little Rock, Arkansas 72201	PROPOSAL OPENING LOCATION: Bureau of Legislative Research Director's Office State Capitol Building, Room 315
E-MAIL: thayerj@blr.arkansas.gov	
TELEPHONE: (501) 682-1937	

Company Name: Econometric Studios, LLC

Name (type or print): Thomas Young, Ph.D.

Title: CEO

Address: 204 E 4<sup>th</sup> Street, North Little Rock, AR 72114

Telephone Number: 801-647-4979

Fax Number:

E-Mail Address: THOMAS.YOUNG@ECONOMETRICSTUDIOS.COM

Identification: 46-1896331

Federal Employer ID Number: 46-1896331

Social Security Number: 529-63-7300

**FAILURE TO PROVIDE TAXPAYER IDENTIFICATION NUMBER MAY RESULT IN PROPOSAL REJECTION**

Business Designation (check one):	Individual [ ]	Sole Proprietorship [ ]	Public Service Corp [ ]
	Partnership [ X ]	Corporation [ ]	Government/ Nonprofit [ ]

GENERAL DESCRIPTION:	State Budgeting and Revenue Forecasting Consulting Services
TYPE OF CONTRACT:	Term

**MINORITY BUSINESS POLICY**

Participation by minority businesses is encouraged in procurements by state agencies, and although it is not required, the Bureau of Legislative Research (“BLR”) supports that policy. “Minority” is defined at Arkansas Code Annotated § 15-4-303 as “a lawful permanent resident of this state who is: (A) African American; (B) Hispanic American; (C) American Indian; (D) Asian American; (E) Pacific Islander American; or (F) A service-disabled veteran as designated by the United States Department of Veteran Affairs”. “Minority business enterprise” is defined at Arkansas Code Annotated § 15-4-303 as “a business that is at least fifty-one percent (51%) owned by one (1) or more minority persons”. The Arkansas Economic Development Commission conducts a certification process for minority businesses. Vendors unable to include minority-owned businesses as subcontractors may explain the circumstances preventing minority inclusion.

Thomas comment: Andre Baksh is a 51% owner of Econometric Studios. Andre is an Indian-American.

**EQUAL EMPLOYMENT OPPORTUNITY POLICY**

The Vendor shall submit a copy of the Vendor’s Equal Opportunity Policy. EO Policies shall be submitted in hard copy and electronic format to the Bureau of Legislative Research accompanying the solicitation response. The Bureau of Legislative Research will maintain a file of all Vendor EO policies submitted in response to this solicitation. The submission is a one-time requirement, but Vendors are responsible for providing updates or changes to their respective policies.

Thomas comment: Our documentation is included in our bid.

**EMPLOYMENT OF ILLEGAL IMMIGRANTS**

The Vendor shall certify prior to award of the contract that it does not employ or contract with any illegal immigrants in its contract with the Bureau of Legislative Research. Vendors shall certify on the Proposal Signature Page and online at <https://www.ark.org/dfa/immigrant/index.php/disclosure/submit/new> . Any subcontractors used by the Vendor at the time of the Vendor’s certification shall also certify that they do not employ or contract with any illegal immigrant. Certification by the subcontractors shall be submitted within thirty (30) days after contract execution.

Thomas comment: We do not employ illegal immigrants and do not contract with illegal immigrants. We have submitted the certification.

**RESTRICTION OF BOYCOTT OF ISRAEL**

Pursuant to Arkansas Code § 25-1-503, a public entity shall not enter into a contract with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of Israel. This prohibition does not apply to a company which offers to provide the goods or services for at least twenty percent (20%) less than the lowest certifying business.

By checking the designated box on the Proposal Signature Page, the Vendor agrees and certifies that they do not, and will not for the duration of the contract boycott Israel.

Thomas comment: We completed the paperwork and submitted everything required.

## **DISCLOSURE FORMS**

Completion of the EO-98-04 Governor's Executive Order contract disclosure forms located at <http://www.dfa.arkansas.gov/offices/procurement/Documents/contgrantform.pdf> is required as a condition of obtaining a contract with the Bureau of Legislative Research and shall be submitted with the Vendor's response.

Thomas comment: We completed this form. We have no conflicts of interest or connections mentioned in the document.

## **SECTION I. GENERAL INFORMATION**

### **1.0 INTRODUCTION**

The purpose of this Request for Proposals ("RFP") issued by the Bureau of Legislative Research ("BLR") is to invite responses ("Proposals") from Vendors desiring to provide State Budgeting and Revenue Forecasting Consulting Services for the Joint Committee on Economic and Tax Policy of the Arkansas General Assembly (the "Committee").

The Committee and the BLR intend to execute one (1) contract as a result of this procurement (the "Contract"), if any contract is issued at all, encompassing all of the products and services contemplated in this RFP, and Proposals shall be evaluated accordingly. All Vendors must fully acquaint themselves with the needs and requirements of the Committee and the BLR and obtain all necessary information to develop an appropriate solution and to submit responsive and effective Proposals.

### **1.1 ISSUING AGENCY**

This RFP is issued by the BLR for the benefit of the Committee, with the vendor selection process to be conducted by the Legislative Council Executive Subcommittee ("Executive Subcommittee"). The BLR is the sole point of contact in the state for the selection process. Vendor questions regarding RFP-related matters should be made in writing (via e-mail) through the Director of the BLR's Legal Counsel, Jillian Thayer, [thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov). Questions regarding technical information or clarification should be addressed in the same manner.

### **1.2 SCHEDULE OF EVENTS**

- |   |                                       |
|---|---------------------------------------|
| • Release RFP   | June 21, 2021                         |
| • Deadline for submission of questions  | August 13, 2021                       |
| • Closing for receipt of proposals and opening of proposals                               | August 30, 2021 at 4:00 p.m. CDT      |
| • Evaluation of proposals by BLR  | August 31, 2021 to September 15, 2021 |
| • Proposals released to ALC-Executive Subcommittee Members                                | September 16, 2021                    |
| • Selection of Vendors to make Oral Presentations   | To Be Announced                       |
| • Oral Presentations/Intent to Award  | To Be Announced                       |
| • Approval of draft contract by the Policy-Making Subcommittee of the Legislative Council | December 15, 2021                     |
| • Approval of final contract by the Legislative Council                                   | December 17, 2021                     |
| • Effective Date of Act 876 of 2021; Contract Term begins                                 | January 1, 2022                       |

Proposals are due no later than the date and time listed on Page 1 of the RFP.

### 1.3 **CAUTION TO VENDORS**

- Vendors shall not contact members of the Committee, the Executive Subcommittee, or the BLR regarding this RFP or the Vendor Selection process from the time the RFP is posted until the Intent to Award is issued, other than through submission of questions in the manner provided for under Section 1.7 of this RFP. The BLR will initiate all other necessary contact with Vendors. ***Any violation of this requirement can be considered a basis for disqualification of the Vendor by the Executive Subcommittee.***
- **Vendors shall respond to each numbered paragraph of the RFP, including by written acknowledgment of the requirements and terms contained in paragraphs that require no other response.** (e.g. "Section 1.3. Vendor acknowledges and agrees with the requirements set forth in this section.") Failure to provide a response will be interpreted as an affirmative response or agreement to the conditions. Reference to handbooks or other technical materials as part of a response must not constitute the entire response, and Vendor must identify the specific page and paragraph being referenced.
- On or before the date and time specified on page one of this RFP, Vendors shall submit:
  - a. One (1) signed original hard copy of the original proposal and the Official Proposal Price Sheet ("OPPS");
  - b. Fifteen (15) additional copies of the redacted proposal and the OPPS (If no redacted version is submitted, then 15 copies of the original proposal.); and
  - c. If the Vendor's proposal contains information that is proprietary and confidential, two (2) electronic versions of the proposal (one (1) redacted electronic version and one (1) unredacted electronic version) on CD, flash drive, or via e-mail. However, if there is no information to redact, one (1) electronic version of the proposal is sufficient.  
*Thomas comment: Our original hard copy was submitted on August 30, 2021. Subsequent requested information was submitted electronically.*
- If emailing electronic versions, send to Jillian Thayer at [thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov) .
  - *Thomas comment: Any correspondence following the original bid was submitted electronically.*
- Failure to submit the required number of copies with the proposal may be cause for rejection.

*Thomas comment: The required copies were submitted on August 30, 2021.*

- For a proposal to be considered, an official authorized to bind the Vendor to a resultant contract must have signed the proposal **and** the Official Proposal Price Sheet.

*Thomas comment: We did this.*

- All official documents shall be included as part of the resultant Contract

*Thomas comment: Done.*

- The Executive Subcommittee reserves the right to award a contract or reject a proposal for any or all line items of a proposal received as a result of this RFP, if it is in the best interest of the Executive Subcommittee to do so. Proposals will be rejected for one or more reasons not limited to the following:
  - a. Failure of the Vendor to submit his or her proposal(s) on or before the deadline established by the issuing office;
  - b. Failure of the Vendor to respond to a requirement for oral/written clarification, presentation, or demonstration;

- c. Failure to supply Vendor references;
- d. Failure to sign the original proposal **and** the Official Proposal Price Sheet;
- e. Failure to complete and sign the Official Proposal Price Sheet(s);
- f. Any wording by the Vendor in its response to this RFP, or in subsequent correspondence, that conflicts with or takes exception to a requirement in the RFP; or
- g. Failure of any proposed services to meet or exceed the specifications.

Thomas comment: We believe all requirements have been completed fully.

#### **1.4 RFP FORMAT**

Any statement in this document that contains the word “must” or “shall” means that compliance with the intent of the statement is mandatory, and failure by the Vendor to satisfy that intent will cause the proposal to be rejected.

Thomas comment: Understood.

#### **1.5 ALTERATION OF ORIGINAL RFP DOCUMENTS**

The original written or electronic language of the RFP shall not be changed or altered except by approved written addendum issued by the BLR. This does not eliminate a Vendor from taking exception(s) to these documents, but it does clarify that the Vendor cannot change the original document’s written or electronic language. If the Vendor wishes to make exception(s) to any of the original language, it must be submitted by the Vendor in separate written or electronic language in a manner that clearly explains the exception(s). If Vendor’s submittal is discovered to contain alterations/changes to the original written or electronic documents, the Vendor’s response may be declared non-responsive, and the response shall not be considered.

Thomas comment: Understood.

#### **1.6 REQUIREMENT OF AMENDMENT**

THIS RFP MAY BE MODIFIED ONLY BY AMENDMENTS WRITTEN AND AUTHORIZED BY THE BUREAU OF LEGISLATIVE RESEARCH. Vendors are cautioned to ensure that they have received or obtained and responded to any and all amendments to the RFP prior to submission.

Thomas comment: Understood.

#### **1.7 RFP QUESTIONS**

Any questions regarding the contents and requirements of the RFP and the format of responses to the RFP shall be directed to Jillian Thayer **via email only** at [thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov). Questions must be submitted by the deadline set forth in Section 1.2, Schedule of Events. Questions submitted by Vendors and answers to questions, as provided by the Bureau of Legislative Research, will be made public.

Thomas comment: Understood.

#### **1.8 PRICES/COST**

An official authorized to bind the Vendor to any resulting Contract must sign the Official Proposal Price Sheet.

Vendors must include all pricing information on the Official Proposal Price Sheet and any attachments thereto and must clearly mark said page(s) as pricing information. Official Proposal Price Sheets may be reproduced as needed. Vendors may expand items to identify all proposed services and costs. A separate listing, which must include pricing, may be submitted with summary pricing.

All charges included on the Official Proposal Price Sheet, must be valid for one hundred eighty (180) days following proposal opening, and shall be included in the cost evaluation. The pricing must include all associated costs for the service being bid.

The BLR will not be obligated to pay any costs not identified on the Official Proposal Price Sheet. Any cost

not identified by the Vendor but subsequently incurred in order to achieve successful operation will be borne by the Vendor.

Thomas comment: The pricing sheet was completed and is included in the physical bid documents. We also submitted an electronic version.

### **1.9 PROPRIETARY INFORMATION**

Proposals and documents pertaining to the RFP become the property of the BLR, and after release to the Executive Subcommittee, shall be open to public inspection pursuant to the Freedom of Information Act of 1967, Arkansas Code § 25-19-101, *et seq.* It is the responsibility of the Vendor to identify all proprietary information by providing a redacted copy of the proposal, as discussed below, and to seal such information in a separate envelope or e-mail marked as confidential and proprietary. If the proposal contains information that the Vendor considers confidential and proprietary, the Vendor shall submit one (1) complete electronic copy of the proposal from which any proprietary information has been removed, *i.e.*, a redacted copy. The redacted copy should reflect the same pagination as the original, show the empty space from which information was redacted, and be submitted on a CD, a flash drive, or in a separate e-mail. Except for the redacted information, the electronic copy must be identical to the original hard copy. The Vendor is responsible for ensuring the redacted copy on CD, flash drive, or submitted via e-mail is protected against restoration of redacted data. ***Submission of a redacted copy is at the discretion of the Vendor, but if no information is redacted, the entire proposal will be considered available as public information once published to the Executive Subcommittee members.***

Thomas comment: Understood.

### **1.10 DELIVERY OF RESPONSE DOCUMENTS**

It is the responsibility of Vendors to submit proposals at the place and on or before the date and time set in the RFP solicitation documents. Proposal documents received at the BLR office after the date and time designated for proposal opening are considered late proposals and shall not be considered. Proposal documents that are to be returned may be opened to verify which RFP the submission is for.

Thomas comment: We submitted our proposal on August 30, 2021 and believe we have abided by every stipulation of the RFP.

### **1.11 BID EVALUATION**

The Executive Subcommittee will evaluate all proposals to ensure all requirements are met. The Contract will be awarded on the basis of the proposal that most thoroughly satisfies the relevant criteria as determined by the Executive Subcommittee.

Thomas comment: Understood.

### **1.12 ORAL AND/OR WRITTEN PRESENTATIONS/DEMONSTRATIONS**

The Executive Subcommittee may select a small group of Vendors from among the proposals submitted to attend a meeting of the Executive Subcommittee to answer questions and to make oral and written presentations to the Executive Subcommittee. The date of this meeting will be announced by the Executive Subcommittee at least one (1) week prior. All presentations are subject to be recorded.

The Successful Vendor selected by the Executive Subcommittee shall also attend the December 15, 2021 meeting of the Policy Making Subcommittee of the Legislative Council and the December 17, 2021 meeting of the Legislative Council, in order to answer any questions that may arise regarding the Contract.

Thomas comment: Ok.

### **1.13 INTENT TO AWARD**

After complete evaluation of the proposal, the intent to award will be announced at the meeting of the Executive Subcommittee at which select Vendors' oral presentations are given (See Section 1.12). The date of this meeting will be announced by the Executive Subcommittee at least one (1) week prior. The purpose of the announcement is to establish a specific time in which vendors and agencies are aware of the intent to award. The Executive Subcommittee reserves the right to waive this policy, the Intent to Award, when it is in the best interest of the state.

Thomas comment: Understood.

### **1.14 APPEALS**

A Vendor who is aggrieved in connection with the award of a contract may protest to the Legislative Council. The protest shall be submitted in writing within five (5) calendar days after the intent to award is announced. After reasonable notice to the protestor, the Legislative Council, or the Joint Budget Committee if the Arkansas General Assembly is in session, shall promptly meet to discuss and issue a decision in writing that states the reasons for the action taken. The Legislative Council's or the Joint Budget Committee's decision is final and conclusive. In the event of a timely protest, the Bureau of Legislative Research shall not proceed further with the solicitation or with the award of the contract unless the co-chairs of the Arkansas Legislative Council or the Joint Budget Committee make a written determination that the award of the contract without delay is necessary to protect substantial interests of the state.

Thomas comment: Understood.

#### **1.15 PAST PERFORMANCE**

A Vendor's past performance may be used in the evaluation of any offer made in response to this solicitation. The past performance should not be greater than three (3) years old and must be supported by written documentation submitted to the Bureau of Legislative Research with the Vendor's RFP response. Documentation shall be in the form of a report, memo, file, or any other appropriate authenticated notation of performance to the vendor files.

Thomas comment: Our proposal has a combined 40 years of experience doing revenue forecasting and budget advice. Also within our proposal are 161 pages of examples directly related to this RFP. We are well-versed in all forms of revenue forecasting, tax impact analysis, budget stress testing, revenue volatility, presentations, research, and other budget-related economics. We have presented at the National Conference of State Legislatures, the Federation of Tax Administrators, the Regional Economic Models Incorporated Annual Conference, and 100s of legislative committee meetings. We have served as Chair of the Revenue Assumption Committee and as members of the Revenue Estimates Committee in Utah. We are also developers of Utah's dynamic fiscal notes structure and have more than 40 years of experience doing static fiscal notes.

#### **1.16 TYPE OF CONTRACT**

This will be a term contract commencing on the date of execution of the Contract, and terminating on December 31, 2022, with an option for one (1) renewal of up to twelve (12) months. The Executive Subcommittee and the BLR will have the option to renegotiate at the time of renewal.

Thomas comment: OK.

#### **1.17 PAYMENT AND INVOICE PROVISIONS**

All invoices shall be delivered to the BLR and must show an itemized list of charges. The Invoice, Invoice Remit, and Summary must be delivered via email to Jillian Thayer, Legal Counsel to the Director, at [thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov).

The BLR shall have no responsibility whatsoever for the payment of any federal, state, or local taxes that become payable by the Successful Vendor or its subcontractors, agents, officers, or employees. The Successful Vendor shall pay and discharge all such taxes when due.

Payment will be made in accordance with applicable State of Arkansas accounting procedures upon acceptance by the BLR. The BLR may not be invoiced in advance of delivery and acceptance of any services. Payment will be made only after the Successful Vendor has successfully satisfied the BLR as to the reliability and effectiveness of the services as a whole. Purchase Order Number and/or Contract Number should be referenced on each invoice.

The Successful Vendor shall be required to maintain all pertinent financial and accounting records and evidence pertaining to the Contract in accordance with generally accepted principles of accounting and other procedures specified by the BLR. Access will be granted to state or federal government entities or any of their duly authorized representatives upon request.

Financial and accounting records shall be made available, upon request, to the BLR's designee(s) at any time during the contract period and any extension thereof and for five (5) years from expiration date and final payment on the Contract or extension thereof.

Thomas comment: Understood.

### **1.18 PRIME CONTRACTOR RESPONSIBILITY**

The Successful Vendor will be required to assume prime contractor responsibility for the Contract and will be the sole point of contact.

If any part of the work is to be subcontracted, the Vendor must disclose in its proposal the following information: a list of subcontractors, including firm name and address, contact person, complete description of work to be subcontracted, and descriptive information concerning subcontractor's business organization.

Thomas comment: None of the work will be subcontracted.

### **1.19 DELEGATION AND/OR ASSIGNMENT**

The Vendor shall not assign the Contract in whole or in part or any payment arising therefrom without the prior written consent of the Committee. The Vendor shall not delegate any duties under the Contract to a subcontractor unless the BLR, as approved by the Committee, has given written consent to the delegation.

Thomas comment: None of the will shall be subcontracted.

### **1.20 CONDITIONS OF CONTRACT**

The Successful Vendor shall at all times observe and comply with federal and state laws, local laws, ordinances, orders, and regulations existing at the time of or enacted subsequent to the execution of the Contract which in any manner affect the completion of the work. The Successful Vendor shall indemnify and save harmless the BLR, the Committee, the Executive Subcommittee, the Arkansas Legislative Council, the Arkansas General Assembly, and the State of Arkansas and all of their officers, representatives, agents, and employees against any claim or liability arising from or based upon the violation of any such law, ordinance, regulation, order, or decree by an employee, representative, or subcontractor of the Successful Vendor.

### **1.21 STATEMENT OF LIABILITY**

The BLR and the Committee will demonstrate reasonable care but shall not be liable in the event of loss, destruction, or theft of contractor-owned technical literature to be delivered or to be used in the installation of deliverables. The Vendor is required to retain total liability for technical literature until the deliverables have been accepted by the authorized BLR official. At no time will the BLR or the Committee be responsible for or accept liability for any Vendor-owned items.

The Successful Vendor shall indemnify and hold harmless the Committee and its members, the Arkansas General Assembly and its members, the BLR and its officers, directors, agents, retailers, and employees, and the State of Arkansas from and against any and all suits, damages, expenses, losses, liabilities, claims of any kind, costs or expenses of any nature or kind, including, with limitation, court costs, attorneys' fees, and other damages, arising out of, in connection with, or resulting from the development, possession, license, modification, disclosure, or use of any copyrighted or non-copyrighted materials, trademark, service mark, secure process, invention, process or idea (whether patented or not), trade secret, confidential information, article, or appliance furnished or used by a vendor in the performance of the Contract.

The resulting Contract shall be governed by the laws of the State of Arkansas, without regard for Arkansas' conflict of law principles. Any claims against the Bureau of Legislative Research, the Committee, the Arkansas Legislative Council, or the Arkansas General Assembly, whether arising in tort or in contract, shall be brought before the Arkansas State Claims Commission as provided by Arkansas law, and shall be governed accordingly. Nothing in this RFP or the resulting contract shall be construed as a waiver of sovereign immunity.

Thomas comment: Understood and agree.

### **1.22 AWARD RESPONSIBILITY**

The BLR and the Executive Subcommittee will be responsible for award of any resulting contract(s).

Thomas comment: Understood.

### **1.23 INDEPENDENT PRICE DETERMINATION**

By submission of this proposal, the Vendor certifies, and in the case of a joint proposal, each party thereto certifies as to its own organization, that in connection with this proposal:

- The prices in the proposal have been arrived at independently, without collusion, and that no prior information concerning these prices has been received from or given to a competitive company; and

- If there is sufficient evidence of collusion to warrant consideration of this proposal by the Office of the Attorney General, all Vendors shall understand that this paragraph may be used as a basis for litigation.

Thomas comment: All quoted prices were derived independently.

#### **1.24 PUBLICITY**

News release(s), media interviews, or other publicity by a Vendor pertaining to this RFP or any portion of the project shall not be made without prior written approval of the BLR, as authorized by the co-chairs of the Executive Subcommittee or the co-chairs of the Committee. Failure to comply with this requirement is deemed to be a valid reason for disqualification of the Vendor's proposal.

The Successful Vendor agrees not to use the BLR's, the Committee's, the Executive Subcommittee's, the Arkansas Legislative Council's, or the Arkansas General Assembly's names, trademarks, service marks, logos, images, or any data arising or resulting from this RFP or the Contract as part of any commercial advertising or proposal without the express prior written consent of the BLR, the Committee, and the Executive Subcommittee in each instance.

Thomas comment: Understood and agree.

#### **1.25 CONFIDENTIALITY**

The Successful Vendor shall be bound to confidentiality of any confidential information that its employees may become aware of during the course of performance of contracted services. Consistent and/or uncorrected breaches of confidentiality may constitute grounds for cancellation of the Contract.

The Successful Vendor shall represent and warrant that its performance under the Contract will not infringe any patent, copyright, trademark, service mark, or other intellectual property rights of any other person or entity and that it will not constitute the unauthorized use or disclosure of any trade secret of any other person or entity.

Thomas comment: We have 40 years of combined experience doing confidential revenue work for legislatives, senior executive officials, agency professionals, and others. All work is considered confidential unless stated otherwise. No work will infringe upon any patents, copyright, trademark, service mark, or other intellectual property rights.

#### **1.26 PROPOSAL TENURE**

All Proposals shall remain valid for one hundred eighty (180) calendar days from the Proposal due date referenced on Page 1 of the RFP.

Thomas comment: OK.

#### **1.27 WARRANTIES**

- The Successful Vendor shall warrant that it currently is, and will at all times remain, lawfully organized and constituted under all federal, state, and local law, ordinances, and other authorities of its domicile and that it currently is, and will at all times remain, in full compliance with all legal requirements of its domicile and the State of Arkansas.

Thomas comment: We are in compliance with all applicable statutes.

- The Successful Vendor shall warrant and agree that all services provided pursuant to this RFP and the Contract have been and shall be prepared or done in a workman-like manner consistent with the highest standards of the industry in which the services are normally performed. The Successful Vendor further represents and warrants that all computer programs implemented for performance under the Contract shall meet the performance standards required thereunder and shall correctly and accurately perform their intended functions.

Thomas comment: All work becomes the property of the Arkansas Legislative Council, including presentations, computer code, and unique analyses.

- The Successful Vendor shall warrant that it is qualified to do business in the State of Arkansas and is in good standing under the laws of the State of Arkansas and shall file appropriate tax returns as provided by the laws of this State.

Thomas comment: Documentation has been submitted authorizing Econometric Studios to do work in Arkansas.

### **1.28 CONTRACT TERMINATION**

Subsequent to award and execution of the Contract, the Committee and the BLR may terminate the Contract at any time. In the event of termination, the Successful Vendor agrees to apply its best efforts to bring work in progress to an orderly conclusion, in a manner and form consistent with the Contract and satisfactory to the Committee.

Thomas comment: OK and understood.

### **1.29 VENDOR QUALIFICATIONS**

The Successful Vendor must, upon request of the Executive Subcommittee, furnish satisfactory evidence of its ability to furnish products or services in accordance with the terms and conditions of this proposal. The Executive Subcommittee reserves the right to make the final determination as to the Vendor's ability to provide the services requested herein.

The Vendor must demonstrate that it possesses the capabilities and qualifications described in Sections 3 and 5, including without limitation the following:

- Be capable of providing the services required by the Committee;
- Provide documentation that it is authorized to do business in this State; and
- Complete the Official Proposal Price Sheet in Attachment A.

Thomas comment: The official pricing sheet has been filled out. We are authorized to do business in the State. On bid submitted on August 30, 2021 includes 161 pages of examples of prior work. As mentioned in our bid, we are Ph.D. economists with 40 years of combined experience doing revenue forecasting, static and dynamic fiscal notes, budget stress testing, revenue volatility, economic development policy, long-term fiscal health, and other budget-related economics issues.

### **1.30 NEGOTIATIONS**

As provided in this RFP, discussions may be conducted by the Executive Subcommittee and the BLR with a responsible Vendor who submits proposals determined to be reasonably susceptible of being selected for award for the purpose of obtaining clarification of proposal responses and negotiation for best and final offers.

Thomas comment: OK and understood.

### **1.31 LICENSES AND PERMITS**

During the term of the Contract, the Vendor shall be responsible for obtaining, and maintaining in good standing, all licenses (including professional licenses, if any), permits, inspections, and related fees for each or any such licenses, permits, and/or inspections required by the state, county, city, or other government entity or unit to accomplish the work specified in this solicitation and the contract.

Thomas comment: OK and agree.

### **1.32 OWNERSHIP OF DATA & MATERIALS**

All data, material, and documentation prepared for the Committee pursuant to the Contract shall belong exclusively to the BLR, for the use of the Committee and other committees of the Arkansas General Assembly, as authorized by the Committee.

Thomas comment: OK and understood. This is common practice.

## **SECTION 2. OVERVIEW**

### **2.0 ACT 876 OF 2021 OVERVIEW**

Act 876 of 2021 (the "Act"), enacted by the 93<sup>rd</sup> General Assembly of the State of Arkansas, requires the Secretary of the Department of Finance and Administration to provide the BLR with "direct access to nonconfidential aggregate and statistical information derived from state tax collection and administration records for use in state budgeting and forecasting and the preparation of fiscal impact statements on proposed legislation." The Act further provides that the BLR may provide access to this information to "any consultant retained by the Bureau of Legislative Research." The Act has an effective date of January 1, 2022.

Thomas comment: Understood.

### **2.1 OBJECTIVES**

It is the objective of the Committee, by entering into a Contract for consultant services, to provide to the members of the Arkansas General Assembly detailed and accurate information concerning state budgeting and forecasting matters, including without limitation access to budgeting and forecasting analysis, research and recommendations, as well as fiscal impact reports on proposed legislation. This will assist the General Assembly to better serve the fiscal needs of the state.

This Request for Proposal is designed to obtain a Contract to provide State Budgeting and Revenue Forecasting Consulting Services to the Committee. All responses to this RFP shall reflect the overall goals and objectives stated herein.

Thomas comment: Understood.

## **SECTION 3. STATE BUDGETING AND REVENUE FORECASTING CONSULTING SERVICES**

### **3.0 SCOPE OF WORK / SPECIFICATIONS**

It will be the responsibility of the Vendor to provide the Committee, and ultimately, the members of the Arkansas General Assembly, with accurate and detailed reports, guidance, and opinions, including without limitation, information set forth in Section 2.1, above, and in this Section 3.0, including without limitation the following services:

- Prepare fiscal impact reports for proposed legislation, including dynamic scoring;  
Thomas: On pages 35 through 37 of our response are examples of our experience doing static and dynamic fiscal notes. In consultation with leadership, we welcome the opportunity to present Arkansas as a leader in budgetable dynamic fiscal scoring.
- Provide revenue forecasting and analysis;  
Thomas: Examples of our revenue forecasting and analysis work are including in our RFP response on pages 19 through 180. We are well-versed in all aspects of revenue forecasting including cutting-edge methods utilizing AI/ML.
- Provide consultation and advisory services regarding proposed legislation;  
Thomas: We have been advising legislators and senior executives for 40 years. Our consulting and advisory services are efficient and to-the-point. We offer options for leadership to consider when weighing potential decisions. We view our role as providing options and evaluating the potential impact of chosen options.
- Provide budgeting and forecasting research and analysis, as requested, including reports regarding updates to state and federal laws, and best practices in state budgeting;  
Thomas: In our response on pages 29 through 32 we provide examples of work we did regarding the state revenue impact of the recently enacted federal Tax Cuts and Jobs Act (TCJA). We are excited to see how states plan for the end of the TCJA in seven years. We also provided examples of revenue trend analysis for defining one-time and ongoing money (pages 33 to 34), revenue volatility (pages 38 to 42), developing consensus economic indicators (pages 43 to 67), developing economic development strategy (pages 68 to 139), developing public-facing tax revenue simulators (pages 140 to 146), and many others. We are well-known as the proponents of budget stress testing and other state budgeting best practices.

- Attend meetings of the Committee, as requested, or of other legislative committees as authorized by the Committee co-chairs;  
Thomas: We welcome the opportunity to meet with and work for Arkansas' leaders.
- Be readily accessible to Committee members and BLR staff; and  
Thomas: We will be available by text, cell phone call, or email.
- Be available for periodic education discussions with Committee members and staff.  
Thomas: We developed the current consensus education indicators in the State of Utah. We were the first to develop the consensus weighted pupil unit budgeting structure still in use in Utah. We know the value of education and the potential long-term issues associated with education policy. We bring experience working with education stakeholders across many states, and understand the issues of equity, long-term investments, "too costly" education practices, the economics of education, and many other issues. Thomas currently services on the Board of Directors of one of the nation's largest charter schools – American Preparatory Academy.

In the event that services in addition to those described in Sections 2.1 and 3.0 are required during the term of the Contract, the Committee shall vote to authorize additional work, subject to the approval of the Legislative Council co-chairs, who shall have the power to approve the additional services and an additional fee for those services in an amount not to exceed ten percent (10%) of the total contract amount.

Thomas comment: Understood. We welcome additional research.

### **3.1 CONSULTING CAPABILITIES**

It should be expected that the Committee may require other details, reports, guidance, and information as part of the final work product under this RFP. It is not possible to capture all variables and discussion points that may be required by the members of the Committee or the legislative body at large so the prospective Vendor should take this opportunity to provide any comparative experience to the scope of work envisioned herein to fully and completely communicate their ability to succeed.

In this Section 3.1, Vendor should detail all capabilities, ideas, guidance, and other information to fully demonstrate the capabilities of the prospective Vendor.

Thomas comment: Our bid response includes examples of monthly revenue monitoring against monthly targets, revenue presentations to the Executive Appropriations Committee, revenue modeling results, dynamic fiscal notes, budget stress testing, and other revenue-related economic works. Our examples start on page 19 of our 180-page RFP response. So far as we know, we are the first in the country to develop a structured framework around dynamic fiscal notes and complete budget stress testing.

### **3.2 STATE BUDGETING AND REVENUE FORECASTING CONSULTING**

The Successful Vendor will be evaluated based on a clear and confident understanding of the goals and deliverables addressed in Section 2 and Section 3. To be evaluated as a complete response to this RFP, each prospective vendor must detail their experience, understanding, and potential path of success for each item addressed above

Thomas comment: We provided a lengthy response to the RFP in physical and digital form. We understand the RFP, have 40 years of combined experience, and have developed a path forward to success.

Vendor's response to this Request for Proposal should be comprehensive and address each individual item of section 3.0 to the Vendor's fullest extent to communicate their understanding of the requirement and how best the Vendor will meet this requirement. All pertinent information regarding the Vendor's proposed solution, team, actuarial resources, technical infrastructure, or other details must be provided to the items in 3.0 and 3.1.

Thomas comment: Understood. Our 180-page RFP response provides a comprehensive view of our capabilities and experience. We have supplemented this main response with this brief point-by-point reply.

The consulting services provided by the successful Vendor pursuant to this Request for Proposal must address the stated specifications and requirements. These services will be provided to the Committee and other legislative committees, as approved.

Thomas comment: Understood. We believe we have provided very detailed responses to the RFP's requests, including numerous examples of our successes.

As requested, the Vendor must attend various meetings of the Committee and other legislative committees of the Arkansas General Assembly. Hourly compensation will be paid for meeting times. The Vendor shall

explain any anticipated limitations in its ability to attend meetings of the Committee or other legislative committees or to provide any of the services described in Section 3.0.

Thomas comment: Understood. We will attend all requested meetings in person (our preferred choice of communication). We have many years of experience presenting to legislative committees and think our experience will serve the Arkansas General Assembly well.

All projects shall be paid pursuant to the fee schedule. The Vendor shall submit itemized invoices to the BLR, which will pay the invoices on a monthly basis.

Thomas comment: Understood.

The BLR does not grant the Vendor with exclusive rights to all State Budgeting and Revenue Forecasting Consulting Services contemplated under this RFP. In the event that the Committee decides that acquisition of these services by another Vendor is in the Committee's best interests, the BLR reserves the right to contract and purchase State Budgeting and Revenue Forecasting Consulting Services from a different source outside of the contract resulting from this RFP, and the Committee's action to procure services outside of the Contract does not infringe upon, nor terminate, the contract resulting from this Request for Proposal.

Thomas comment: Understood.

### **3.3 PROCUREMENT OF GOODS AND SERVICES**

If the Vendor anticipates the need to procure additional goods or services in order to provide the consulting services requested in their RFP, the Vendor must identify the goods and / or services that may be procured, the reason the procurement is necessary, the name of the vendor for whom the goods or services are to be procured, and the anticipated cost of the goods and/or services to be procured.

Thomas comment: Depending upon the nature of the forecast and analysis, the Arkansas Legislative Council may be advised to purchase a subscription to Global Insight, Oxford Economics, or Moody's DataBuffet.

## **SECTION 4. COST PROPOSAL**

### **4.0 COMPENSATION**

Compensation for State Budgeting and Revenue Forecasting Consulting Services shall be paid based upon the work performed as specified in this RFP. A Vendor seeking consideration shall submit a compensation proposal for State Budgeting and Revenue Forecasting Consulting Services as provided throughout the RFP.

The fee schedule will cover the time spent in the completion of the requested task or project, as well as other administrative costs (including, but not limited to, secretarial, bookkeeping, budget preparation, monitoring and auditing services, travel expenses, etc.). The fee schedule will cover the time expended inclusive of all overhead or any other costs associated with the particular individuals who may be performing the services.

Thomas comment: Completed.

### **4.1 PAYMENT SCHEDULE**

The BLR shall pay the Vendor based on the hours expended for approved projects on a monthly basis or as otherwise may be agreed to in writing by the parties. The BLR may request and the Vendor shall provide timesheets or other documentation as may be directed by the BLR prior to the payment for any services rendered. Failure to provide appropriate and satisfactory documentation will be sufficient grounds to withhold payment for the disputed amount, but other nondisputed amounts must be paid in a timely manner.

Thomas comment: OK.

### **4.2 TRAVEL, LODGING, AND MEALS**

The Successful Vendor may submit invoices and receive reimbursement for actual travel expenses allowed by law related to attending meetings of the Committee and other legislative committees of the Arkansas General Assembly, or other travel related to work under the Contract as approved by the co-chairs of the Committee. Reimbursement of travel expenses will be included in the total maximum contract amount.

Estimates of expenses as allowed by law for travel related to field work required by the Contract and this RFP should be included by the Vendor in the fee schedule, as required by Section 4.0.

Thomas comment: Understood. We think travel will be \$1,480 per 2-day meetings and plan to submit reimbursement requests based upon tracked expenses.

## **SECTION 5. ADDITIONAL VENDOR REQUIREMENTS**

### **5.0 COMPREHENSIVE VENDOR INFORMATION**

All proposals should be complete and carefully worded and should convey all of the information requested by the Executive Subcommittee and the BLR. If significant errors are found in the Vendor's proposal, or if the proposal fails to conform to the essential requirements of the RFP, the Executive Subcommittee will be the sole judge as to whether that variance is significant enough to reject the proposal. Proposals should be prepared simply and economically, providing a straightforward, concise description of the Vendor's capabilities to satisfy the requirements of the RFP. Emphasis should be on completeness and clarity of the content. Proposals that include either modifications to any of the contractual requirements of the RFP or a Vendor's standard terms and conditions may be deemed non-responsive and therefore not considered for award.

Thomas comment: Understood. We think we have been very comprehensive, including providing numerous examples of prior work experience. Our submission includes 161 pages of examples and discussion of many other directly related experience.

### **5.1 VENDOR PROFILE**

In addition to information requested in other sections of the RFP, the Vendor shall submit the following:

- Business Name; [Econometric Studios](#)
- Business Address; [204 E 4<sup>th</sup> Street, North Little Rock, AR, 72114](#)
- Alternate Business Address; [1675 Devonshire Drive, SLC, UT 84108](#)
- Primary Contact Name, Title, Telephone, Fax, and E-mail Address; [Thomas Young, Ph.D., 801-647-4979, \[Thomas.young@econometricstudios.com\]\(mailto:Thomas.young@econometricstudios.com\)](#)
- How many years this company has been in this type of business; [10 years](#)
- Proof that the Vendor is qualified to do business in the State of Arkansas; [This was submitted.](#)
- A disclosure of the Vendor's name and address and, as applicable, the names and addresses of the following: If the Vendor is a corporation, the officers, directors, and each stockholder of more than a ten percent (10%) interest in the corporation. However, in the case of owners of equity securities of a publicly traded corporation, only the names and addresses of those known to the corporation to own beneficially five percent (5%) or more of the securities need be disclosed; if the Vendor is a trust, the trustee and all persons entitled to receive income or benefits from the trust; if the Vendor is an association, the members, officers, and directors; and if the Vendor is a partnership or joint venture, all of the general partners, limited partners, or joint venturers; A disclosure of all the states and jurisdictions in which the Vendor does business and the nature of the business for each state or jurisdiction;

Thomas comment: [Econometric Studios, LLC is owned by Andre and Thomas.](#)

- A disclosure of all the states and jurisdictions in which the Vendor has contracts to supply the type of services requested under this RFP and the nature of the goods or services involved for each state or jurisdiction;

Thomas comment: [None that are directly related to this type of work. We do offer services in all 50 states.](#)

- A disclosure of the details of any finding or plea, conviction, or adjudication of guilt in a state or federal court of the Vendor for any felony or any other criminal offense other than a traffic violation committed by the persons identified as management, supervisory, or key personnel;  
[Thomas comment: Not applicable. We have nothing to disclose.](#)

- A disclosure of the details of any bankruptcy, insolvency, reorganization, or corporate or individual

purchase or takeover of another corporation, including without limitation bonded indebtedness, and any pending litigation of the Vendor;

Thomas comment: Not applicable. We have nothing to disclose.

- A disclosure of any conflicts of interest on the part of the Vendor or its personnel that will be working on this project.

Thomas comment: No conflicts of interest.

- Additional disclosures and information that the Executive Subcommittee may determine to be appropriate for the procurement involved.

Thomas comment: None.

## **5.2 GENERAL INFORMATION**

Vendor shall submit any additional information for consideration such as specialized services, staffs available, or other pertinent information the Vendor may wish to include.

Thomas comment: We submitted a long list of prior experience that justifies our successes in the field of revenue forecasting and budget analysis services.

## **5.3 DISCLOSURE OF LITIGATION**

A Vendor shall include in its Proposal a complete disclosure of any civil or criminal litigation or indictment involving such Vendor. A Vendor shall also disclose any civil or criminal litigation or indictment involving any of its joint ventures, strategic partners, prime contractor team members, and subcontractors. This disclosure requirement is a continuing obligation, and any litigation commenced after a Vendor has submitted a Proposal under this RFP must be disclosed to the BLR in writing within five (5) days after the litigation is commenced.

Thomas comment: None.

## **5.4 EXECUTIVE SUMMARY**

A Vendor must provide a summary overview and an implementation plan for the entire project being proposed. The intent of this requirement is to provide the Executive Subcommittee with a concise but functional summary of the discussion of each phase of the Vendor's plan in the order of progression. While the Executive Subcommittee expects a Vendor to provide full details in each of the sections in other areas of the RFP relating to its plan, the Executive Summary will provide a "map" for the Executive Subcommittee to use while reviewing the Proposal.

Thomas comment: Our detailed, 180-page RFP response provides information on our plan to accomplish the task at hand. In the sections below, we explain our one-month "lead-in" plan.

Each area summarized must be listed in chronological order, beginning with the date of Contract execution, to provide a clear indication of the flow and duration of the project. A Vendor may use graphics, charts, pre-printed reports, or other enhancements as a part of this section to support the chronology or add to the presentation. Any such materials must be included in the original and each copy of the Proposal.

Gather historical information on revenue sources by month, quarter, year, and if possible, daily.

o Due: January 8, 2022 • Develop time-series forecasting models for large revenue sources

o Due: January 15, 2022 • Compare models of the Arkansas economy and revenue picture using dynamic, general equilibrium modeling structure

o Due January 29, 2022 • At this point, and considering the consultant's long history in fiscal notes and economic impact analyses, the consultant should have a working understanding of how best to assist the Committee in its desire for an independent static and dynamic fiscal noting process.

Dr. Young will be available for questions and modeling once the contract starts. Some might consider this timeline plan too aggressive or short. To the contrary, because we come with a broad understanding of the revenue modeling picture, our work is efficient, with little time devoted to becoming familiar with unique aspects of the Arkansas revenue picture. We are well-versed and think this one-month lead in will be enough to be proficient in providing advice to the Arkansas Legislative Council.

## 5.5 VENDOR'S QUALIFICATIONS

A Vendor shall provide resumes or short biographies and qualifications of all management, supervisory, and key personnel to be involved in performing the services contemplated under this RFP. The resumes shall present the personnel in sufficient detail to provide the Executive Subcommittee with evidence that the personnel involved can perform the work specified in the RFP. A Vendor shall provide a brief history of its company, to include the name and location of the company and any parent/subsidiary affiliation with other entities. If a Vendor is utilizing the services of a subcontractor(s) for any of the service components listed, the Vendor shall include in its proposal response a brief history of the subcontractor's company to include the information requested herein. A Vendor shall provide:

- A brief professional history, including the number of years of experience in providing the services required under this RFP or related experience and any professional affiliations and trade affiliations.  
*Thomas comment: Our resumes are included on pages 2 through 4 of the RFP response. We have a combined 40 years of experience doing revenue forecasting and budget-related economic advice. We are active or former members of the Revenue Assumptions Working Group, the Revenue Estimating Committee, the American Economic Association, the National Association for Business Economics, the American Finance Association, the Board of Directors of American Preparatory Academy, among others.*
- A listing of current accounts and the longevity of those accounts.  
*Microsoft (5), BOE Securities (7 years), HM Enterprises (4 years), ValueWalk (8 years), Intuit (1 year), Kitley Tech (1 year), SafeGraph (2 years), Points Consulting (1 year), Zest Tea (1 year), Gravis Marketing (7 years)*
- An organizational chart highlighting the names/positions that will be involved in the contract, including the individual who will be primarily responsible for managing the account on a day-to-day basis.  
*Thomas comment: Thomas will manage the contract work with the assistance of Andre Baksh.*
- A detailed description of the plan for assisting the Committee in meeting its goals and objectives, including how the requirements will be met and what assurances of efficiency and success the proposed approach will provide.  
*Gather historical information on revenue sources by month, quarter, year, and if possible, daily.*
  - o *Due: January 8, 2022 • Develop time-series forecasting models for large revenue sources*
  - o *Due: January 15, 2022 • Compare models of the Arkansas economy and revenue picture using dynamic, general equilibrium modeling structure*
  - o *Due January 29, 2022 • At this point, and considering the consultant's long history in fiscal notes and economic impact analyses, the consultant should have a working understanding of how best to assist the Committee in its desire for an independent static and dynamic fiscal noting process.*  
*Dr. Young will be available for questions and modeling once the contract starts. Some might consider this timeline plan too aggressive or short. To the contrary, because we come with a broad understanding of the revenue modeling picture, our work is efficient, with little time devoted to becoming familiar with unique aspects of the Arkansas revenue picture. We are well-versed and think this one-month lead in will be enough to be proficient in providing advice to the Arkansas Legislative Council.*
- An indication of the timeframe the Vendor would require assisting the Committee in meeting its goals and objectives.  
*Thomas comment: Our response is included in the above response.*
- A detailed, narrative statement listing the three (3) most recent, comparable contracts (including contact information) that the Vendor has performed and the general history and experience of its organization.  
*(1) Utah Legislature: Dr. Young was a senior economist with the Utah Legislature, performing substantially similar work.*

- a. Nate Talley, Governor's Chief Economist, 801-699-1889
- (2) Microsoft: Prepared confidential forecasting.
- a. Amanda Lankford, 202-386-6347
- (3) BOE Securities: Prepared economic forecasting. a. Bufus Outlaw, 609-216-3094
- At least three (3) references from entities that have recent (within the last three (3) years) contract experience with the Vendor and are able to attest to the Vendor's work experience and qualifications relevant to this RFP.
  - (1) Utah Legislature: Dr. Young was a senior economist with the Utah Legislature, performing substantially similar work.
  - a. Nate Talley, Governor's Chief Economist, 801-699-1889
  - (2) Microsoft: Prepared confidential forecasting.
  - a. Amanda Lankford, 202-386-6347
  - (3) BOE Securities: Prepared economic forecasting. a. Bufus Outlaw, 609-216-3094
- A list of every business for which Vendor has performed, at any time during the past three (3) years, services substantially similar to those sought with this solicitation. Err on the side of inclusion; by submitting an offer, Vendor represents that the list is complete.
  - Utah Legislature, Microsoft, BOE Securities, HM Enterprises, ValueWalk, Intuit, Western Governors University, University of Utah, Dataforce, Gratia Group, Ascend, Kessman Engineering, Rutherford International, Kately Tech, SafeGraph, Points Consulting, The Valley Economic Alliance, Zest Tea, Southeastern Company Police, Gravis Marketing, Tata Consultancy
- List of failed projects, suspensions, debarments, and significant litigation.
  - Thomas: None.
- An outline or other information relating to why the Vendor's experience qualifies in meeting the specifications stated in Section 3 of this RFP.
  - Thomas: Please see our written, lengthier RFP response, particularly the final 161 pages.

A Vendor shall provide information on any conflict of interest with the objectives and goals of the Committee that could result from other projects in which the Vendor is involved. Failure to disclose any such conflict may be cause for Contract termination or disqualification of the response.

Thomas comment: We have no conflict of interest.

A Vendor or its subcontractor(s) must list all clients that were lost between June 2018 and the present and the reason for the loss. The Executive Subcommittee reserves the right to contact any accounts listed in this section. A Vendor must describe any contract disputes involving an amount of thirty-five thousand dollars (\$35,000) or more that the Vendor, or its subcontractor(s), has been involved in within the past two (2) years. Please indicate if the dispute(s) have been successfully resolved.

Thomas comment: Not applicable. We have no contract disputes since June 2018.

#### **5.5.1 BACKGROUND INVESTIGATION**

Vendors must allow the BLR to perform an investigation of the financial responsibility, security, and integrity of a Vendor submitting a bid, if required by the Executive Subcommittee.

Thomas comment: OK.

## **SECTION 6. EVALUATION CRITERIA FOR SELECTION**

### **6.0 GENERALLY**

The Vendor should address each item listed in this RFP to be guaranteed a complete evaluation. After initial qualification of proposals, selection of the Successful Vendor will be determined in a meeting of the Executive Subcommittee by evaluation of several factors.

The Executive Subcommittee has developed evaluation criteria that will be used by the Executive Subcommittee and that is incorporated in Section 6.1 of this RFP. Other agents of the Executive Subcommittee may also examine documents.

Submission of a proposal implies Vendor acceptance of the evaluation technique and Vendor recognition that subjective judgments must be made by the Executive Subcommittee during the evaluation of the proposals.

The Executive Subcommittee reserves, and a Vendor by submitting a Proposal grants to the Executive Subcommittee, the right to obtain any information from any lawful source regarding the past business history, practices, and abilities of Vendor, its officers, directors, employees, owners, team members, partners, and/or subcontractors.

Thomas comment: Understood.

### **6.1 EVALUATION CRITERIA**

The following evaluation criteria are listed according to their relative importance; however, the difference between the importance assigned to any one criterion and the criteria immediately preceding and following is small:

- Directly related experience;
- Pricing;
- Plan for providing services;
- Proposed schedule for providing services;
- Proposed personnel and the credentials of those assigned;
- Compliance with the requirements of the RFP; and
- Past performance.

Thomas comment: We think we excel on these measures. On directly related experience, we have been projecting state revenue and providing budget advice for 40 combined years. On pricing, we think our pricing structure is reasonable. On our plan for providing the services, we think our plan is aggressive, but given our extensive background in the field, achievable. On personnel and the credentials of those assigned, we are Ph.D. economists with years of professional experience. On compliance with the requirements of the RFP, we think we abided by all the details of the RFP, including submitting our proposal on time by August 30, 2021 and providing answers each section of the RFP. Lastly, on performance, we have been successfully working in the industry for a combined 40 years.

## PROPOSAL SIGNATURE PAGE

Type or Print the following information:

### Prospective Contractor Contact Information

Contact Person: Thomas Young \_\_\_\_\_ Title: CEO \_\_\_\_\_

Phone: 801-647-4979 \_\_\_\_\_ Alternate Phone: \_\_\_\_\_

Email: Thomas.young@econometricstudios.com \_\_\_\_\_

### Confirmation of Redacted Copy

YES, a redacted copy of proposal documents is enclosed.

NO, a redacted copy of submission documents is not enclosed. I understand a full copy of non-redacted submission documents will be released if requested.

*Note: If a redacted copy of the proposal documents is not provided with the Vendor's proposal, and neither box is checked a copy of the unredacted documents will be released in response to any request made under the Arkansas Freedom of Information Act (FOIA).*

### Illegal Immigrant Confirmation

By signing and submitting a response to this RFP and by certifying online at <https://www.ark.org/dfa/immigrant/index.php/disclosure/submit/new>, the Vendor agrees and certifies that they do not employ or contract with illegal immigrants. If selected, the Vendor certifies that they will not employ or contract with illegal immigrants during the aggregate term of the contract.

Thomas comment: This has been completed.

### Israel Boycott Restriction Confirmation

By checking the box below, the Vendor agrees and certifies that they do not boycott Israel, and if selected, will not boycott Israel during the aggregate term of the contract.

Vendor does not and will not boycott Israel.

---

***An official authorized to bind the Vendor to a resultant contract shall sign below.***

The Signature below signifies agreement that any exception that conflicts with the requirements of this RFP will cause the Vendor's proposal to be disqualified.

Authorized Signature: \_\_\_\_\_ Title: \_\_\_\_\_

Printed/Typed Name: Thomas Young \_\_\_\_\_ Date: \_\_\_\_\_

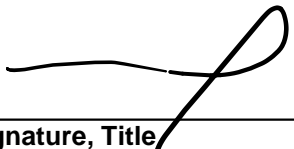
**ATTACHMENT A**  
**OFFICIAL PROPOSAL PRICE SHEET**

**Note: The Official Proposal Price Sheet must be submitted in a separate envelope or e-mail. Any reference to pricing in the technical proposal shall be cause for disqualification from further considerations for award.**

1. Bids should provide at least a 180-day acceptance period.
2. By submission of a proposal, the proposer certifies the following:
  - A. Prices in this proposal have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition;
  - B. No attempt has been made nor will be by the proposer to induce any other person or firm to submit a proposal for the purpose of restricting competition;
  - C. The person signing this proposal is authorized to represent the company and is legally responsible for the decision as to the price and supporting documentation provided as a result of this RFP; and
  - D. Prices in this proposal have not been knowingly disclosed by the proposer and will not be prior to award to any other proposer.

**The Official Price Proposal Sheet must be submitted in substantially the following form, allowing for the inclusion of specific information regarding positions, goods, services, etc., and signed by an official authorized to bind the Vendor to a resultant contract.**

DESCRIPTION	PRICE PER HOUR	NUMBER OF POSITIONS
Supervisor	\$150	1
Other Professional Staff (List by Position)	\$75	0.1
Support Staff	\$25	0.05
DESCRIPTION	PRICE PER UNIT (IF APPLICABLE)	TOTAL PRICE
Subcontractors (if any)	N/A	N/A
Travel	@ cost	@ cost
Any Additional Goods & Services (List Individually)		
<b>TOTAL MAXIMUM AMOUNT OF BID:</b>		

  
 \_\_\_\_\_  
 Signature, Title

9/30/21  
 \_\_\_\_\_  
 Date

# EQUAL EMPLOYMENT OPPORTUNITY POLICY AND ANTI-DISCRIMINATION POLICY ECONOMETRIC STUDIOS, LLC

## AIMS

Econometric Studios, LLC (“**the Company**”) is committed to providing a safe, flexible and respectful environment for staff and clients free from all forms of discrimination, bullying and sexual harassment.

All staff are required to treat others with dignity, courtesy, and respect.

By effectively implementing our Equal Employment Opportunity & Anti-Discrimination Policy we will attract and retain talented staff and create a positive working environment for staff.

## SCOPE

This policy applies to:

- All staff, including managers and supervisors; full-time, part-time, or casual, temporary, or permanent staff; job candidates; student placements, apprentices, contractors, sub-contractors, and volunteers.
- How the Company provides services to clients and how it interacts with other members of the public.
- All aspects of employment, recruitment, and selection; conditions and benefits; training and promotion; task allocation; shifts; hours; leave arrangements; workload; equipment and transport.
- On-site, off-site or after-hours work; work-related social functions; conferences – wherever and whenever staff may be as a result of their duties.
- Staff treatment of other staff, of clients, and of other members of the public encountered in the course of their duties.

In so far as this policy imposes any obligations on the Company, those obligations are not contractual and do not give rise to any contractual rights. To the extent that this policy describes benefits and entitlements for employees, they are discretionary in nature and are also not intended to be contractual. The terms and conditions of employment that are intended to be contractual are set out in an employee’s written employment contract.

The Company may unilaterally introduce, vary, remove, or replace this policy at any time.

## STAFF RIGHTS AND RESPONSIBILITIES

All staff are entitled to:

- Recruitment and selection decisions based on merit and not affected by irrelevant personal characteristics; Work free from discrimination, bullying and sexual harassment.
- The right to raise issues or to make an enquiry or complaint in a reasonable and respectful manner without being victimized.
- Reasonable flexibility in working arrangements, especially where needed to accommodate their family responsibilities, disability, religious beliefs, or culture.

All staff must:

- Follow the standards of behavior outlined in this policy.

- Offer support to people who experience discrimination, bullying or sexual harassment, including providing information about how to make a complaint.
- Avoid gossip and respect the confidentiality of complaint resolution procedures; treat everyone with dignity, courtesy, and respect.

## ADDITIONAL RESPONSIBILITIES OF MANAGERS AND SUPERVISORS

Managers and supervisors must also:

- Model appropriate standards of behavior.
- Take steps to educate and make staff aware of their obligations under this policy and the law; Intervene quickly and appropriately when they become aware of inappropriate behavior.
- Act fairly to resolve issues and enforce workplace behavioral standards, making sure relevant parties are heard.
- Help staff resolve complaints informally.
- Refer formal complaints about breaches of this policy to the appropriate complaint handling officer for investigation.
- Ensure staff who raise an issue or make a complaint are not victimized.
- Ensure that recruitment decisions are based on merit and that no discriminatory requests for information are made.
- Seriously consider requests for flexible work arrangements.

## UNACCEPTABLE WORKPLACE CONDUCT

Discrimination, bullying, and sexual harassment are unacceptable at the Company and are unlawful under legislation including:

- Sex Discrimination Act 1984 (Cth).
- Racial Discrimination Act 1975 (Cth).
- Disability Discrimination Act 1992 (Cth).
- Age Discrimination Act 2004 (Cth).

Staff (including managers) found to have engaged in such conduct might be counselled, warned, or disciplined. Severe or repeated breaches can lead to formal discipline up to and including termination of employment.

Under the law staff can be held personally liable for certain breaches of discrimination law, and the Company can also be vicariously liable for staff members' conduct.

## DISCRIMINATION

Discrimination is treating, or proposing to treat, someone unfavorably because of a personal characteristic protected by the law, such as sex, age, race, or disability.

Discrimination can occur:

- **Directly**, when a person or group is treated less favorably than another person or group in a similar situation because of a personal characteristic protected by law. For example, a worker is harassed and humiliated because of their race, or a worker is refused promotion because they are 'too old'
- **Indirectly**, when an unreasonable requirement, condition or practice is imposed that has, or is likely to have, the effect of disadvantaging people with a personal characteristic protected by law. For example, redundancy is decided based on people who have had a worker's compensation claim rather than on merit.

Protected personal characteristics under Federal discrimination law include:

- Parental status or status as a caregiver, for example, because they are responsible for caring for children or other family members.
- Race, color, descent, national origin, or ethnic background.
- Age, whether young or old, or because of age in general.
- Sex.
- Industrial activity, including being a member of an industrial organization like a trade union or taking part in industrial activity, or deciding not to join a union.
- Religion.
- Pregnancy and breastfeeding.
- Sexual orientation, intersex status, or gender identity, including gay, lesbian, bisexual, transsexual, transgender, queer, and heterosexual.
- Marital status, whether married, divorced, unmarried or in a de facto relationship or same sex relationship; Political opinion.
- Social origin; Medical record.
- An association with someone who has, or is assumed to have, one of these characteristics, such as being the parent of a child with a disability.

It is also against the law to treat someone unfavorably because you assume they have a personal characteristic or may have it at some time in the future.

## DISABILITY DISCRIMINATION

Employers are also required in some circumstances to make “reasonable adjustments” to facilitate employees with disabilities to perform the “inherent requirements” of the particular role they perform. An employer will be deemed to have discriminated against an employee if they fail to make these adjustments.

The “inherent requirements” of a position are the essential activities that must be carried out to fulfil the purpose of the position.

An adjustment is not reasonable if it will impose “unjustifiable hardship” on the employer. In assessing unjustifiable hardship factors to be considered include:

- The nature of the benefit or detriment to be imposed on any person concerned, including the community.
- The effect of the employee's disability.
- The financial circumstances and the estimated amount of expenditure required to be made by the employer; The availability of financial and other assistance to the employer.

Examples of adjustments that may in some circumstances be reasonable for an employer to make include:

- **Changing recruitment and selection procedures.** For example, providing a sign language interpreter for a Deaf person or ensuring the medical assessor is familiar with a person’s particular disability and how it relates to the job requirements.
- **Modifying work premises.** For example, making ramps, modifying toilets, or providing flashing lights to alert people with a hearing loss.
- **Changes to job design, work schedules or other work practices.** For example, swapping some duties among staff or providing regular meal breaks for a person with diabetes.
- **Modifying equipment.** For example, lowering a workbench or providing an enlarged computer screen.
- **Providing training or other assistance.** For example, running induction programs for staff with a disability and their co-workers, providing a mentor or support person for a person with an intellectual disability, and including staff with a disability in all mainstream training.

It is not unlawful to discriminate against a person because of their disability where:

They cannot meet the inherent requirements of the job, even when the employer has made any reasonable adjustments; or

Providing the person with reasonable adjustments to facilitate their disability imposes an unjustifiable hardship on the employer.

## BULLYING

If someone is being bullied because of a personal characteristic protected by equal opportunity law, it is a form of discrimination.

Bullying can take many forms, including jokes, teasing, nicknames, emails, pictures, text messages, social isolation or ignoring people, or unfair work practices.

Under Federal law, this behavior does not have to be repeated to be discrimination – it may be a one-off event.

Behaviors that may constitute bullying include.

- Sarcasm and other forms of demeaning language; Threats, abuse or shouting.
- Coercion; Isolation.
- Inappropriate blaming; Ganging up.
- Constant unconstructive criticism.
- Deliberately withholding information or equipment that a person needs to do their job or access their entitlements.
- Unreasonable refusal of requests for leave, training, or other workplace benefits.

Any form of bullying is unacceptable in the Company and may also be against workplace health and safety law. The Company has a separate Workplace Anti-Bullying and Anti-Harassment Policy which employees must read and abide by, this deals with bullying and harassment that is not a form of discrimination (i.e., where not based on a protected personal characteristic).

## SEXUAL HARASSMENT

Sexual harassment is a specific and serious form of harassment. It is unwelcome sexual behavior, which could be expected to make a person feel offended, humiliated or intimidated. Sexual harassment can be physical, spoken or written. It can include:

- Comments about a person's private life or the way they look; Sexually suggestive behavior, such as leering or staring; Brushing up against someone, touching, fondling, or hugging; Sexually suggestive comments or jokes.
- Displaying offensive screen savers, photos, calendars, or objects; Repeated unwanted requests to go out.
- Requests for sex.
- Sexually explicit posts on social networking sites; Insults or taunts of a sexual nature.
- Intrusive questions or statements about a person's private life; Sending sexually explicit emails or text messages; Inappropriate advances on social networking sites.
- Accessing sexually explicit internet sites.
- Behavior that may also be considered to be an offence under criminal law, such as physical assault, indecent exposure, sexual assault, stalking or obscene communications.

Just because someone does not object to inappropriate behavior in the workplace at the time, it does not mean that they are consenting to the behavior.

Sexual harassment occurs in the workplace when it happens at work, at work-related events, between people sharing the same workplace, or between colleagues outside of work.

All staff and volunteers have the same rights and responsibilities in relation to sexual harassment. A single incident is enough to constitute sexual harassment – it doesn't have to be repeated.

All incidents of sexual harassment – no matter how large or small or who is involved – require employers and managers to respond quickly and appropriately.

The Company recognizes that comments and behavior that do not offend one person can offend another. This policy requires all staff and volunteers to respect other people's limits.

The Company will not tolerate or accept any form of sexual harassment, in the workplace or in any work-related context such as conferences, work functions and business trips. All staff members are responsible for their own behavior, and under the law may be held personally liable if they engage in sexual harassment. The Company may also be vicariously liable for staff members found to have engaged in any form of sexual harassment.

## VICTIMISATION

Victimization is subjecting or threatening to subject someone to a detriment because they have asserted their rights under equal opportunity law, made a complaint, helped someone else make a complaint, or refused to do something because it would be discrimination, sexual harassment, or victimization. Victimization is against the law.

It is also victimization to threaten someone (such as a witness) who may be involved in investigating an equal opportunity concern or complaint.

Victimization is a very serious breach of this policy and is likely (depending on the severity and circumstances) to result in formal discipline against the perpetrator.

The Company has a zero-tolerance approach to victimization.

## VILIFICATION

Vilification is where a person commits a public act which is reasonably likely to offend, insult, humiliate or intimidate another person because of their race, sex, religion, sexuality, or sexual identity. Hatred or vilification due to an attribute protected under equal opportunity laws is unlawful.

The Company will not tolerate or accept any form of hatred or vilification due to a protected attribute of another person.

Any conduct that can possibly be observed by the public or any sort of communication either verbal or in writing to the public can be considered a public act. Workplaces can be public places.

The Company may be vicariously liable for staff members found to have engaged in any form of unlawful hatred or vilification. Staff may also be sued personally or prosecuted criminally under Commonwealth or State criminal laws.

Conduct that may constitute vilification can include verbal or written statements, or even be the reproduction or distribution of already published information. Examples include:

- Offensive material on the internet, including e-forums, blogs, social networking sites and video sharing sites.
- Offensive comments or images published in a publication such as a leaflet, flyer, internal message board or workplace intranet.
- Offensive speeches at public events, work functions or in the workplace.
- Abusive comments in any public place, such the workplace, or any other place attended in connection with employment; or
- In some instances, the reproduction or distribution of already published information around the workplace.

## CONFIDENTIALITY

It is unacceptable for staff at the Company to talk with other staff members, clients, or suppliers about any complaint of discrimination or harassment without the Company's express permission.

Breaching the confidentiality of a formal complaint investigation or inappropriately disclosing personal information obtained in a professional role (for example, as a manager) is a serious breach of this policy and may lead to formal discipline.

## DECISIONS TO BE BASED ON MERIT

All recruitment and job selection decisions at the Company will be based on merit – the skills and abilities of the candidate as measured against the inherent requirements of the position – regardless of personal characteristics. It is unacceptable and may be against the law to ask job candidates questions, or to in any other way seek information, about their personal characteristics, unless this can be shown to be directly relevant to a genuine requirement of the position.

## RESOLVING ISSUES

The Company strongly encourages any staff member who believes they have been discriminated against, bullied, sexually harassed, vilified or victimized to take appropriate action by making a complaint in accordance with the Grievance Handling Policy.

Any staff member who has witnessed any discrimination, bullying, sexual harassment, vilification or victimization should report this to their manager or other responsible person in the Company, or can raise a complaint in accordance with the Grievance Handling Policy.

## OTHER POLICIES

Employees are encouraged to read this policy in conjunction with other relevant Company policies, including:

- Workplace Anti-Harassment and Anti-Bullying Policy.
- Code of Conduct.
- Grievance Handling Policy.

**EXECUTIVE ORDER E0-98-04**  
**EXECUTIVE ORDER DISCLOSURE FORM**

NAME: Thomas Young / Econometric Studies  
 ADDRESS: 1675 Devonshire Drive, SLQ, UT 84108  
Street City State/Zip County  
 CONTRACT NO: HR 210302 FEDERAL NO: \_\_\_\_\_  
 CONTRACT EFFECTIVE DATE: 1/1/2022

**B. DISCLOSURE REQUIREMENTS**

Agencies shall require, as a condition of obtaining or renewing a contract, lease, purchase agreement, employment, or grant with any state agency, that any individual desiring to contract with, be employed by, or receive grant benefits from, any state agency shall disclose whether that person is a current or former; member of the general assembly, constitutional officer, board or commission member, state employee, or the spouse or immediate family member of any of the persons described in this sentence. Agencies shall require that any non-individual entity desiring to contract with, or receive grant benefits from, any state agency shall disclose (1.) any position of control, or (2.) any ownership interests of 10% or greater, that is held by a current or former member of the general assembly, constitutional officer, board or commission member, state employee, or the spouse or immediate family member of any of the persons described in this sentence.

As a condition for obtaining funding through a contract, lease, purchase agreement, or a grant with the Department of Health and Human Services, the following information must be disclosed:

Individual contractor indicate below if you are:

	Current	Former	Term(s) of service
1. A member of the general assembly	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No	
2. A constitutional officer	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No	
3. A state employee	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No	
4. Serving as a commission or board member	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No	

Individual contractor indicate below if you are a spouse or immediate family member of an individual that is;

	Current	Former	Term(s) of service	Relative's name and relationship
1. A member of the general assembly	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No		
2. A constitutional officer	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No		
3. A state employee	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No		
4. Serving as a commission or board member	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No		


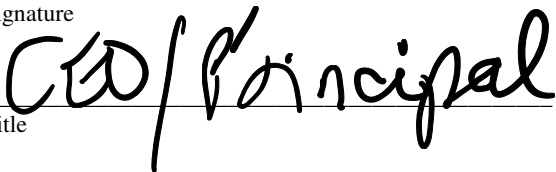
Non-individual entity list any individual who holds a position of control or ownership interest of 10% or greater in the entity if the individual is:

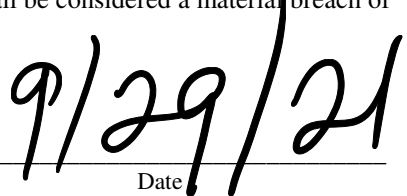
	Current	Former	Relative's name & Term(s) of Service	Relationship	Individual
1. A member of the general assembly	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No			
2. A constitutional officer	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No			
3. A state employee	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No			
4. Serving as a commission or board member	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No			

Non-individual entity list any individual who holds a position of control or ownership interest of 10% or greater in the entity if the individual is a spouse or immediate family member of:

	Current	Former	Term(s) of service	Relative's name & Relationship	Individual
1. A member of the general assembly	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No			
2. A constitutional officer	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No			
3. A state employee	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No			
4. Serving as a commission or board member	Yes/No (circle one) <input checked="" type="radio"/> No	Yes/No (circle one) <input checked="" type="radio"/> No			

Failure of any person or entity to disclose under any term of Executive Order 98-04 shall be considered a material breach of the terms of the contract.

  
 Signature  
  
 Title

  
 Date

**THIS FORM MUST BE COMPLETED AND RETURNED PRIOR TO EXECUTION OF THE CONTRACT**

NAME: Thomas Young / Geometric Audio  
 ADDRESS: 1675 Devonshire Drive, Slaz of 84/08  
Street City State/Zip County  
 PHONE: 801-642-4979 FAX: \_\_\_\_\_  
 CONTRACT: BKR - 210002  
 CONTRACT EFFECTIVE DATE: 11/1/2022

**DISCLOSURE OF SUBCONTRACTORS**

Agencies shall require, as a condition of obtaining or renewing a contract, lease, purchase agreement, or grant with any state agency, that any individual or entity desiring to contract with any state agency shall require that any subcontractor, sub-lessor, or other assignee (hereafter "Third Party"), shall disclose whether such Third Party is a current or former; member of the general assembly, constitutional officer, board or commission member, state employee, or the spouse or immediate family member of any of the persons described in this sentence, or if any of the persons described in this sentence hold any position of control or any ownership interest of 10% or greater in the Third Party, and shall report any such disclosure by the Third Party to the agency. The disclosure requirements of this paragraph shall apply during the entire term of the contract, lease, purchase agreement, or grant, without regard to whether the subcontract, sublease, or other assignment is entered into prior or subsequent to the contract date.

Third Party shall indicate below if he/she is:

	Current	Former	Term(s) of Service	Relative's name & relationship	Third Party
1. A member of the general assembly	Yes/No (circle one) <u>No</u>	Yes/No (circle one) <u>No</u>			
2. A constitutional officer	Yes/No (circle one) <u>No</u>	Yes/No (circle one) <u>No</u>			
3. A state employee	Yes/No (circle one) <u>No</u>	Yes/No (circle one) <u>No</u>			
4. Serving as a commission or board member	Yes/No (circle one) <u>No</u>	Yes/No (circle one) <u>No</u>			

Third Party shall indicate below if he/she is a spouse or immediate family member of an individual that is

	Current	Former	Term(s) of service	Relative's name & relationship	Third Party
1. A member of the general assembly	Yes/No (circle one) <u>No</u>	Yes/No (circle one) <u>No</u>			
2. A constitutional officer	Yes/No (circle one) <u>No</u>	Yes/No (circle one) <u>No</u>			
3. A state employee	Yes/No (circle one) <u>No</u>	Yes/No (circle one) <u>No</u>			
4. Serving as a commission or board member	Yes/No (circle one) <u>No</u>	Yes/No (circle one) <u>No</u>			

Agencies shall require, as a further condition of obtaining or renewing any contract or agreement with any state agency, that the individual or entity desiring to contract shall incorporate into any agreement with a Third Party, previously defined, the below stated language, and any other necessary language as provided by rules and regulations promulgated to enforce Executive Order 98-04, which provides that failure of the Third Party to disclose the identity of any person or entity described previously shall be considered a material breach of the agreement.

The failure of any person or entity to disclose as required under any term of Executive Order 98-04, or the violation of any rule, regulation or policy promulgated by the Department of Finance and Administration pursuant to this Order, shall be considered a material breach of the terms of the contract, lease, purchase agreement, or grant and shall subject the party failing to disclose or in violation to all legal remedies available to the Agency under the provisions of existing law.

*I do not plan on using subcontractors*

Signature of Third Party

**THIS FORM MUST BE COMPLETED AND RETURNED PRIOR TO EXECUTION OF THE CONTRACT**

# STATE OF ARKANSAS



**John Thurston**

ARKANSAS SECRETARY OF STATE

To All to Whom These Presents Shall Come, Greetings:

I, John Thurston, Arkansas Secretary of State of Arkansas, do hereby certify that the following and hereto attached instrument of writing is a true and perfect copy of

## **Certificate of Organization**

of

## **ECONOMETRIC STUDIOS, LLC**

filed in this office  
October 01, 2021

**In Testimony Whereof**, I have hereunto set my hand and affixed my official Seal. Done at my office in the City of Little Rock, this 1st day of October 2021.



  
John Thurston  
Secretary of State

Online Certificate Authorization Code: 4716196157535ddc1ed  
To verify the Authorization Code, visit [sos.arkansas.gov](http://sos.arkansas.gov)

**State Budgeting and Revenue Forecasting Consultant Services**  
**Summary of Response to RFP**

**Evaluation Criteria:**

<p><b>Directly Related Experience:</b></p>	<ul style="list-style-type: none"> <li>• <u>North Dakota Legislative Council</u>: (2017-2021), provided tax revenue analysis and economic forecasting</li> <li>• <u>City of Philadelphia, Office of Budget and Program Evaluation</u>: (ongoing), supports the city’s planning, budgeting, revenue estimating, and economic forecasting</li> <li>• <u>State of New York, Senate Finance Committee</u>: (20 years), provides revenue estimates for all state tax revenue streams and expert testimony as part of the state budgeting process</li> <li>• <i>See</i> previous work for the Arkansas General Assembly through contracts with BLR re: economic development projects – Big River Steel (2013) and Lockheed Martin (2015), at p. 25 of proposal</li> <li>• <i>See</i> “Client References” at pp. 25-28 of proposal</li> </ul>
<p><b>Price:</b></p>	<p><u>Total Max Bid</u>: \$76,255</p> <p><i>See</i> attached Official Proposal Price Sheet and Price Comparison Table.</p>
<p><b>Plan/Schedule:</b></p>	<p><u>Plan</u>:</p> <ul style="list-style-type: none"> <li>• Prepare fiscal impact reports for proposed legislation, including dynamic scoring</li> <li>• Provide revenue forecasting and analysis (timing of reports set by Committees)</li> <li>• Provide consultation and advisory services re: proposed legislation</li> <li>• Provide budgeting and forecasting research/analysis, including updates on state and fed law and best practices</li> <li>• Provide periodic education discussions with members and staff</li> </ul>

**IHS (Cont'd)**

	<ul style="list-style-type: none"> <li>• <i>See</i> “Proposed Scope of Work” at pp. 13-15 of proposal.</li> </ul>
<b>Availability:</b>	<ul style="list-style-type: none"> <li>• Indicated they will be “readily accessible to Committee members and BLR staff”, at p. 14, item #6, of proposal.</li> <li>• Available to attend meetings onsite or virtually, as requested, at p. 14, item #5, of proposal.</li> </ul>
<b>Personnel:</b>	<ul style="list-style-type: none"> <li>• Brendan O’Neil – Project Executive in Charge</li> <li>• Jim Diffley – Project Technical Lead and Project Manager</li> <li>• <i>See</i> Organizational Chart, at p. 16 of proposal.</li> <li>• <i>See</i> Resumes, at pp. 17-24 of proposal.</li> <li>• <i>See also</i> “Qualifications and Experience of Key Personnel”, at pp. 15-16 of proposal.</li> </ul>
<b>Past Performance:</b>	<ul style="list-style-type: none"> <li>• IHS founded in 1959; merged with Markit in 2016, <i>See</i> “IHS Markit Business Background” at pp. 7-9 of proposal.</li> <li>• <i>See</i> Work Samples – Appendices.</li> <li>• <i>See also</i> References Table (References, pp. 25-28 of proposal).</li> </ul>
<b>Compliance with RFP Requirements:</b>	See Attached Checklist.
<b>Subcontractors:</b>	None listed.

## Amos, Shonna

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**From:** Brendan O'Neil <Brendan.ONeil@ihsmarkit.com>  
**Sent:** Thursday, October 14, 2021 10:27 AM  
**To:** Thayer, Jill E.  
**Cc:** Garrity, Marty  
**Subject:** RE: RFP No. BLR-210002 -- Pricing Question

Hi Jill,

Thanks for your note and apologies for any confusion I may have created. In my attempt to provide BLR greater cost surety and visibility for budgeting purposes, I quoted a fixed price for a recurring quarterly revenue forecast deliverable since it is the type of report commonly delivered on a schedule and structured in a common format with updated content (versus ad hoc requests that can range in scope). Most of our other state government tax clients receive a revenue report monthly or quarterly on a fixed schedule for a fixed cost and in light of the ongoing tax forecasting work we do it is relatively easy for us to price the level of effort involved in providing the same type of report to BLR (which is why we quoted \$76,255 for that task). For all other requirements of the RFP, we would simply execute those tasks on a time & materials basis pursuant to the rate schedule included in the cost proposal.

To your specific questions:

1. You should not interpret the \$76,255 as IHS Markit's maximum contract price bid. Rather, that quote was merely offered as a fixed price for what is typically a fixed report deliverable for ongoing revenue forecasting & analysis (e.g. regular forecast update of income, corporate, sales taxes – we included a sample of such a report in our proposal appendix). If you prefer, we can bill these deliverables on a time & materials basis.
2. With respect to a maximum contract bid, it is difficult to assess a value without having visibility into the volume of work anticipated. That circumstance notwithstanding, IHS Markit commits to a maximum bid price of \$1,000,000, although our past experiences suggest the level of effort would come under this 'not-to-exceed' threshold.

Please let me know if this clarifies matters and please do not hesitate to reach out with additional questions.

Thank you,

Brendan

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**From:** Thayer, Jill E. <Thayerj@blr.arkansas.gov>  
**Sent:** Thursday, October 14, 2021 10:11 AM  
**To:** Brendan O'Neil <Brendan.ONeil@ihsmarkit.com>  
**Cc:** Garrity, Marty <garritym@blr.arkansas.gov>  
**Subject:** RFP No. BLR-210002 -- Pricing Question  
**Importance:** High

**[CAUTION] EXTERNAL EMAIL**

Mr. O'Neil,

In IHS Markit's response to RFP No. BLR-210002, under Price Proposal, you state that "IHS Markit proposes to undertake the State Budgeting and Revenue Forecasting Consulting Services for a firm fixed price of \$76,255 or for a time and materials Detailed fee structure". The Official Proposal Price Sheet that is part of the RFP is set out in such a way that

Vendors should provide a maximum contract amount and include the details of their hourly staff rates, the amount and type of staff to be utilized, travel expense estimates, and other expense estimates, including any subcontractor fees. If a contract is awarded, the Bureau will pay the selected vendor up to their maximum contract amount based on invoices of hourly rates for documented work and actual travel and other expenses.

Are we to interpret your pricing proposal of \$76,255 as IHS Markit's maximum contract price bid? Please clarify.

Thank you!

Jill.

Jillian E. Thayer

**Legal Counsel to the Director**

Bureau of Legislative Research

State Capitol, Rm. 315

Little Rock, Arkansas 72201

Phone: (501) 683-0720

Fax: (501) 682-1936

[thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov)

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IHS Markit™

**COST PROPOSAL**

In response to  
RFP No. BLR-210002

**State Budgeting & Revenue Forecasting Consulting  
Services**

**Prepared for:**  
State of Arkansas  
Bureau of Legislative Research

**Submitted by:**  
**IHS Markit (dba as IHS Global Inc.)**  
15 Inverness Way East  
Englewood, CO 80112  
[www.ihsmarkit.com](http://www.ihsmarkit.com)  
DUNS: 620365023  
TIN: 22-2721160  
Business Type: Large

August 30, 2021

**Signature of Authorized Person:**

  
Brendan O'Neil, Executive Director

*This proposal or quotation includes data that shall not be disclosed outside the Government and shall not be duplicated, used or disclosed, in whole or in part, for any purpose other than to evaluate this proposal or quotation. If, however, a contract is awarded to this offer or quote as a result of, or in connection with, the submission of these data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in these data if they are obtained from another source without restriction. The data subject to this restriction are contained in all pages of this proposal or quote.*

**ATTACHMENT A**  
**OFFICIAL PROPOSAL PRICE SHEET**

**Note: The Official Proposal Price Sheet must be submitted in a separate envelope or e-mail. Any reference to pricing in the technical proposal shall be cause for disqualification from further considerations for award.**

1. Bids should provide at least a 180-day acceptance period.
2. By submission of a proposal, the proposer certifies the following:
  - A. Prices in this proposal have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition;
  - B. No attempt has been made nor will be by the proposer to induce any other person or firm to submit a proposal for the purpose of restricting competition;
  - C. The person signing this proposal is authorized to represent the company and is legally responsible for the decision as to the price and supporting documentation provided as a result of this RFP; and
  - D. Prices in this proposal have not been knowingly disclosed by the proposer and will not be prior to award to any other proposer.

**The Official Price Proposal Sheet must be submitted in substantially the following form, allowing for the inclusion of specific information regarding positions, goods, services, etc., and signed by an official authorized to bind the Vendor to a resultant contract.**

DESCRIPTION	PRICE PER HOUR	NUMBER OF POSITIONS
Supervisor	see Pricing Schedule on page 3	
Other Professional Staff (List by Position)	see Pricing Schedule on page 3	
Support Staff	see Pricing Schedule on page 3	
DESCRIPTION	PRICE PER UNIT (IF APPLICABLE)	TOTAL PRICE
Subcontractors (if any)	None	
Travel	as needed	
Any Additional Goods & Services (List Individually)	none	
<b>TOTAL MAXIMUM AMOUNT OF BID:</b>		<b>\$76,255</b>

*Brandon G. Deal*  
Signature, Title      *Executive Director*

*August 27, 2021*  
Date

## PRICE PROPOSAL

IHS Markit (dba as IHS Global Inc.) proposes to undertake the State Budgeting and Revenue Forecasting Consulting Services for a firm fixed price of \$76,255 or for a time and materials. Detailed fee structure is as follows:

<b>Task</b>	<b>Fee Structure</b>
Prepare fiscal impact reports for proposed legislation, including dynamic scoring	Time & Materials per schedule below
Provide revenue forecasting and analysis	Time & Materials OR Fixed Fee of \$76,255 for quarterly tax forecast report updates *These fees include one-time model development costs
Provide consultation and advisory services regarding proposed legislation	Time & Materials per schedule below
Provide budgeting and forecasting research and analysis, as requested, including reports regarding updates to state and federal laws, and best practices in state budgeting	Time & Materials per schedule below
Attend meetings of the Committee, as requested, or of other legislative committees as authorized by the Committee co-chairs	Time & Materials per schedule below
Be available for periodic education discussions with Committee members and staff	Time & Materials per schedule below

### Time & Materials Hourly Rate Schedule

The hourly billing rates for the job classifications that would be used to provide Time & Materials-based services are listed below. These hourly billing rates are based on the U.S. General Services Administration’s FSS Multiple Award Schedule (MAS) contract no. 47QRAA19D001X and they would apply to the entire 1-year contract term plus the option year term. These government hourly rates quoted herein represent a minimum of 40% discount off of IHS Markit’s commercial bill rates.

<b>Personnel</b>	<b>Project Title</b>	<b>Hourly Rates</b>
Jim Diffley	Project Technical Lead/Project Manager	\$358.45
Brendan O’Neil	Consulting Executive-in-Charge	\$358.45
Chris Varvares	Sr. Technical Advisor	\$358.45
David Iaia	Lead Analyst 1	\$307.33
Tom Jackson	Lead Analyst 2	\$247.82
Emily Hanson	Business Analyst 1	\$181.20
James Kelly	Business Analyst 2	\$155.66

Services provided on a Time & Materials basis will be invoiced on a mutually agreed schedule. IHS Markit maintains a comprehensive system for tracking project billings by analyst; a screenshot of the system has been included in the appendix of this proposal.

IHS Markit hereby confirms that the offer is valid for 180 calendar days from the date of submission to the State of Arkansas, Bureau of Legislative Research.

## PROPOSAL SIGNATURE PAGE

Type or Print the following information:

### Prospective Contractor Contact Information

Contact Person: Brendan O'Neil Title: Executive Director  
Phone: 202-481-9239 Alternate Phone: 617-283-0078  
Email: brendan.oneil@ihsmarkit.com

### Confirmation of Redacted Copy

YES, a redacted copy of proposal documents is enclosed.

NO, a redacted copy of submission documents is not enclosed. I understand a full copy of non-redacted submission documents will be released if requested.

*Note: If a redacted copy of the proposal documents is not provided with the Vendor's proposal, and neither box is checked a copy of the unredacted documents will be released in response to any request made under the Arkansas Freedom of Information Act (FOIA).*

### Illegal Immigrant Confirmation

By signing and submitting a response to this RFP and by certifying online at <https://www.ark.org/dfa/immigrant/index.php/disclosure/submit/new>, the Vendor agrees and certifies that they do not employ or contract with illegal immigrants. If selected, the Vendor certifies that they will not employ or contract with illegal immigrants during the aggregate term of the contract.

### Israel Boycott Restriction Confirmation

By checking the box below, the Vendor agrees and certifies that they do not boycott Israel, and if selected, will not boycott Israel during the aggregate term of the contract.

Vendor does not and will not boycott Israel.

---

***An official authorized to bind the Vendor to a resultant contract shall sign below.***

The Signature below signifies agreement that any exception that conflicts with the requirements of this RFP will cause the Vendor's proposal to be disqualified.

Authorized Signature:  Title: Executive Director  
Printed/Typed Name: Brendan O'Neil Date: 8/27/2021



IHS Markit™

**TECHNICAL PROPOSAL**

In response to  
RFP No. BLR-210002

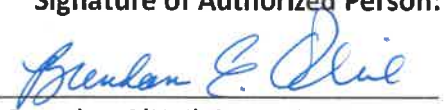
**State Budgeting & Revenue Forecasting Consulting  
Services**

**Prepared for:**  
State of Arkansas  
Bureau of Legislative Research

**Submitted by:**  
**IHS Markit (dba as IHS Global Inc.)**  
15 Inverness Way East  
Englewood, CO 80112  
[www.ihsmarkit.com](http://www.ihsmarkit.com)  
DUNS: 620365023  
TIN: 22-2721160  
Business Type: Large

August 30, 2021

**Signature of Authorized Person:**

  
Brendan O'Neil, Executive Director

*This proposal or quotation includes data that shall not be disclosed outside the Government and shall not be duplicated, used or disclosed, in whole or in part, for any purpose other than to evaluate this proposal or quotation. If, however, a contract is awarded to this offer or quote as a result of, or in connection with, the submission of these data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in these data if they are obtained from another source without restriction. The data subject to this restriction are contained in all pages of this proposal or quote.*

## CONTACT INFORMATION

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## TRANSMITTAL LETTER



August 30, 2021

Jillian E. Thayer  
Legal Counsel to the Director  
Bureau of Legislative Research  
State Capitol, Rm. 315  
Little Rock, Arkansas 72201

**SUBJECT:** RFP No. BLR-210002 – State Budgeting & Revenue Forecasting Consulting Services

Dear Ms. Thayer:

Thank you for the opportunity to contribute our proposal for above-referenced services necessary to support the State of Arkansas General Assembly’s budgeting and revenue forecasting processes. The following provides the IHS Markit company profile, our understanding of your requirements for economic research and forecasting services. We have also provided a description of our key assets relevant to delivery of these services, our technical approach to the requisite modeling and a list of relevant project qualifications and client references (including previous projects for BLR).

For many years, IHS Markit has supported our state and local government clients’ ability to manage to desirable fiscal outcomes through our system of rigorous models and hands-on expertise in simulating fiscal scenarios. Our economists regularly support our revenue estimating clients with forecasts, including preparation of independent revenue estimates utilized for budget preparation and policy evaluation. We frequently contribute budget hearing testimony to help policymakers understand the local, national, and global economic dynamics that drive the state economy and revenues.

As a strategic partner to revenue forecasting stakeholders at all levels of government, IHS Markit brings the economic foresight and hands-on public sector experience to help clients validate and strengthen the foundation for their own revenue estimates. IHS Markit aims to enhance our clients’ own economic analysis – not simply through spreadsheets and tables; to the contrary, a successful forecasting relationship is based on open dialog with our client stakeholders in the shared pursuit of clarity, so all are able deliver on their goals and mission.

Since terms and conditions for work performed for BLR were mutually accepted in 2015, IHS Markit wishes to utilize these previous mutually agreeable terms, to the extent feasible. (see Appendix E for the 2015 Agreement).

Thank you for your consideration.

Regards,

A handwritten signature in black ink that reads "Brendan O'Neil".

Brendan O’Neil  
Executive Director, IHS Markit Economics Consulting  
Office: 202-481-9239  
Mobile: 617-283-0078  
Email: [brendan.oneil@ihsmarkit.com](mailto:brendan.oneil@ihsmarkit.com)

## TABLE OF CONTENTS

BACKGROUND AND EXPERIENCE OF IHS MARKIT .....	5
Business Profile.....	5
IHS Markit Business Information .....	5
IHS Markit Primary Contact .....	5
PROJECT UNDERSTANDING .....	5
IHS MARKIT BUSINESS BACKGROUND.....	7
TAX FORECASTING METHODOLOGY .....	11
PROPOSED SCOPE OF WORK.....	13
Work Specifications .....	13
Time & Materials Services.....	14
QUALIFICATIONS & EXPERIENCE OF KEY PERSONNEL .....	15
Project Staffing & Management.....	15
CLIENT REFERENCES .....	25
APPENDICES.....	29
APPENDIX A – IHS Markit Sample Economic & Fiscal Report .....	29
APPENDIX B – IHS Markit Sample State Economic Analysis Report .....	83
APPENDIX C – Client Model Testing, Validation & Development – Technical Approach .	105
APPENDIX D – SharpOwl Project Time & Billing Tracking System.....	106
APPENDIX E – 2015 Agreement.....	107
APPENDIX F – Disclosure Forms.....	115

## BACKGROUND AND EXPERIENCE OF IHS MARKIT

### Business Profile

#### IHS Markit Business Information

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<b>Address:</b>	15 Inverness Way East Englewood, CO 80112
<b>Main Phone No.:</b>	303-790-0600
<b>Website:</b>	<a href="http://www.ihsmarkit.com">www.ihsmarkit.com</a>
<b>TIN:</b>	22-2721160

#### IHS Markit Primary Contact

<b>Legal Contracting Entity:</b>	<b>IHS Global Inc.</b>
<b>Name:</b>	Brendan O’Neil
<b>Title:</b>	Executive Director
<b>Address:</b>	1300 Connecticut Avenue NW, Suite 800 Washington, DC 20036
<b>Tel:</b>	202-481-9239 (W) 617-283-0078 (C)
<b>Email:</b>	<a href="mailto:Brendan.ONeil@ihsmarkit.com">Brendan.ONeil@ihsmarkit.com</a>

## PROJECT UNDERSTANDING

When the 93<sup>rd</sup> General Assembly enacted Act 876 of 2021, the legislature effectively codified and enhanced its ability to provide taxpayers data-driven fiscal leadership by directing the Secretary of Finance and Administration (DFA) to share critical tax data and analysis necessary for sound budgeting and overall policymaking. The Bureau of Legislative Research (BLR) was further empowered to utilize this information in retention of an independent consultant to help the General Assembly conduct its own fiscal analysis and prepare forecasts that assist the legislature in budget preparation and assessing the impacts of proposed legislation.

Historically, the General Assembly has not had the data access nor the in-house resources to systematically produce the level of fiscal reporting common to DFA. Furthermore, DFA does not presently operate under a schedule of regular revenue forecast updates, preferring to update the revenue forecast around specific planning milestones, such as preparation of the forthcoming fiscal year budget. The result of not having regular access to revenue and economic forecasts means that the General Assembly has been forced to operate with limited fiscal visibility and sub-optimal data.

In fairness, DFA will provide tracking reporting through the Secretary’s [Monthly General Revenue Report](#), but this report does not include a forecast of future revenue expectations. When DFA does share a forecast, it includes a baseline estimate of expectations but does not reflexively offer alternative planning scenarios that could impact receipts and collections. Finally, the executive branch of Arkansas government is not actively undertaking the dynamic scoring of proposed

legislation which impedes the legislature's ability to holistically understand the implications of "money bills" up for consideration.

In short, DFA's current reporting practices are foundational but Act 876 will enable the General Assembly to build its own institutional capacity for enhanced revenue analysis and forecasting which will indubitably lead to more informed budgeting and policymaking. While staff turnover in DFA and BLR is inevitable and term limits within the General Assembly will have an effect on "institutional memory," our own client experiences suggest that a long-term relationship with a forecast partner like IHS Markit endures because we share your commitment to better informed policymaking manifested through close collaboration.

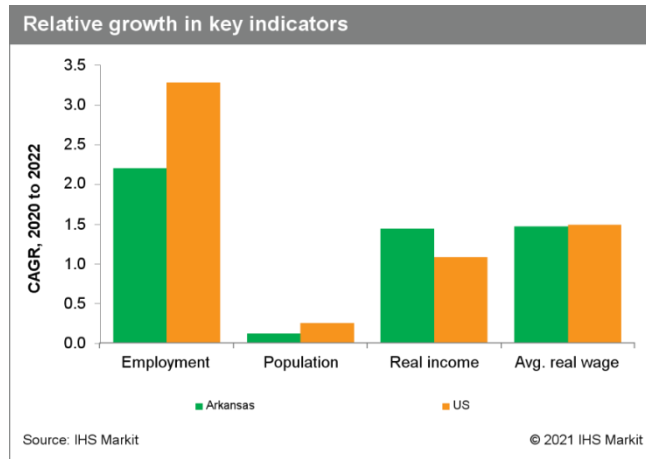
To that end, BLR is seeking to establish an agreement with an objective third-party firm with well-established competencies for economic research, analysis, and revenue forecasting. Key services to be provided include:

- Prepare fiscal impact reports for proposed legislation, including dynamic scoring;
- Provide revenue forecasting and analysis;
- Provide consultation and advisory services regarding proposed legislation;
- Provide budgeting and forecasting research and analysis, as requested, including reports regarding updates to state and federal laws, and best practices in state budgeting;
- Attend meetings of the Committee, as requested, or of other legislative committees as authorized by the Committee co-chairs;
- Be readily accessible to Committee members and BLR staff; and
- Be available for periodic education discussions with Committee members and staff;
- Other details, reports, guidance and information as part of any final work product pursuant to this Request For Proposal.

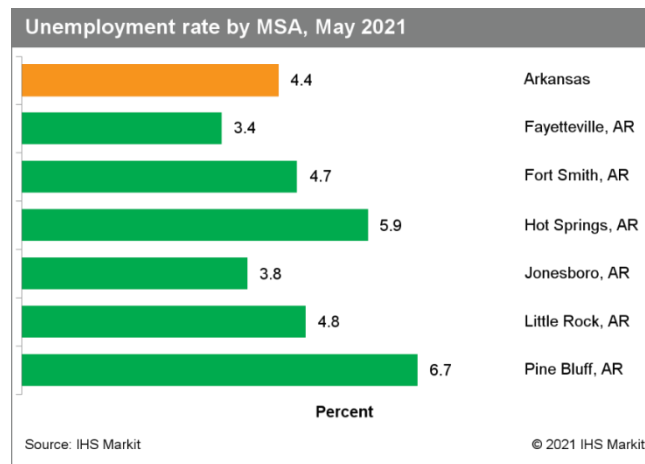
The contract term is a base term of 12 months concluding December 31, 2022 plus one 12-month renewal option period.

IHS Markit is eager to support General Assembly leadership, committee members and BLR with its research and forecasting requirements necessary to fulfill its mission for fiscal stewardship and fact-based policy development. Our team of economists and analysts is systematically tracking the Arkansas, US and global economy and we work with our clients daily to help them understand how shifting economic dynamics impact governments, businesses and financial institutions. As the largest and most consistently accurate commercial forecasting business in the world, IHS Markit is well-positioned from a staffing and data resources perspective to meet the requirements within the Request for Proposal (RFP), all while striving to exceed the expectations of our clients, which include fiscal stakeholders and budget analysts in over 40 states.

The availability of robust economic analysis and forecasting is particularly critical as the Arkansas state economy continues to recover from the economic declines associated with the COVID-19 pandemic. While economic activity remains in recovery mode from the initial lockdowns of the COVID-19 pandemic in early 2020, overall employment is still roughly 2.1% below pre-pandemic levels, significantly better than the national average. Economic growth has been uneven in the state with the Greater Little Rock and Northwest Arkansas regions seeing strong performance in the Professional & Business Services sector while the Leisure & Hospitality and Retail Trade sectors in other regions of the state are still looking for fresh momentum. Structurally, the Arkansas economy has a higher concentration of manufacturing activity compared to the US average yet headwinds such as its tax climate, ranked as 17<sup>th</sup> highest state & local tax burden in the US ([National Tax Foundation 2019 study](#)), and an aging population that could inhibit future growth in Gross State Product (GSP).



Given both the near-term pandemic recovery dynamics and the long-term structural complications facing the Arkansas economy, having rigorous, well-resourced economic analysis and revenue



forecasting has never been more important. Our state and local government tax clients have told us candidly that the post-pandemic forecasting environment is providing challenges they have never witnessed before, even with the benefits of federal transfer payments. It is our hope that we can be a strategic partner to BLR for the varied support services that will help state leaders navigate an evolving post-pandemic economy.

### IHS MARKIT BUSINESS BACKGROUND

Every day, people in business, finance and government make decisions with wide-ranging implications. These leaders need to see the big picture and the interconnected factors that impact their organizations and their mission. Rigorous analytics that yield unique insights allows them to make the best decisions and stay ahead of the trend. At IHS Markit, we call this The New Intelligence.

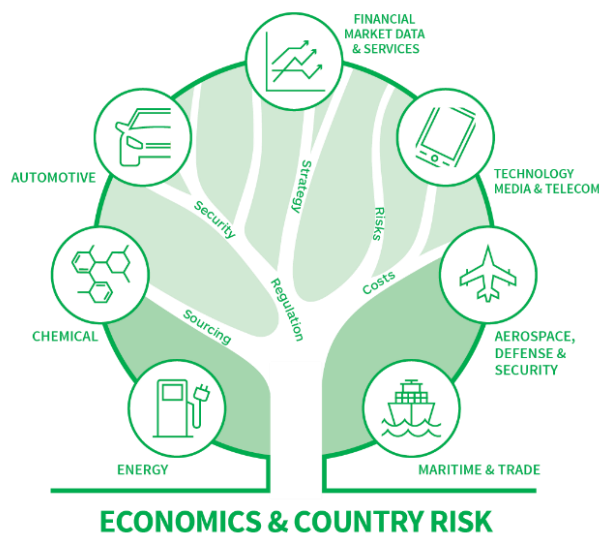
IHS Markit is a leading source of information, insight and advisory services in the pivotal areas that shape today’s business and policy landscape: economics, financial markets, energy, manufacturing, chemicals, technology, retail, logistics and transportation, healthcare, geopolitical

risk, sustainability and supply chain management. Governments around the globe rely on the expert independent analysis of IHS Markit to make high impact decisions and create strategies with speed and confidence. We combine leading economic, industry and geographic insight with client stakeholder input to help shape unique strategies and solutions for our clients. By uniting the world's largest private database of economic and industry information with unrivaled technical expertise, IHS Markit industry specialists and economists create actionable solutions based rooted in the realities that shape local, regional and global economies.

IHS was founded in 1959 and became a publicly traded company on the New York Stock Exchange in 2005. In July 2016, IHS entered a merger of equals with global information leader Markit to create a new company, IHS Markit (NYSE: INFO). The combined company employs more than 14,000 people around the world.

IHS Markit currently serves:

- All G-20 governments
- 50,000 customers in over 140 countries
- 85% of the Fortune Global 500
- 75% of the Fortune Global 1000
- 94 of the 100 largest U.S. corporations
- 49 out of 50 largest U.S. banks



Our **Economics and Company Risk (ECR)**

group cuts across all industry verticals, using our expertise to prepare economic analysis and forecasts through systematic coverage of the global economy and comprehensive consulting services. At the same time, ECR economic analysis and forecasts sets the foundation for the sector specific analysis used by IHS Markit industry specialists to provide real-time and forward-looking guidance to our clients.

Nearly all these business lines operate under IHS Global Inc., an independent US subsidiary headquartered in Englewood, CO.

### **A Deep History in Economic Analysis & Forecasting**

Through predecessor companies such as Global Insight, DRI, and Wharton Econometric Forecasting Associates, IHS Markit founded the modern economic forecasting industry over 50 years ago. A leader in modeling and forecasting, IHS Markit has combined its economic analysis capabilities with the deep experience and rich analytics of our industry sector experts to provide unparalleled coverage and insight of the global economy.

### **Our Experts**

The Economics & Country Risk team of over 300 economists, analysts and consultants serve as valuable extensions of our client organizations' staff – trusted advisors to executive management and policymakers alike. Our customers are engaged daily with our economists and industry specialists to get a clear and comprehensive understanding of our analysis and forecasts.

## Consulting Services

We advise on specific issues that affect competitive position, investment strategy and policy development by:

- Investigating global, regional, and local economic dynamics
- Identifying the market forces that will shape economic growth and business performance
- Providing clear, reasoned recommendations to help guide opportunity and mitigate risk

## TAX FORECASTING EXPERTISE & KEY FORECASTING ASSETS

State economies are constantly evolving with changes in economic structure, industry mix, demographics, public policy, and unforeseen economic shocks that ultimately shape government revenue flows. However, as regional economies become increasingly intertwined, events previously thought of as irrelevant or far-flung can now have direct local impact. Everything from tariffs to evolving consumer behavior to shifting import patterns can influence state government revenues. For example, softening economic growth in key Asian economies may weaken export demand for producers in your area. Fluctuating exchange rates and new tariffs may curtail the ability of local firms to respond to export demand or capitalize on strong consumer spending.

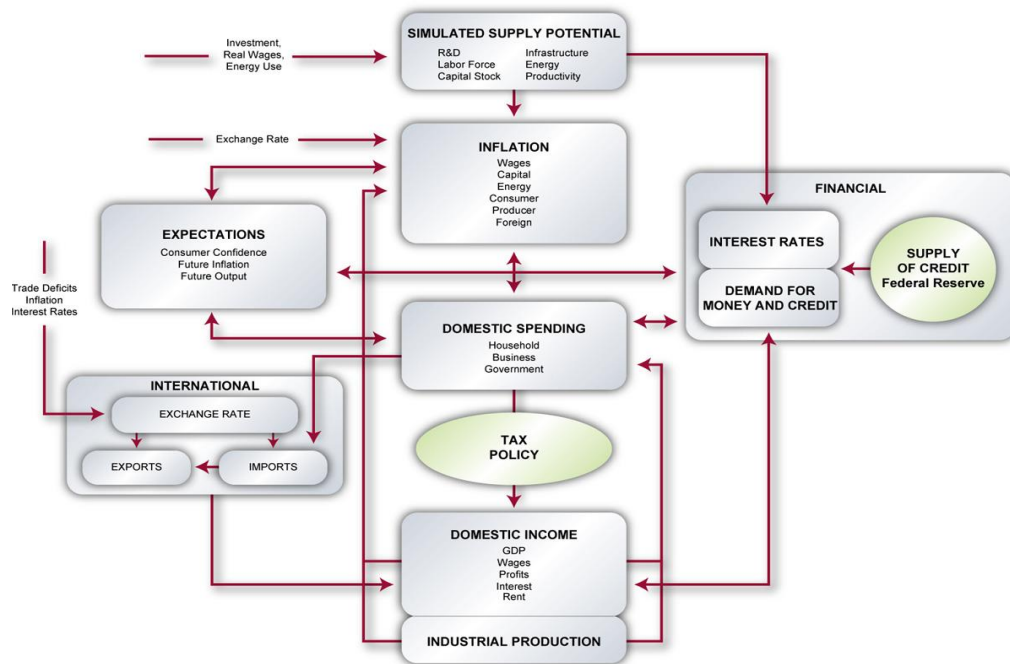
Bottom line? Basic trend models that take a simplified, one-dimensional view of local economic activity without holistically incorporating local, national, and global drivers are often deficient for reliably predicting government revenues.

As a strategic partner to state fiscal leaders, we work with our clients to quantify how economic and policy changes impact their state's capacity to plan, budget and deliver vital public services. Every day we work closely with state legislative leaders, state budget officers and revenue forecasters to inform their revenue estimating and budget process by providing independent forecasts of tax and non-tax revenues that help fiscal planning stakeholders achieve better rigor, consensus and outcomes. We develop our custom tax revenue forecasting models by deriving statistical relationships between changes in the levels of specific tax revenue streams (e.g., personal and corporate income taxes, sales and use taxes, etc.) and trends in the key economic drivers that generate the revenues.

### IHS Markit Model of the US Economy

The IHS Markit's Model is an econometric dynamic equilibrium growth model. It strives to incorporate the best insights of many theoretical approaches to the business cycle: Keynesian, neoclassical, monetarist, supply-side, and rational expectations. In addition, the IHS Markit's Model embodies the major properties of the long-term growth models presented by James Tobin, Robert Solow, Edmund Phelps, and others. This structure guarantees that short-run cyclical developments will converge to robust long-run equilibria.

In growth models, the expansion rate of technical progress, the labor force, and the capital stock determine the productive potential of an economy. Both technical progress and the capital stock are governed by investment, which in turn must be in balance with post-tax capital costs, available savings, and the capacity requirements of current spending. As a result, monetary and fiscal policies will influence both the short- and the long-term characteristics of such an economy through their impacts on national saving and investment.



**IHS Markit’s Model for Arkansas and US State Economies**

IHS Markit maintains behavioral econometric models for each of the 50 US states. The state models are dynamic econometric models of competition and growth, and provide a detailed specification and generate forecasts of demographic and macroeconomic concepts including population cohorts, labor force and unemployment, employment by NAICS classification, GSP by NAICS sectors, average wage by NAICS sectors, personal income details, housing markets, retail sales, etc. Structural details of inter-industry purchasing relationships are integrated into the industry sectors of each model.

IHS Markit’s State Econometric Models are linked to Quarterly Model of the US Economy, incorporating national demands for goods and services as drivers of economic activity within a state. The influence of the national economy is shaped by state-specific conditions of industry mix; relative cost structures, demographics, and income/expenditure patterns. A state’s evolving competitive strengths and weaknesses determine its success in capturing a share of the national market by industry sector.

The basic objective is to project how state economic activity varies, given an economic environment as laid out by IHS Markit’s US Macroeconomic and US Industry forecasts. Analyst input is an important factor in finalizing the forecast. IHS Markit has a dedicated analyst for each state and metro area, and these analysts are well informed and educated about local developments and how those should affect the outlook for the region. The econometric models provide an initial forecast solution determined by national economic and state-specific drivers; the analysts’ judgment incorporates refinements to the forecast due to any expected changes that may have not been captured in the behavioral relationship formulated in the model.

The IHS Markit’s US Regional Model provides analyses of each state and metropolitan area in the US, including county level models. Each area is modeled individually and then linked into a national system of macroeconomic and industry forecasts. The models forecast internal growth

dynamics and differential business cycle responses for each state. Our objective is to forecast how regional activity varies, given an economic environment as laid out by IHS Markit's US economic and industry models. To do this, the model must be able to explain two key phenomena:

- Why states react differently from one another over the business cycle.
- Why states grow or decline relative to each other over the longer run.

These issues are addressed using information about detailed industrial mix, inter-industry and inter-regional relationships, productivity and relative costs, and migration trends. In addition, the models are policy sensitive, and respond to changes in tax rates, Federal transfer payments, etc.

## TAX FORECASTING METHODOLOGY

The IHS Markit approach to tax model development is based on sound, defensible econometric methods that reflect best practices for the discipline of forecasting. We stress the importance of employing a rigorous set of local tax data coupled with appropriate economic indicators for the state from the Bureau of Labor Statistics and the Bureau of Economic Analysis. The base data are then linked to IHS Markit proprietary forecasts for Arkansas (and our extended forecasting system for industry sectors and regions) to achieve a forward view of Arkansas tax revenue.

For each Tax Model variable, IHS Markit will develop, using best econometric practice, an explanatory equation capable of use as a forecast equation with our economic and demographic forecasts as inputs. All standard statistical regression test statistics and results will be made available to the client. Model (equation) selection will be determined on a case-by-case basis for each tax component. The functional form will generally be logarithmic, or log-difference. Explanatory variables, and their estimated coefficients, will be consistent with economic theory.

Our standard practice for our tax revenue estimating clients is to develop a set of econometric equations for inclusion in a model to forecast all relevant tax revenue streams, such as sales and use taxes by sector, personal or individual income taxes on wages and non-wage income, corporate income taxes, excise taxes, and property taxes. Model equations are constructed to use our proprietary economic and demographic forecasts as inputs. These include variables such as wage and salary disbursements, personal income, retail sales, consumer expenditures by type of good or service including motor vehicles, unemployment rate, value added by sector, output, population change, and home prices. We use our econometric expertise to estimate statistically significant equations, unique to each jurisdiction and tax type being considered, that explain tax revenue levels over time based on the trends and variation in the economic variables. Similar approaches are also deployed to forecast receipts from non-tax sources such as license fees, room charges, user fees, and tolls on transportation infrastructure.

One major IHS Markit competitive advantage in forecasting state and local government revenues is that we already have econometric forecasting models for states with historical and forecast values for all the major economic and demographic variables that drive government revenues. We can then develop and link a module that explains the econometric relationships between tax collections and changes in economic activity.

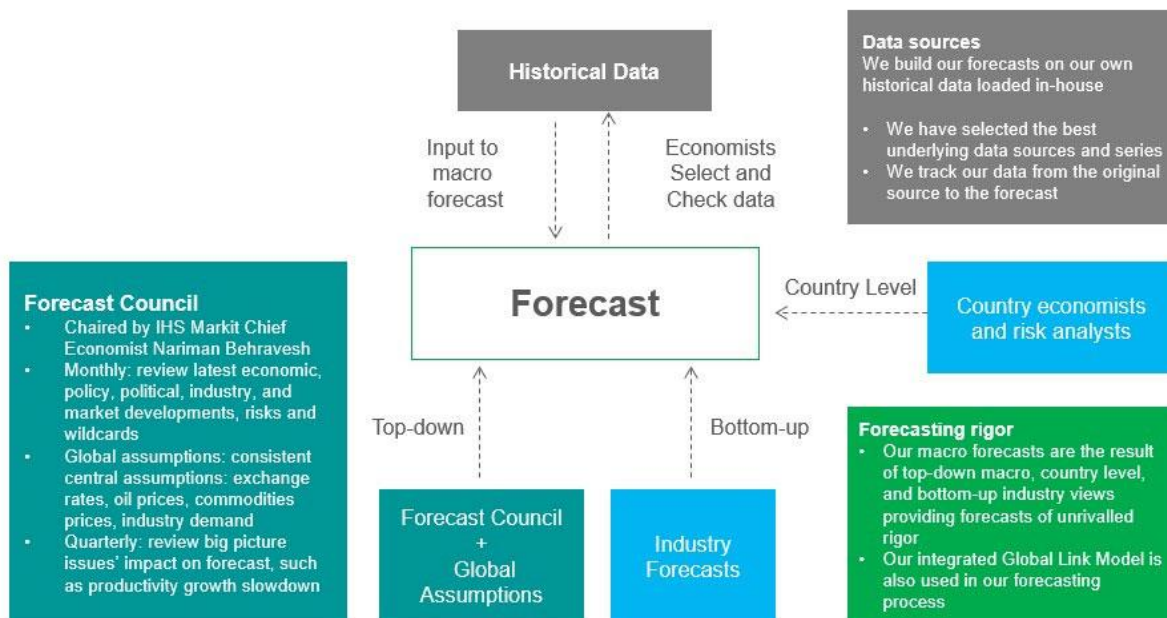
Another advantage is that we use a top-down approach in developing our state forecasts. As a result, key variables from our current energy, industry, US macroeconomic, and global economic forecasts are automatically considered in the state forecast.

A third key advantage of IHS Markit forecasts is our ability to leverage IHS Markit’s vast array of industry experts who regularly contribute to our revenue forecasting process. A few major industries will often be the dominate contributors to state revenues and statewide economic activity. In Arkansas, for example, that could mean: leveraging IHS Markit Agriculture experts to assess the prospects of livestock demand and food processing; assessing retail spending trends for consumer packaged goods at big box stores; forecasting sheet steel demand from the automotive industry; and tracking natural gas prices to assess the well-head economics of the Fayetteville Shale formation. Beyond our economic expertise, IHS Markit’s industry experts play a crucial role in providing context on the industries that shape tax revenue flows.

Our state econometric forecasting models already contain multiple variables that are essential to forecasting different types of tax revenues, including: total personal income, wage and salary payments by 2-digit NAICs code, two categories of retail sales, new passenger and light truck vehicle registrations, 21 types of personal consumption expenditures, the CPI, state and local personal tax payments, shipments of manufactured goods and industrial production. The models also contain, as applicable in an individual state, current tax rates for nine types of major state-level taxes.

Our state forecasting models are designed, along with the proprietary software used to run them (EViews), with the ability to modify and compare the revenue effects of alternative tax policies such as different rates, types of goods and services subject to a tax, as well as alternative economic growth scenarios.

Our methodology for forecasting government revenues is shown in the flow chart presented below. The figure clearly shows how we leverage all our information and forecasting assets to derive government revenue estimates that are driven by levels of economic activity at the regional, state, US, and global levels.



## PROPOSED SCOPE OF WORK

Pursuant to the various tasks specified in Section 3.0 of the RFP, IHS Markit can perform these services on both a “Time & Materials” basis in accordance with the rate schedule specified later in this proposal as well certain services on a “Fixed Fee” basis given the routine updating of certain forecasting and analysis reports. Ultimately, we will defer to BLR’s deliverable and billing preferences, but we nonetheless wanted to provide price flexibility and surety around the expense of certain deliverables under this contract. Based on our previous experience with other fiscal management clients and engagements, we will offer suggestions as to the appropriate frequency of reporting so as to provide BLR flexibility in its decision-making. Moreover, clients appreciate a structured format for recurring reports since it provides consistency and continuity when examining trends within tax revenues and the broader economy.

The methodologies for undertaking the requested forecasting, analysis and support are described in previous sections of this proposal as well as in the appendix. We will also describe in the following work specifications any unique tasks that supplement the general tax analysis and forecasting approach and methodology articulated elsewhere in this proposal.

### Work Specifications

1. Prepare fiscal impact reports for proposed legislation, including dynamic scoring – IHS Markit will undertake the modeling of fiscal impacts, including dynamic scoring, to assess the net fiscal and economic impacts of proposed legislation. These services will be performed on a Time & Materials basis.
2. **Provide revenue forecasting and analysis** – IHS Markit will systematically produce forecast reports for the various Arkansas revenue streams (e.g., personal income, corporate income, sales and use taxes) and the Arkansas state economy. IHS Markit will utilize our existing economic forecast for the Arkansas economy as the basis of generating the tax forecasts. The forecast report deliverable typically includes an executive summary report that details notable forecast highlights, key assumptions in the forecast and an explanation of the performance of the core drivers of the state’s economy. IHS Markit typically includes alternative scenarios (i.e., Optimistic/Pessimistic) to accompany the Baseline forecast of revenues since our fiscal clients like to see different potential revenue outlooks tested under different assumptions and economic conditions.

For an example of this type of report, please refer to the document prepared for [North Dakota Legislative Management](#) located in the Appendix of this proposal. The following tax forecasts, including the baseline, optimistic and pessimistic scenarios, will be included in the report:

- Individual Income
- Corporate Income
- Sales & Use Tax
- Alcohol
- Tobacco
- Insurance
- Racing
- Gaming
- Severance
- Franchise
- Real Estate Transfer

The timing of these reports would set by BLR and it is typical of our fiscal clients to have the reporting coincide with the start of the fiscal year budget planning cycle. In our

experience, fiscal clients prefer revenue/economic forecast updates on a quarterly or semiannual basis. While some clients opt for monthly forecast frequency, they do so with the understanding that there will be greater volatility in the reported data due to calendar and receipts timing, and that it may not reflect revisions that subsequently accompany historical data reporting. A Fixed Fee price for this quarterly report is articulated in the Cost Section of this proposal.

3. **Provide consultation and advisory services regarding proposed legislation** – The cornerstone of IHS Markit customer relationships is the ability to work collaboratively through complex material to understand “what it means” to our customer, their workflow and the broader set up fiscal stakeholders.
4. **Provide budgeting and forecasting research and analysis, as requested, including reports regarding updates to state and federal laws, and best practices in state budgeting** – In addition to the recurring revenue and economic forecast updates, IHS Markit is able to systematically track and provide updates to updates and changes to state and federal laws, particularly those that may impact future revenues and the economic performance. We are also able to advise on economic trends such that our ongoing tracking of key indicators will serve as an “early-warning system” to BLR and legislators.

While we are scrupulous in the protection of privacy in our client engagements, one benefit of working with multiple states and cities for tax forecasting is that we have a broad picture of fiscal management practices and are able to share those experiences to the extent another jurisdiction can benefit from other client experiences and best practices. These services would be delivered on a Time & Materials basis.

5. **Attend meetings of the Committee, as requested, or of other legislative committees as authorized by the Committee co-chairs** – IHS Markit routinely participates in legislative committee meetings, public hearings and revenue consensus meetings in order to share our forecast findings, fundamentals and assumptions. While we are typically available for on-site participation, we have continued to support our fiscal clients with virtual participation in hearings. These services would be delivered on a Time & Materials basis.
6. **Be readily accessible to Committee members and BLR staff** - Our Project Staffing Model, described in the following section of this proposal, requires a team of economists and analysts be “at the ready” to support our clients and is staffed with sufficient personnel to ensure depth, breadth and availability to Committee members and BLR staff. These services would be delivered on a Time & Materials basis.
7. **Be available for periodic education discussions with Committee members and staff** – The IHS Markit Economics team understands that success in the application of economics and forecasting is contingent upon our client stakeholders having a clear understanding of the logic, drivers and implications of our forecasts. To ensure the Committee and staff are getting full value from their forecasting consultant, IHS Markit is prepared to regularly host briefing sessions for every forecast update and general information seminars on the key drivers of state revenues and the Arkansas economy.

### Time & Materials Services

For analytical and forecasting tasks required on an ad hoc or ‘as-needed’ basis, IHS Markit will provide such services on a time and materials basis based on General Services Administration

approved rates under the provisions of the FSS Multiple Award Schedule (MAS) contract No. 47QRAA19D001X. These rates are not comprised of individual elements but are based on a minimum discount of 40% from IHS Markit category-specific hourly rates for private sector consulting work.

## QUALIFICATIONS & EXPERIENCE OF KEY PERSONNEL

### Project Staffing & Management

The IHS Markit team will work with the city to develop a communications plan that ensures an appropriate level of dialog with the city and the associated stakeholders on project tasks yet is also sensitive to our client schedules and requirements for detail. The current IHS Markit Management and Staffing plan stresses:

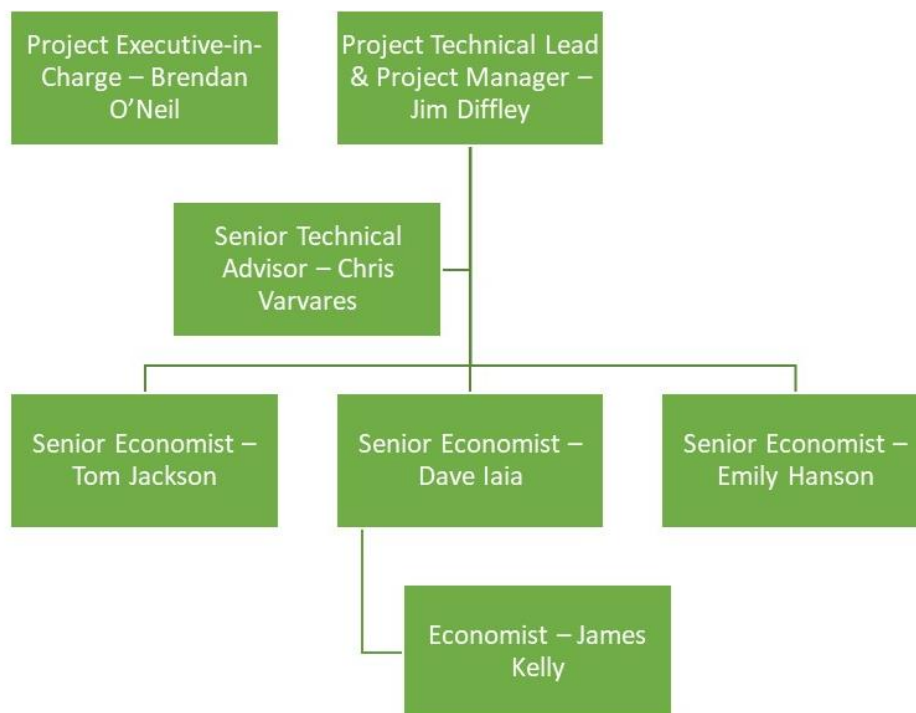
- **Clarity** of roles and responsibilities among the core project team as well as of lines of communication both between the IHS Markit team and the client - including clearly identified “primary” and “secondary” points of contacts - and among IHS Markit team members;
- **Accountability** of key staff over the course of the proposed Period of Performance; and
- **Flexibility** to respond to feedback and additional input from the client and focus research to answer specific questions covered by the scope of work over the course of the Period of Performance.

Our Management Plan includes a Consulting Executive-in-Charge and a Project Manager and will be supported by team members across the various IHS offices and disciplines.

- **Consulting Executive-in-Charge (EIC):** IHS Markit will appoint senior level staff to serve as the Executive-in-Charge (EIC). In this role, a Managing Director or higher-level staff member will be responsible for securing the necessary resources to enable successful execution of each project. The Executive-in-Charge will have the authority to augment the IHS Markit team as required to meet the government’s requirements over the course of the project. The Executive-in-Charge will also be involved in reviewing the report deliverables as part of a broader, mandatory IHS Markit quality control effort. The Executive-in-Charge will assist the Project Manager in engaging colleagues across the entire IHS Markit organization that can provide the necessary technical or regional expertise to the ongoing research and analysis. Senior staff within the IHS Markit Consulting Business has extensive access to resources across IHS Markit for the purpose of identifying and engaging IHS Markit experts on topics relevant client research and analysis efforts.
- **Chief Regional Economist:** The IHS Markit Chief Regional Economist has overall responsibility for US Regional Economic Services, including the Regional Core Macroeconomic Service and the IHS Markit’s Real Estate and Construction Service. The Chief Regional Economist oversees the quarterly economic forecast of the 50 states and over 300 metropolitan areas of the United States. The Chief Regional Economist regularly makes presentations of these regional economic forecasts and analysis to clients, conferences, governmental bodies and the press.

- **Project Manager:** The Project Manager provides oversight and guidance to the Lead Analyst(s) throughout the Period-of-Performance (PoP) and will serve as a quality control expert and primary point of contact. The Project Manager will serve as the point person for communications, project briefings and ensure day-to-day activities and interactions are executed smoothly and consistently.
- **Lead Analyst(s):** The Lead Analyst will be the secondary point of contact responsible for performing research and analysis in support of the project (often task specific), including working with the Project Manager to synthesize analytical outputs of the research effort.
- **Business Analyst(s):** Business Analysts will work with the Project Manager and the Lead Analyst to conduct research and analysis in support of the requirement and will contribute to the final and interim reports.

### Project Organizational Chart



Resumes of key personnel for this effort are presented on the following pages.

## JAMES DIFFLEY

*Executive Director, Economics Consulting*

*Project Title: Project Technical Lead/Project Manager*

### **Relevant Work Experience: +30 Years**

- Macroeconomic Forecasting
- Tax Analysis
- Economic Impact Analysis
- Revenue Impact Analysis
- Real Estate & Construction

### **Education:**

- PhD training in Economics, State University of New York at Stony Brook
- MA, Economics, State University of New York at Stony Brook
- B.A., Mathematics & Economics, State University of New York at Buffalo

### **Summary of Qualifications**

James Diffley is Executive Director of IHS Economics Consulting and Industry Services, with responsibility for a variety of advisory services and consulting solutions for clients in the public and private sectors. Mr. Diffley was, from 1998 to 2013, the Chief Economist of IHS Global Insight's U.S. Regional Services Group, with overall responsibility for US Regional Services, including the Regional Core Macroeconomic Service and the IHS Global Insight Real Estate and Construction Service. He regularly makes presentations of these regional economic forecasts and analysis to clients, conferences, governmental bodies, and the press. Among the customized consulting projects, Mr. Diffley has been responsible for are long-term projections of cigarette consumption, analysis of the impact of changing oil prices on local economies, and the economic impacts of the investment and operations of various industries.

Prior to joining the company, Mr. Diffley was supervising tax analyst with the New Jersey Division of Taxation's Office of Tax Analysis from 1988 to 1996, where he was responsible for developing the state economic forecast for the state executive budget and for business tax revenue forecasting. From 1982 to 1987, he was on the economics faculty at Adelphi University in New York.

### **Selected Project Experience**

- **Suffolk County, New York.** Provided independent sales tax revenue estimates, updated quarterly, as part of the annual state budget setting process.
- **City of Philadelphia Department of Revenue.** IHS built an econometric model of each of the components of City tax collections based on local and national economic conditions. The model was then used to forecast City revenues for the upcoming 5-year period. Presentations and testimony have been provided since 2010.
- **U.S. Residential Real Estate Forecasts for State and Metropolitan Areas.** Responsible for all aspects of the U.S. Real Estate Service. This includes supplying a detailed analysis of demand-side drivers for the residential real estate market in each of the 50 states, the District of Columbia, and 363 metro areas and 29 metro divisions. Using input from IHS Global Insight standard models, maintained accompanying real estate models that forecast such variables as housing starts, affordability, sales prices, and mortgage originations, average monthly payments, foreclosures started, and loans past due.
- **U.S. Regional Services.** Responsibilities include management of the Regional Services Practice; economic forecast and analysis of 50 states and 319 metropolitan areas; fulfillment of consulting projects; presentations, testimony to clients; and management of client relationships

- **New York State Revenue Forecasts.** Provided modeling, forecast, and analysis to the New York State Senate – for example, NYSTREAM model re-estimation and update; NYSTREAM forecast of revenue sources; testimony at Legislative Forecast Conference.
- **New York City MTA Revenue Forecasts.** Provided modeling, forecast, and analysis to the New York City Metropolitan Transportation Authority.
- **Rhode Island Income Tax Revenue Forecasting.** Provided a 5 fiscal year forecast of state taxable capital gains realizations with alternative scenario results. IHS built a tax model and incorporated its national and state economic forecast.
- **Pennsylvania Department of Revenue.** Continuously provided independent revenue estimates and expert testimony as part of the annual state budget setting process.
- **Projects for the U.S. Conference of Mayors.** Responsible for generating series of reports entitled The Role of Metro Areas in the U.S. Economy. In addition, as a part of the U.S. Metro Economies series, authored special reports on topical issues. Examples include: U.S. Foreclosure Crisis is Having a Negative Ripple Effect on the Economies of the Nation's Metropolitan Areas, and Current and Potential Green Jobs in the U.S. Economy.
- **Cigarette Consumption Forecasts.** Provided a forecast of US cigarette consumption for the Tobacco Settlement Financing Corporation (State of New York), for use in the offering statement for the Tobacco Settlement Financing Corporation (State of New York) Asset-Backed Revenue. Also provided cigarette consumption forecasts for Louisiana, California, Rhode Island, Washington, Niagara TASC, Chautauqua TASC, and Kern County.
- **Series 2010 Financing, Virgin Islands Public Finance Authority.** Provided a report containing an overview of market for VI rum; competitive factors affecting demand, demographic data on liquor consumption; VI market position, analysis of impact of the expansion of the Cruzan production facility, and its use to provide Beam Global branded spirits to the US; and forecast of all long-term rum shipments to the US from the USVI. Results used in the prospectus for the bonds issued by Virgin Island Public Finance Authority.

***Publications/Reports/Presentations/Testimonies***

- US Conference of Mayors
- Builder 100 Conference
- Commercial Property News
- Council of State Governments
- Legislative Fiscal Officers Association
- National Association of Home Builders
- Numerous other consulting reports on economic impacts
- National Real Estate Investment Managers
- Bond buyer Conferences
- NY State Association of Counties
- National Association of State Budget Offices
- National Association of Industrial & Office Property Owners
- Testimony on Budget & Economic Matters to State Governments
- Frequently quoted in national media, including NY Times, San Francisco Chronicle, NBC Nightly News, CNNfn

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**DAVID IAIA**

*Director, IHS Markit US Regional Service*

*Project Title: Lead Analyst 1*

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**Area of Expertise: 20+ Years**

- Regional economics
- Urban economics
- Labor economics

**Education**

- MA (ABD), Economics, Brown University
- BA, Economics, Amherst College

David Iaia, Director of Regional Economics, will serve as a lead analyst 1 for this effort. His responsibilities will include contributing to the regional economic and model analysis.

***Summary of Qualifications***

Dave Iaia is a Director of the IHS Markit US Regional group. He oversees the state, metro, and county forecasts, covering more than 300 metropolitan areas and 3,100 counties, ensuring data quality and forecast consistency. He also has an active role in development and enhancement of the group's data methodology and manages the group's staff. Additionally, Mr. Iaia is the primary analyst for Virginia, Maryland, the District of Columbia, and Connecticut. He has done consulting work on the cost of doing business in states, and for the U.S. Conference of Mayors on the importance of metro areas in the national economy.

## **TOM JACKSON**

*Manager, IHS Markit US Regional Service*

*Project Title: Lead Analyst 2*

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**Area of Expertise:**

- Economics & Econometrics
- Agricultural and Applied Economics

**Education**

- MS, Agricultural Economics, the Ohio State University
- BS, Agricultural Economics, the Ohio State University

### **Summary of Qualification**

Tom Jackson is Manager and Principal Economist in the US Regional Economic Service of IHS Markit, with responsibility for economic forecasts of states in the eastern portion of the Midwest/Great Lakes region. Mr. Jackson has been with the US Regional Service for nine years – prior to that, he served from 1999 to 2011 in the Agriculture Service with the company. In each role, he has played a leading role in forecast development and evaluation, and in communicating with clients. Mr. Jackson also has represented IHS Markit through many news media outlets, including CNN, MSNBC, The Wall Street Journal, and USA Today, to name a few.

As part of his regional focus, Mr. Jackson has developed specific expertise in major industries such as unconventional natural gas, downstream oil and gas processing, and automobile manufacturers and suppliers. He has provided support for many major consulting projects within the company, including regional impacts of the development of unconventional natural gas and oil, impact of relaxing US barriers to oil exports, and the impact of renewable fuels standards on the US agriculture sector.

### **Selected Relevant Experience**

**U.S. Regional Economic Services.** Responsibilities include management of four colleagues; economic forecast and analysis of 6 states and their metropolitan areas; fulfillment of consulting projects; presentations, testimony to clients; and management of client relationships.

**Economic impact studies** of a wide range of national and regional economic events including deployment of new technology, policy changes, and drought.

**Tax revenue** forecast models at the city and state level.

## EMILY HANSON

*Senior Consultant, Economics Consulting*  
*Project Title: Business Analyst 1*

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**Area of Expertise: 10+ Years**

- Regional economics
- Financial economics
- Labor economics

**Education**

- MA, Economics, Clemson University
- BA, Applied Statistics, American University

**Summary of Qualification**

Emily Hanson is a Senior Consulting Analyst within the Economic and Country Risk group at IHS Markit. Her work focuses mostly on stress testing for banking clients. Some of her tasks include collecting and cleaning financial data, developing and producing documentation for custom financial models, and running BHC and the FRB's CCAR scenarios for stress testing clients. Other consulting projects include using regional economic forecasts to produce tax revenue projections for the state of North Dakota, providing multifactor productivity outlook for U.S. Centers for Medicare and Medicaid Services, modeling plastic demand by region using megatrend drivers such as urbanization and the rise of the middle class for the American Chemical Council, and researching roadway conditions in Texas for an infrastructure report for Texas Oil and Gas Association.

**Selected Relevant Experience**

- North Dakota Legislative Council: *Economic Forecasting & Industry Report: The State of North Dakota*– Project Role: key; Date of Final Report: Sept. 2020
- American Chemical Council: *Population Growth and Materials Demand Study*– Project Role: key; Date of Final Report: Aug. 2019
- Texas Oil and Gas Association: *Critical Infrastructure for Texas Growth*– Project Role: key; Date of Final Report: March 2019

Through her project work at IHS Markit, Emily has demonstrated proficiency in EViews. She also has experience with R and Python.

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**JAMES KELLY**

*Senior Economist, IHS Markit US Regional Service*

*Project Title: Business Analyst 2*

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**Area of Expertise: 10+ Years**

- Regional economics
- Financial economics
- Labor economics

**Education**

- MA, Economics, Clemson University
- BA, Applied Statistics, American University

**Summary of Qualification**

James Kelly's responsibilities include preparing forecasts and written economic analysis for states in the Midwest and South, including Kansas, Missouri, Arkansas, Kentucky, Tennessee and Mississippi, as well as their respective metropolitan areas. A native of northwest Arkansas, he continues to track developments and monitor trends in the region's economy. He also helps spearhead US Regional's use of data analytics and Power BI to make forecast data and visualizations more accessible for clients. Before joining IHS Markit, he received a Bachelor of Science in Economics from the University of Missouri, US, and a Master of Science in Economics from the University of Illinois at Urbana-Champaign, US.

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## CHRIS VARVARES

*Vice President, IHS Economics*

*Project Title: Senior Technical Advisor*

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**Relevant Work Experience: +35 Years**

- Macroeconomic Modeling
- Forecasting & Policy Analysis

**Education:**

- Graduate Training (ABD) in Economics, Washington University in St. Louis
- BA, Economics, The George Washington University

Mr. Varvares has nearly 40 years of experience in macroeconomic modeling, forecasting and policy analysis, as co-head of US Economics at IHS Markit, in his previous role as a principal of Macroeconomic Advisers and as a member of the staff of the President's Council of Economic Advisers (1981-1982); he served as a member of the US delegation to the OECD in April 1982. Macroeconomic Advisers was acquired by IHS Markit in 2017.

He and the IHS Markit US economic principals serve as consultants to key agencies of the US and foreign governments, major trade associations, and private corporations, and are widely quoted in the business and financial media. IHS Markit is widely recognized as among the most accurate forecasters of the US economy. Mr. Varvares is a recent past president and a former director of the National Association for Business Economics (NABE). He served as president of the NABE Gateway chapter in St. Louis and is a member of the American Economic Association.

He serves as a member of the New York State Economic and Revenue Advisory Board and has participated in the meetings of the Outside Consultants to the CBO, has been a panelist for the World Economic Forum, and he sits on advisory boards for the Olin Business School at Washington University and the Walker School of Business and Technology at Webster University.

Mr. Varvares holds a Bachelor of Arts in Economics from The George Washington University and received his graduate training (ABD) in Economics from Washington University in St. Louis, where he was also a member of the adjunct faculty in both the economics department and the Olin School of Business.

## **BRENDAN O'NEIL**

*Executive Director, IHS Economics Consulting*  
*Project Title: Executive-in-Charge*

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**Relevant Work Experience: 20+ Years**

- Project Management
- Economic Development
- Agriculture
- Construction
- Energy
- Public & Private Sector Business Development

**Education:**

- Graduate studies at Suffolk University
- BA, Political Science, Syracuse University

Brendan O'Neil – Mr. O'Neil will be responsible for contract negotiation and administration and will serve as Executive-in-Charge of this engagement. These responsibilities include the allocation adequate project resources, coordination of any public media releases associated with project, and ensuring overall “Customer Delight,” IHS Markit’s standard for delivering client value, satisfaction and overall effectiveness of the project results.

Mr. O'Neil is the Commercial Lead for Economics Consulting in the IHS Markit Economics & Country Risk Group. Among Mr. O'Neil’s responsibilities are client solution architecture and oversight of the Federal, State & Local Government and Trade Associations segments of the Economics & Country Risk business. In addition to his sector development efforts, he is responsible developing client and strategic partner relationships and executive management of client engagements. Mr. O'Neil has specialized in assisting clients with their market planning and forecasting, economic and policy impact analysis, and supply chain cost containment efforts. With over 20 years of experience in market and policy research, Mr. O'Neil has expanded the firm’s reach by engaging clients in a wide range of industry sectors and through multiple product and capability launches.

Prior to joining IHS Markit, Mr. O'Neil served in various client-facing roles at Global Insight, World Markets Research Centre and Forrester Research. Mr. O'Neil’s policy experience stems from his work in Massachusetts and New York state legislatures.

## CLIENT REFERENCES

IHS Markit provides data and analysis to all fifty U.S. states. The majority of those states are utilizing our forecasting services to perform fiscal budget preparation, revenue forecasting, and our economic outlook is frequently used as the basis for short-term fiscal (e.g., annual or biennial budgeting) and long-term capital investment planning (e.g., infrastructure, bond issues). These services are utilized by state legislatures and state Departments of Finance/Revenue/Taxation. The Arkansas Department of Administration and Finance is among those clients utilizing our syndicated forecast services and the Department of Transportation and the Department of Economic Development also have active contracts for data/analysis services with IHS Markit.

A sample of clients and references for our custom revenue forecast services is listed below.

*(Please note that even though IHS had provided services to the Arkansas Bureau of Legislative Research more than 3 years ago, they are included here for your information.)*

### ***Arkansas Bureau of Legislative Research***

*Address:* State Capitol, Room 115, Little Rock, AR 72201

*Contact:* Mr. Richard Wilson (retired)

*Telephone:* 501-682-1937

*Email:* richardw@blr.arkansas.gov

*Performance Period:* 2013

*Services provided:* The State of Arkansas was considering issuing general obligation bonds to support a major economic development project - the Big River Steel (BRS) plant, a \$1.1 billion electric arc furnace (EAF) steel mill. The State was considering providing a package of direct economic incentives (e.g., low interest loans, construction grants), and indirect incentives (e.g., tax deductions and credits), with a potential cost of almost \$300 million over a 20-year period. IHS was retained by the State to assess: 1) the long-term economic viability of the proposed BRS plant; and 2) benefits and costs to the state in terms of the costs of the incentives provided and the NPV of the tax revenues received by the State. IHS concluded that the steel industry can absorb the addition of Big River Steel plant, but if any other major plants other those already announced, were built, then BRS plant's production goals and operating margins would not be achieved, reducing the level of production and also the tax revenues needed to cover the costs of the economic incentives. The benefit-cost analysis found that in the most optimistic scenarios that the net economic benefits were barely positive, and in most cases the NPV of the costs exceeded benefits if the plant's capacity factor and sales were too low. Two representatives from IHS presented testimony to, and answered questions from, a joint session of the Arkansas Legislature.

### ***Arkansas Bureau of Legislative Research***

*Address:* State Capitol, Room 115, Little Rock, AR 72201

*Contact:* Mr. Richard Wilson (retired)

*Telephone:* 501-682-1937

*Email:* richardw@blr.arkansas.gov

*Performance Period:* 2015

*Services provided:* IHS was retained again by the State of Arkansas Bureau of Legislative Research to evaluate an economic incentive package be offered to attract the manufacturing facility for the joint light tactical vehicle (JLTV) production facility (i.e., the next generation of Humvees). IHS presented testimony to the Arkansas Legislature. Lockheed Martin (LM) proposed to locate a facility to assemble joint light tactical vehicles (JLTVs) adjacent to one of their existing plants in

the Highland Industrial Park in Calhoun County in southcentral Arkansas. LM was one of 3 companies competing for a contract from the US Department of Defense (DOD) to produce approximately 54,600 JLTVs between 2016 and 2040. The State of Arkansas proposed an economic incentive package under Amendment 82 to the Arkansas Constitution which permits it to issue general obligation bonds to finance infrastructure improvements or other needs to attract large industrial projects. Arkansas would provide \$84.645 million in infrastructure improvement and job training, paid for by proceeds from a bond issue. IHS was retained by the Arkansas Bureau of Legislative Research to analyze the proposed economic incentive package. We were specifically asked to determine if the net present value (npv) of the additional major state-level tax revenues (e.g., personal income, corporate income, and sales and use) generated by the increased economic activity attributable to the construction and operation of the JLTV facility would exceed the npv of the costs incurred by Arkansas (i.e., the net present value of the bond debt service). IHS conducted the analysis over a 25-year period from 2016 through the final year of scheduled production in 2040. We concluded that there would be positive return to the State over the 25-year analysis period, with the bulk of the benefits occurring after the bond debt service payments ended.

***North Dakota Legislative Council, State of North Dakota***

Address: State Capitol, 600 East Boulevard Avenue, Bismack, ND 58505

Contact: Allen Knudsen

Phone: 701-328-4231

Email: [aknudsen@nd.gov](mailto:aknudsen@nd.gov)

Performance Period: 2017-2021

Description of Service Provided: The North Dakota Legislative Assembly sought external support in estimating the state's tax revenue and economic forecast to update the 2017-19 biennium revenue forecast and develop the 2019-21 biennium revenue forecast. Due to the volatile nature of several industries key to the North Dakota economy, scenario capabilities were necessary. Additionally, the North Dakota Legislative Assembly required the qualitative assessment of both national and local economic conditions and demographic trends that are driving these projections.

IHS Markit developed an econometric model that blended proprietary macroeconomic, pricing, and industry forecasts with revenue trends to incorporate both short- and long-term national and state-level economic forecasts. IHS Markit equipped the model to generate three scenarios to project baseline, optimistic, and pessimistic outlooks for the North Dakota economy and industry-level short-term outlooks for sectors of special importance to the state's economy, oil & gas and agriculture. The project team provided additional "deep dives" into four tax streams: sales and use tax, motor vehicle excise tax, individual income tax, and corporate income tax, which highlighted relevant economic indicators and their variability over time. Tax projections were evaluated in the year following the estimate and IHS Markit was rehired for additional work for the following biennium revenue forecast.

***City of Philadelphia Office of Budget and Program Evaluation***

Address: City of Philadelphia, MSB 1401 JFK Blvd, Philadelphia, PA 19102

Contact: Marisa Waxman, Budget Director

Phone: (215) 686-6558

Email: [Marisa.Waxman@phila.gov](mailto:Marisa.Waxman@phila.gov)

Performance Period: ongoing

Description of Service Provided: The City of Philadelphia Office of Budget and Program Evaluation (OBPE) has retained IHS for several years to support the City's planning, budgeting, revenue estimating and economic forecasting efforts. The IHS analysis supports the Director of Finance in preparation of the City's annual operating budget, Five Year Plan, capital program and capital budget. OBPE requires that a consultant either have or develop the economic modeling framework that can address how income, housing activity and corporate profits impact the City's revenue streams, such as the Wage Tax, Business Income and Receipts Tax, Net Profits Tax, Real Estate Tax, Real Estate Transfer Tax, Sales Tax, Parking Tax and Amusement Tax. The end-product delivered by IHS is current fiscal year and 5-year forecasts of the aforementioned taxes, participation in meetings and presentations that require a detailed explanation of the consultant's modeling framework, retrospective analysis of forecasted versus actual revenue, a monthly outlook of the Philadelphia economy and qualitative assessment of trends and drivers.

***County of Suffolk, State of New York***

*Address:* Office of the County Executive, 100 Veterans Memorial Highway, Hauppauge, NY 11788

*Contact:* Stephanie Rubino, Assistant Budget Director

*Phone:* 631-853-5913

*Email:* [stephanie.rubino@suffolkcountyny.gov](mailto:stephanie.rubino@suffolkcountyny.gov)

*Performance Period:* 2017-present

*Service Provided:* IHS was retained to 1) develop a model of Suffolk sales tax revenues; 2) apply our macroeconomic and regional economic forecasts to the current, and upcoming five year budget planning; 3) provide a separate accounting of their energy (mainly retail gasoline) sales, the most volatile part of their revenue in recent years; 4) provide a written report supporting the forecast for inclusion in the County Executive's budget proposal; 5) provide forecast updates with a report detailing any changes in the economic or revenue outlook. Using the results from IHS reports, Suffolk has substantially improved their budget planning accuracy after years of revenue shortfalls.

***Commonwealth of Pennsylvania – Department of Revenue***

*Address:* 1147 Strawberry Square, Harrisburg, PA 17128

*Contact:* C. Dan Hassell, Revenue Secretary

*Phone:* (717) 787-4099

*Performance Period:* ongoing (for over 20 years)

Description of Service Provided: IHS Global Inc. has been continuously engaged with this client to provide independent economic estimates and expert testimony as part of the annual state budget setting process.

***Rhode Island Department of Revenue – Income Tax Revenue Forecasting***

*Address:* One Capitol Hill, Providence, RI 02908

*Contact:* Paul Dion, PhD, Chief of Revenue Analysis

*Phone:* 401-574-8943

*Performance Period:* 2016-present

*Service Provided:* Client desired a 5 fiscal year forecast of state taxable capital gains realizations with alternative scenario results. IHS built a tax model and incorporated its national and state economic forecast.

***Minnesota Department of Employment and Economic Development***

*Address:* 332 Minnesota Street, suite E-200, St. Paul, MN 55101

*Contact:* Neal Young

*Phone:* 651-259-7196

*Performance Period:* 2015

*Email:* [neal.young@state.mn.us](mailto:neal.young@state.mn.us)

*Service Provided:* At the request of the Minnesota state legislature, IHS conducted a study for the Minnesota Department of Employment and Economic Development estimating the impacts of crude oil production in North Dakota's (ND) Bakken shale formation on the Minnesota (MN) economy. The study was released to the public in late April 2015. Three direct spending effects were considered: 1) sales of goods and services by MN companies to support oil production in ND; 2) transportation infrastructure investments and 3) changes in agricultural income. The study had four tasks: 1) forecast crude oil production and spending in North Dakota under three oil price scenarios; assess the impacts of transporting crude oil and required inputs such as frac sand on transportation systems; 3) estimate total economic impacts from the three direct effects, including changes in state level tax revenues; and 4) describe prospects and expectations for maximizing the economic development benefits. IHS developed estimates of the types of goods and services used in oil production and in the construction of the proposed \$3.3 billion Sandpiper crude oil pipeline, half of which would be located in Minnesota. The economic impact analysis considered the direct, indirect and induced economic impacts generated using the IMPLAN model. Our primary finding is that the total economic impacts in Minnesota from ND oil production are modest, generally producing increases of less than 1% in the level of state-wide economic activity.

***Connecticut Innovations (State of Connecticut Investment Fund)***

*Address:* 865 Brook Street, Rocky Hill, CT 06067

*Contact:* Ms. Karin Lawrence, Senior Vice President, Public and Specialty Finance

*Phone:* 860 258-7814

*Performance Period:* 2013 through 2016.

*Service Provided:* IHS analyzed two proposed tax increment financing districts (TIFs) established to pay for site improvements requested by developers of major retail projects. A portion of the incremental sales tax revenues generated by each project would be used to pay debt service on general obligations issued by CT to pay for the improvements. IHS determined the probability that each project would generate enough tax revenues to pay for the requested improvements. Required state and local forecasts of sales tax revenues.

***State of New York – Senate Finance Committee***

*Address:* Office of Fiscal Studies, Legislative Office Building, Albany, NY 12247

*Performance Period:* approximately 20 years

*Service Provided:* IHS has been continuously engaged with this client to provide independent revenue estimates for all state tax revenue streams and expert testimony as part of the annual state budget setting process.

## **APPENDICES**

### **APPENDIX A – IHS Markit Sample Economic & Fiscal Report**

Please refer to the following pages for a sample Economic & Fiscal Report for the State of North Dakota.



IHS Markit™

# Economic Forecasting & Industry Report

## THE STATE OF NORTH DAKOTA

**March 19, 2021**

## Table of Contents

- I. PROJECT OVERVIEW**
- II. MAJOR ECONOMIC & DEMOGRAPHIC DRIVERS**
  - a. US Macroeconomy
  - b. North Dakota State Economy
- III. SPECIAL INDUSTRIES**
  - a. Oil
  - b. Agriculture
- IV. DEEP DIVE INTO THE TAX STREAMS**
  - a. Sales and Use Tax
  - b. Motor Vehicle Excise Tax
  - c. Individual income tax
  - d. Corporate income tax
- V. SCENARIOS**
- VI. DISCLOSURES**

## I. Project Overview

### North Dakota Legislative Assembly goals:

- > The North Dakota Legislative Assembly sought the support of a professional services firm with the capabilities to support the state's revenue estimating and economic forecasting efforts.
- > The Legislative Assembly required that a consultant either have or develop the economic modeling framework that can address how the economy impacts its revenue streams.
- > The end-product required of the Legislative Assembly's consultant will be used for updating the 2019-21 biennium revenue forecast and developing the 2021-23 biennium revenue forecast.
- > The information must be provided in context of both short- and long-term economic behavior (out to 2021 and 2025, respectively) with forecast expectations of the national economy as well as detailed economic forecasts specific to North Dakota's economy.
- > All forecasted values will be provided in terms of a baseline, optimistic, and pessimistic scenarios with probability assignments to each outcome. And finally, in addition to their quantitative requests, the North Dakota Legislative Assembly requires the qualitative assessment of both national and local economic conditions and demographic trends that are driving these projections.

### About IHS Markit

- > IHS Markit is a leading source of information, insight and advisory services in the pivotal areas that shape today's business and policy landscape: economics, financial markets, energy, chemicals, technology, logistics and transportation, healthcare, geopolitical risk, sustainability and supply chain management.
- > IHS was founded in 1959 and became a publicly traded company on the New York Stock Exchange in 2005.
- > In July 2016, IHS Inc. and Markit Ltd. merged to form IHS Markit Ltd. (NASDAQ: INFO), a world leader in critical information, analytics and solutions for the major industries and markets that drive economies worldwide.
- > IHS Markit has more than 50,000 key business and government customers, including 80% of the Fortune Global 500 and the world's leading financial institutions.
- > By providing in-depth analysis and forecasts down to the local level, IHS Economics team of over 300 of economists and analysts serve as valuable extensions to our client organizations' staff and provide the data and analysis they need to make high impact business and policy decisions.
- > As much as possible, IHS Markit has utilized our existing US Macroeconomic and Regional modeling infrastructure to meet the Legislative Management's economic forecasting requirements. This allowed IHS Markit to immediately begin the more detailed work on behalf of the State tax revenue models and minimized the development cost associated with building new models.

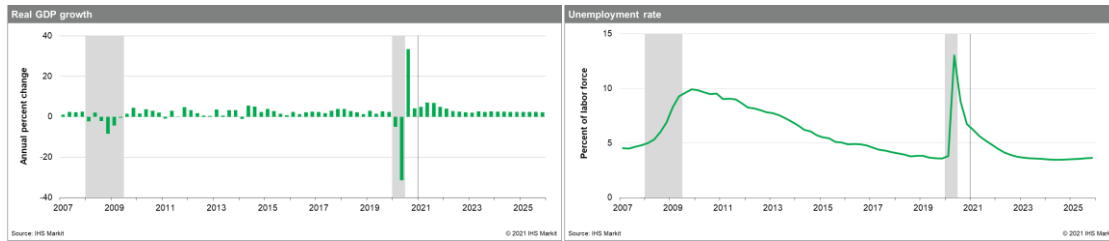
## II. Major Economic and Demographic Drivers in the North Dakota Economy

### US Macroeconomy

#### OVERVIEW

##### **Little change in GDP growth forecast, but with notable revisions in details**

- > BEA's second estimate showed real GDP grew 4.1% in Q4, revised up 0.1 percentage point from the first estimate. Neither that revised growth nor its composition differed enough from our expectations to alter the forecast. While government purchases declined 1.1% in Q4, real final sales to private domestic purchasers—the best barometer of domestic demand—grew an unrevised, firm 5.6%.
- > Our forecasts of real GDP growth for 2021 and 2022 are 5.7% and 4.1%, unchanged from last month, and above the 12 February Blue Chip consensus forecasts of 4.9% and 3.8%. Beneath the unchanged headlines were notable revisions in details.
- > Last month's forecast included an assumed \$1.5 trillion in new federal pandemic relief. With versions of the American Rescue Plan (ARP) Act costing close to \$1.9 trillion having passed in the House and Senate, we've included nearly that full amount in this month's forecast. Why, then, haven't we revised up the growth forecast? There are several reasons.
- > First, new cost estimates from CBO suggest that spend-outs of grants to states for education and infrastructure, as well as funds for COVID-19 mitigation, will be slower than we assumed.
- > Second, after monitoring debate in the Senate last week, we lowered our assumed enhanced federal unemployment benefit from \$400/week to \$300/week, with a measurable impact on PCE in 2021.
- > Third, recent firming in Treasury yields encouraged us to revise up our near-term projections of the 10-year note yield, by 20 basis points in 2021 and by 10 basis points in 2022. This undermines interest sensitive components of aggregate demand.
- > Fourth, firming interest rates stabilized the dollar, which we now project to appreciate modestly rather than depreciate further. This lowered net exports despite an upward revision in projected domestic oil production that raised net petroleum exports.
- > We've revised up the price of Brent crude oil, but only for 2021. In conjunction with the upward revision in the dollar that undermines import prices, this led to a downward revision in 2022 of core PCE inflation, from 1.9% to 1.7%.
- > The three conditions for "lift-off" (maximum employment, core inflation at 2%, and expected to exceed 2% moderately) are met in mid-2024; hence we've not changed our Fed call. The forecast shows the 10-year T-note yield, currently near 1.5%, reaching 2% by late 2023, and 3% by 2028.



**CAA and ARP lift GDP by 2% this year; pace of return to “normal” consumption frames the recovery**

- > Three elements of the recent Consolidated Appropriations Act (CAA) and the pending ARP Act have significant impacts on our forecast of near-term growth: checks and emergency unemployment benefits, which support PCE by boosting disposable income; subsidies to businesses that support corporate profits (and hence dividend income) and proprietors’ income; and, government purchases of goods and services that are recorded as GDP. Most of those purchases are for COVID-19 mitigation: testing, procurement and distribution of vaccines, and purchases of equipment.
- > We estimate the propensity to consume stimulus checks is low (0.15) and spread over several quarters. The propensity to spend unemployment benefits, which we view as replacing labor income for incomeconstrained households, is 1, but also spread over several quarters. The propensities to spend incomes supported by subsidies are intermediate. Based on these parameters, our models suggest the two bills will boost the level of GDP by nearly 2% this year and next, but by waning amounts in subsequent years.
- > A second critical element in the forecast is the pace at which consumption returns to a normal (or “target”) relationship with income and wealth. That pace is determined not just by how quickly the pandemic is brought under control and restrictions lifted, but also by the persistence of any precautionary increase in saving even after the virus is controlled.
- > In the forecast, consumption rises towards target at a pace modestly faster than suggested by the “slow” response of consumption to “shocks” estimated over history. This reflects our judgement that the current recovery is particular to the easing of the pandemic.
- > However, we also assume that a shortfall of consumption persists for several years; that is, a precautionary increase in saving. The base forecast shows
- > GDP growth this year and next of 5.7% and 4.1%. With the slow return to normal, those growth rates drop to 5.3% and 3.0%, respectively. With the fast return to normal, they rise to 6.6% and 5.7%. The differences are wider in 2022 than 2021 because much of the impact of the alternative assumptions falls too late in 2021 to have its biggest impact this year. With some epidemiological projections now showing most of the US population vaccinated by the end of this year, these results suggest some upside risk to our base forecast.

**Dollar appreciation, easing of oil prices from current highs limit core inflation below 2% through mid-2023**

- > The all-urban consumer price index (CPI) rose 0.4% in February following a 0.3% increase in January. The price index for gasoline rose 6.4%, contributing to a 3.9% increase in the CPI for energy and accounting for over half of the rise in the overall CPI. The food index rose 0.2% while the core CPI, which excludes food and energy prices, rose 0.1%.
- > Outside of the energy, inflation remained subdued through February. The 12-month change in the CPI was 1.7%, while for the core CPI, it was 1.3%, little changed from a low point of 1.2% in May and June of 2020.
- > Over the last five months, the core CPI has risen at an average annualized rate of just 1.0%. Core inflation continues to be restrained by slowing increases in rents and declines in prices for apparel and medical care commodities.
- > Since the start of the pandemic, core inflation as measured in the CPI has declined by much more than core inflation within personal consumption expenditures (PCE). In 12-month changes, core CPI inflation fell 1.5 percentage points from February 2020 to February 2021. We estimate that core PCE inflation on the same basis fell just 0.3 percentage point over the same span, to 1.6%. One major cause of this is a larger impact on the CPI from the slowdown in rent inflation.
- > Labor market slack, reinforced by disinflationary effects of a modest dollar appreciation and an easing of oil prices from recent highs, will maintain core PCE inflation below 2% until 2023 when tightening labor markets will push inflation to 2%.
- > Under its new operating strategy, the Fed will encourage inflation moderately above 2% to reinforce that its 2% objective is an average, not a ceiling. Accordingly, the forecast shows core PCE inflation averaging 2.2% from 2024 through 2030.
- > Commodity prices are rebounding, driven higher by increasing demand and, in some industries, supply chain disruptions. So far, however, the result has been only to reverse the sharp widening of margins that occurred in the second quarter of last year.

**Fiscal stimulus, low borrowing costs, and robust business confidence to boost investment spending**

- > Fiscal stimulus is boosting the economy broadly and supporting investment spending generally. The passage of the American Rescue Plan will provide a lift to the overall economy that will feed back into the investment sector, encouraging businesses to invest in plants and equipment.
- > Orders and shipments of nondefense capital goods excluding aircraft have surged above their pre-pandemic trends, setting the stage for near-term strength in equipment spending.
- > Resumed deliveries of Boeing's 737 MAX line of aircraft is propping up fixed investment in the near term.
- > The pace of light vehicle sales slowed in February (to 15.7 million, annual rate). This is somewhat below the average since last fall. Consumer leases,

which are counted as investment spending in the National Accounts, have been robust in recent months. What has prevented a full recovery to pre-pandemic norms has been lagging fleet sales, a segment of the market that likely will not recover until the travel sector recovers.

- > The recovery in oil prices has led to rising drilling activity, which will give way to solid growth of investment in mining structures over the next few years.
- > Business fixed investment is expected to grow at annual rates averaging 6.3% in the first two quarters of 2021. After this year, business fixed investment slows to growth of 6.0% next year and 4.5% over the following two years.
- > Business confidence about future output will help to fuel growth of investment spending, as will historically low borrowing costs, easing bank lending standards, and improving attitudes about risk.

### **The US goods deficit is back on its pre-pandemic path**

- > The US goods deficit is back on its pre-pandemic path, one of widening total and non-petroleum deficits, and small petroleum surpluses (nominal dollars). In the early months of the pandemic, the total and nonpetroleum deficits contracted after imports collapsed more than exports. In January, the goods deficit widened by \$1.3 billion to \$85.4 billion, the second largest reading ever.
- > China has regained its position as the US's second leading trading partner, after the Eurozone.
- > Nominal goods imports—driven mostly by consumer goods and then capital goods—climbed to a record high in January. The remarkable gains in imports are partly explained by the pandemic: computers, medical equipment, and pharmaceuticals are soaring; motorcycles, toys, and stereo equipment—used to cope with the pandemic—have also surged.
- > Nominal goods exports have regained nearly all ground lost to the pandemic—goods exports in January were 0.7% below their year-ago value. Capital goods increased 3.9% January, but remain 6.8% below the 2020 January reading. Consumer exports, which dropped 3.8% in January, falling 2.5% behind its year-earlier value, are also struggling. Food exports have shot up recently and stand 25.2% above the year-ago reading.
- > We look for real exports and imports to continue growing over the coming quarters as the US and its trading partners ramp up production.
- > Net exports deduct 1.2 percentage points from growth this year on surging imports; in 2022, imports deduct and exports add offsetting amounts to GDP growth.
- > The firming of yields has halted the recent depreciation of the US dollar, which we now project to appreciate modestly rather than depreciate further before then recovering.

### **Declining infections and loosening restrictions raise prospects for robust employment gains**

- > Nonfarm payroll employment rose 379 thousand in February, surpassing expectations. Private payrolls expanded by more (465 thousand). The

unemployment rate declined 0.1 percentage point to 6.2%. After two largely dismal employment reports in December and January, the February employment report was a welcome moderate surprise to the upside.

- > Payrolls remain 9.5 million below the pre-pandemic peak reached February of last year. About three-quarters of this shortfall is in private service-sector employment. It will take further robust gains in aggregate demand and continued relaxation of restrictions on social and economic activity to pull employment back in line with the pre-pandemic trend.
- > Unusually harsh winter weather across much of the US had an impact on a few aspects of February's employment report. Employment in the construction sector fell by 61 thousand in February, the first decline in construction employment so far in the recovery. Also, the private workweek declined sharply in February, led by an outsized decline in the construction industry.
- > In the Household Survey, the unemployment rate declined 0.1 percentage point to 6.2%. This reflected a solid gain in civilian employment (208 thousand) that outpaced a 50 thousand increase in the civilian labor force.
- > Recent news provides ample reasons for cautious optimism: initial claims have generally declined since mid-January and as of 6 March stood at a 4-month low of 712 thousand, new daily COVID-19 infections have declined substantially since the beginning of the year, the vaccination campaign is accelerating, and another large round of fiscal stimulus was recently enacted. Combined, these factors provide hope for a robust and sustained recovery in labor markets over the remainder of the year.
- > We project that after gaining 7.2 and 1.8 million jobs in the third and the fourth quarters of 2020 respectively (on a quarterly average basis), payrolls will increase 0.4 million in the first quarter of 2021 before increasing by 2.0 million in the second quarter. The unemployment rate is expected to continue declining, reaching an average of 4.9% by the end of the year.

### **Stimulus gives incomes another boost**

- > According to BEA's second estimate, real disposable personal income (DPI) fell at a 10.0% annual rate in the fourth quarter of 2020 after a decline at a 17.4% rate in the third. These declines followed a 48.6% surge in the second quarter due to the CARES Act and left real disposable income still 3.2% above its level as of the fourth quarter of 2019.
- > Nominal wage and salary compensation of employees continues to gradually rise. After plunging a cumulative 10.3% (not annualized) from February through April, wage and salary disbursements posted nine monthly gains that left their twelve-month change at 1.1% in January. However, due to data revisions stemming from the Quarterly Census of Employment and Wages, this was a smaller positive twelve-month change than had previously been recorded for December.
- > In the version of the American Rescue Plan Act that was ultimately enacted, the enhanced unemployment benefit was reduced from \$400/week to \$300/week, but the first \$10,400 of benefits were exempted from 2020 income taxes.

- > Real DPI grew 5.8% in 2020. In large part due to the two major fiscal stimulus bills that have been passed since November, we estimate that real DPI will grow at annual rates of 23.7% and 26.9% in the first and second quarters of 2021. The second quarter's growth represents an 8.5-percentage point upward revision from last month's forecast. This results in a total (front-loaded) increase of 2.9% (year-over-year) in 2021, 0.4 percentage point higher than last month. Real DPI is then forecast to give back 1.9% in 2022.
- > The personal saving rate, which reached a historic 26.0% in the second quarter of 2020 before falling back to 13.4% in the fourth, is forecast to jump to 20.3% in the second quarter of 2021.
- >

**Between two stimulus bills, nearly \$3 trillion of pandemic relief has been enacted within three months**

- > On 11 March, President Biden enacted the \$1.9 trillion American Rescue Plan (ARP) Act. Including the recent Consolidated Appropriations Act (CAA), Congress has now approved nearly \$3 trillion of pandemic relief within three months.
- > ARP, which was modified only slightly in the Senate, includes \$1,400 stimulus checks, extension into September of emergency unemployment programs and benefits, temporary expansions of refundable tax credits, funding for COVID-19 mitigation, and financial support for state and local governments, the transportation sector, agriculture and nutrition programs, and renters.
- > The forecast reflects the full ARP, approximately \$400 billion more than we assumed last month. However, given slower spendouts, higher term yields, and a stronger dollar than previously assumed, we maintained our forecast of GDP growth this year at 5.7%. We estimate the combined effect of CCA and ARP will boost the level of GDP this year and next by approximately 2%.
- > Aid to state and local governments, both general and specifically purposed, is several times larger than in the CARES Act. Along with rapidly recovering tax revenues, this will prevent the usual post-recession state and local fiscal contraction.

**The global economy awaits liberation from COVID-19 pandemic**

- > In our latest forecast, real trade-weighted GDP for advanced foreign economies is forecast to grow 4.0% in 2021 after having contracted 5.8% in 2020. For emerging market economies, real GDP is forecast to grow 5.3% in 2021 after having fallen 4.4% in 2020.
- > We project that the value of the real trade-weighted broad dollar reached a cyclical high in the second quarter of 2020; we forecast that the real dollar appreciates in mid-2021 before again slipping gently from 2022-2024.
- > The JPMorgan Global Composite Output Index (compiled by IHS Markit) rose 0.9 percentage point to 53.2 in February, indicating rising output for the eighth straight month.
- > The COVID-19 pandemic continues to shape global and regional economic activity in 2021. A tightening of virus containment measures in late 2020 and early 2021 has stalled global real GDP growth in the first quarter.

- > Turning the corner: Since cresting in January, new COVID-19 virus infections have declined globally. Countries hit hardest by a winter wave of infections—including the United Kingdom, Spain, the United States, and Russia—are seeing remarkable improvements.

### Bottom line for the US economy

- > Real GDP is forecast to grow 5.7% in 2021 and 4.1% in 2022, unchanged from last month.
- > The forecast incorporates the Senate version of the \$1.9 trillion American Rescue Plan (ARP).
- > The recent Consolidated Appropriations Act (CAA) and the ARP Act boost the level of forecasted GDP by nearly 2% this year and next, but by waning amounts in subsequent years.
- > Real GDP surpasses its previous peak in the second quarter of 2021; the output gap is eliminated by mid-2022.
- > Core PCE inflation reaches 2% in late 2023.
- > We have not changed our Fed call. The conditions for Fed “lift-off” are still met by mid-2024.

#### Real GDP and its components

Percent change, annual rate	20Q3	20Q4	21Q1	21Q2	21Q3
Real GDP	33.4	4.1	4.9	7.0	6.8
Consumption	41.0	2.4	4.7	6.6	7.0
Residential investment	63.6	36.9	19.0	5.8	-3.9
Business fixed investment	22.9	14.0	7.5	5.0	8.7
Federal government	-6.2	-0.9	21.7	-9.5	-3.4
State & local government	-3.9	-1.2	0.8	19.0	2.4
Exports	59.6	21.8	6.7	7.9	7.4
Imports	93.1	29.6	11.5	9.5	8.4

Source: IHS Markit

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#### Key indicators

Percent change	2020	2021	2022	2023
Industrial production	-6.6	7.4	4.1	1.9
Payroll employment	-5.7	2.4	3.4	1.8
Consumer Price Index	1.2	2.2	1.5	2.0
Core CPI	1.7	1.7	1.9	2.1
Brent crude oil price (USD/barrel)	41.8	62.2	60.2	61.4
Federal funds rate (%)	0.38	0.08	0.09	0.10
10-year Treasury yield (%)	0.89	1.45	1.81	1.99

Source: IHS Markit

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## North Dakota State Economy

### **A slow recovery for North Dakota following shocks from the COVID-19 pandemic and oil-price drops**

- > In the fourth quarter of 2020, employment climbed by 2.6% (annualized). Although the last half of 2020 showed growth in employment, it was coming off of very low levels from the second quarter of 2020. Despite strong growth, employment remains 6.9% below the pre-pandemic 2020Q2 levels. Because of the huge drop, it will likely take more than a year to make up the deficit.
- > North Dakota began experiencing spikes in caseloads of COVID-19 over late June which remained on an upward trajectory through early November. On November 13<sup>th</sup>, the state issued a mask mandate and social distancing orders. The order coupled with the vaccine roll-out has brought down caseloads in North Dakota. With the exception of November and December, job growth has remained positive every month from May 2020 to January 2021.
- > Low oil prices stemming from the pandemic and declines oil demand plagued the economy in North Dakota in 2020. In the second quarter of 2020, the West Texas Intermediate (WTI) price had plunged to \$28/barrel. By the end of the year, prices firmed up to above \$42/barrel thanks to rebounding demand and lower production levels.
- > Driven by the broad vaccination campaign, the WTI is expected to have a faster recovery than in the previous forecast. By the end of 2021, the WTI will climb to over \$57/barrel. Although oil production in the Bakken will stay below pre-pandemic levels for some time, upstream activity will ramp up again as soon as it's profitable to drill.

### **North Dakota's economy will be driven by the performance of the US oil industry in the near term**

- > The global pandemic threw oil markets into a tailspin in 2020. From October through early November, rig counts in North Dakota fell to 10-11 rigs – half the amount as the worst week during the 2015-2016 correction. The fallout will remain over the next year or so as upstream companies reduce capital expenditure budgets.
- > The timing of the eventual recovery will depend on several factors, including the pace of the vaccine rollout. The recession was a short one but was deep, and a full recovery hinges on when COVID-19 can be reliably managed and oil demand returns.
- > Looking further ahead, North Dakota's economy will trail the US on the whole. Employment in the state will climb an average 1.2% annually through 2025 compared with 1.9% for the United States.
- > The oil downturn will slow the initial COVID-19 recovery and thus weigh down average growth in the period. Indeed, it has been a roller-coaster ride of sorts for the North Dakota economy, with high-flying growth during 2010–14, then a steep plunge in 2015–16, followed by a gradual climb back up until the economy hit another wall in 2020.

### **The energy industry is a double-edged sword for North Dakota's economy**

- > Despite low oil prices we remain optimistic about the longer-term prospects for North Dakota's energy industry. It was a very challenging time over 2015–17

- and additionally will be in 2020–21. But the Bakken will remain a viable play, albeit not at the heights of the Permian, once oil prices recover.
- > The western part of the state remains heavily dependent on the Bakken formation and the oil industry. However, the metros in the eastern part of the state do not have huge dependence on the oil industry and have made strides in diversifying their economies over the years.
  - > Besides the in-migration related to the energy boom, the state has had trouble attracting new residents. This limits population growth and dampens overall economic potential.
  - > The state is quite vulnerable to boom and bust cycles now that it is such a large energy producer. Employment in the state was the second-fastest growing in the country during 2014 but fell to dead last in 2015 and remained among the bottom in 2016 and 2017. The economic growth spurred by the energy industry can be dramatic but so can the declines.

### **Labor force and demographics**

- > In 2018, North Dakota was the 47th-largest state by population. The state's total population increased by 0.6%, to 760,000. This is well below the 2.0%-plus average seen during 2011–15 when the state was one of the fastest growing in the nation. The mass immigration sparked by the oil industry was the main driver behind the outsized population growth, and there was payback as oil field workers left the state. Population growth will pick up in the coming years along with upstream energy activity, but it will not get back to the 2011–15 boom years.
- > One trend that has not changed is the declining share of the state's population living in rural areas. North Dakota had been losing rural population steadily since 1984, with rural residents' share of the total population decreasing from 66% in 1975 to 56% in 2000. Most of this decline was during the 1980s farm crisis, when both rural and metropolitan areas saw residents relocate to other states. More recent data from the decennial census show that in 2010 this share fell further, to 52%. Although this population decline has recently decelerated, due largely to the influx of people to rural northwestern North Dakota for the Bakken shale play, it is still under way because of ongoing migration from rural areas to the state's metropolitan areas such as Fargo and Bismarck.
- > North Dakota boasts a well-educated work force: its educational system has one of the nation's highest percentage (93%) of ninth-graders who go on to graduate from high school; the national average is 88%. In addition, the state has a significantly higher proportion of population possessing at least an associate's degree, which stood at 44% in 2017, in comparison to the national average of 41%.

### **Economic structure**

- > North Dakota has one of the smallest concentrations of industrial jobs in the country. In all, manufacturing firms make up just 6% of nonfarm employment, versus the national average of 9%. Industrial activity is driven by a few segments: agricultural and construction machinery; food products; printing and publishing; transportation equipment; fabricated metals; and stone, clay, and glass.

- > Agriculture has a large influence on the state's manufacturing economy, affecting local agricultural machinery manufacturers, as well as transportation providers. Major local manufacturers include Melroe/Ingersoll Rand, Imation, Marvin Windows, and American Crystal Sugar.
- > The most notable economic change is the recent explosion of growth in the energy sector due to the Bakken shale. While the mining and natural resources sector still accounts for only 5.0% of North Dakota's total nonfarm employment, this is up from just 1% 10 years ago. Although the Bakken shale region has experienced quite a boom since the mid-2000s, the low-oil-price environment that emerged in late 2014 and has continued through 2015 and 2016 has led to a dramatic decline in upstream energy activity although the longer-term prospects remain relatively bright for the Bakken play.
- > Fargo generates almost one-third of both jobs and gross state product. The metro area serves as a center for farm-related trade, distribution, and manufacturing, and has a large service sector that is highly concentrated in the healthcare and other knowledge-based industries. Fargo's low-cost structure makes it ideal for the back-office operations of many financial services firms, including Wells Fargo.

### III. Special Industries

#### Oil

North Dakota's oil production sectors have grown significantly in their importance to the state's economy over the past 12 years. As state legislation has been updated to better reflect this industry's importance and improve capture of related revenue streams in royalties from extraction and production, accuracy of future oil and gas activities is essential for stable budget projections. Indeed, the capital expenditures for drilling and completing new wells are a key input for IHS Markit's tax revenue forecast model.

IHS Markit maintains a forecast of global oil prices and production, and updates models each month, and releases a formal production forecast each quarter, to stay abreast of changes among operators and within the industry. Within the US, oil and gas are forecasted by major producing plays, including the Bakken/Three Forks Shale play. IHS Markit's forecasts are coordinated across multiple departments and include the following:

- The commerciality of each US play as reflected in its cost of supply
- The incentive and ability of producers to develop resources within these plays
- Historical and current activity in each play, such as rig counts and reported production volumes
- Global energy outlook and projections for energy demand
- Activities of oil producing countries, including OPEC+ (herein defined as OPEC and Russia)
- The role of alternative energy sources such as natural gas and renewables
- Worldwide events and conditions that can impact the global energy demand, such as COVID-19 and the subsequent recovery in the economy and global demand increases
- Refining and marketing

In conjunction with the oil and gas forecast, a supply-demand balance is formulated, and a price outlook is generated.

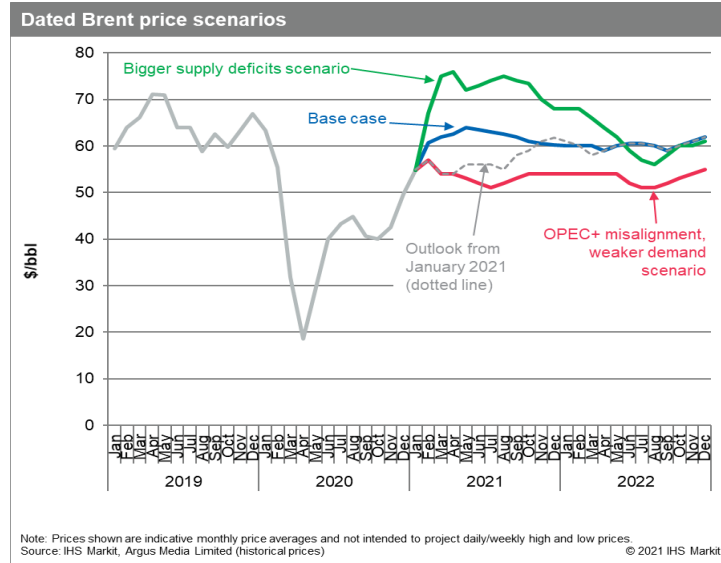
#### **Global Oil Market Fundamentals:**

Global oil markets have improved, setting the stage for a slow improvement in commodity prices. Factors contributing to a short-term improvement since the March-April 2020 oil market crash include:

- A recovery in oil prices based on improved market fundamentals and massive economic and financial support from monetary authorities in the United States, Europe, Japan, and mainland China, and
- Record production cuts by Saudi Arabia of up to 4.5 MMbbls/d and its OPEC+ partners, along with drilling curtailment and production shut-ins in North America and elsewhere, which have also played a pivotal role in accelerating the rebalancing of markets.

As of March 2020, we estimate that global liquids demand has reached about 93% of the level of a year ago, led by recoveries in Mainland China, the United States, and

Europe. While there is more clarity about what will define the path of the world economy and the oil market in the latter half of 2021, much uncertainty still remains about the future direction of oil prices and world oil demand. This uncertainty is driven by the degree to which COVID-19 is contained or not. OPEC+ decisions to continue production cuts, business and tourist travel, and other variables will be shaped by this one overarching factor, which means that until COVID-19 is contained (which includes a sustained decline in new cases and/or when whole populations are vaccinated), the oil market recovery will be fragile and vulnerable to reversals.



**Figure 3-1: supply and demand surpluses and deficits**

Figure 3-1 illustrates the range in short-term oil price recovery driven by the uncertainty in how COVID-19 is likely to play out in the months ahead. IHS notes, however, that the overall short-term outlook in prices has improved considerably since December. Inventory drawdowns, increased demand and a brighter prognosis regarding COVID-19, have elevated our base case outlook. Currently WTI oil prices are in the low \$60 range and are expected to continue for the first half of the year. The high case reflects possible short-term inability to meet demand, due to the massive decrease in spending during 2020, which situation is likely to be corrected during the following year. The low-price outlook suggests a \$50 floor which OPEC+ is likely to maintain going forward.

Recent announced cuts of 1 million bbls/day by Saudi Arabia have provided a recent boost to prices with announced cuts projected to continue through May of this year; however, future cuts by Saudi Arabia may be eased in the future as prices continue to strengthen. Currently they are holding ~4.5 MMbbls/day off the market which when added back-in could substantially affect the price outlook.

Current price gains should be able to be sustained, but future OPEC+ supply will likely limit the momentum and keep the price in the \$60 to \$65 range in 2021 with slight decreases in 2022. West Texas Intermediate (WTI) will average about \$2.50 to \$3.00 lower. Other factors that are likely to put downward pressure on prices include the possibility that OPEC+ unity would begin to fray at prices above \$60/bbl, as well as continued high inventory and spare capacity levels.

### Long-Term Oil WTI and Bakken Price Forecast

While the ongoing crude supply recovery is mixed for North America, we expect that abundant worldwide supply and anemic demand growth will keep oil prices in the \$55-60 realm (constant dollar – no inflation) through 2030 and beyond (see Figure 3-2). The nominal price increases reflect a long-term inflation rate of 2.5%. This WTI pricing

projection reflects a barrel netted back to Cushing. The long term WTI pricing complex (Houston, Cushing, and Midland) will remain at an export discount of about \$2-3/bbl relative to Dated Brent.

Due to the historical transport constraints, Bakken/Clearbrook price differentials to WTI have been priced negative, however, due to the plentiful take-away capacity\* to the Midwest and Gulf Coast refining markets, and projected improvement in gas and water management, Bakken/WTI differentials are forecasted to be slightly higher in the future.

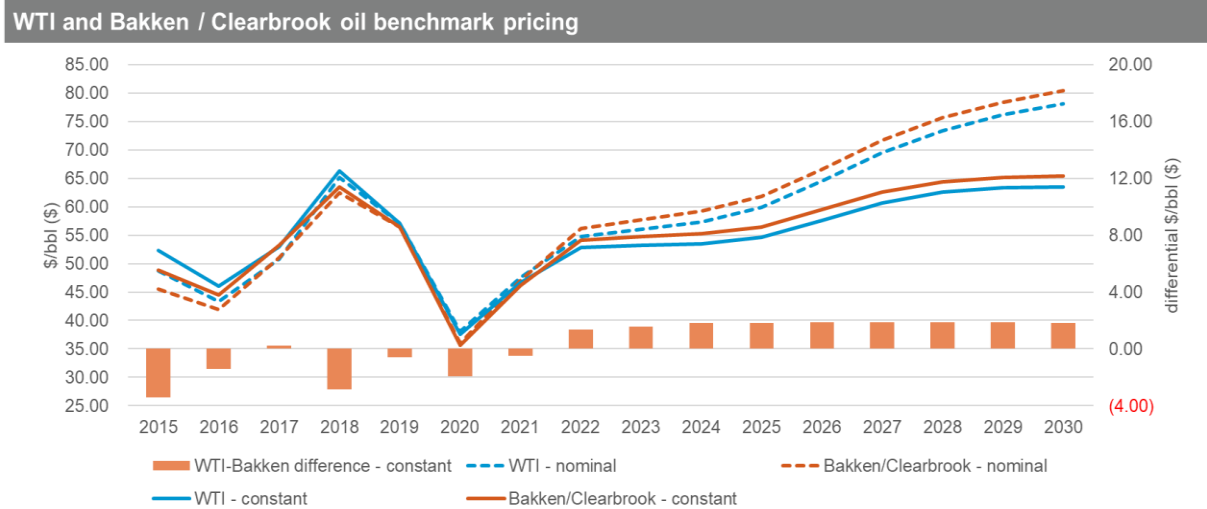


Figure 3-2 long term WTI and Bakken oil price forecasts

\*These assumptions assume that transport via Dakota Access pipeline (DAPL) will continue relatively uninterrupted; however, should interruption occur, a significant negative differential will occur during shutdown (see discussion at the end of this section)

### US Base Case Drilling and Production Forecast

In May 2020, US crude production bottomed out at 9.8 MMbbl/day and has increased over since that time, primarily due to shut-in volumes being reactivated. However, 2020 saw a year over year drop of nearly 1.5 MMbbls/day. During that same period, oil prices stabilized at the low \$40/bbl level, triggering the restart of well completions, which were halted in May and early June. Over the next two years, production is expected to grow only slightly as production from new wells is expected to largely replace declining production.

In addition to a lower oil price forecast, operators are likely to spend less on drilling in the years ahead. North American liquids-focused operators reduced their 2020 budgets by nearly 50%, and future spending decisions will dictate US supply trends through 2021. Before the price collapse, capital budget trimming was

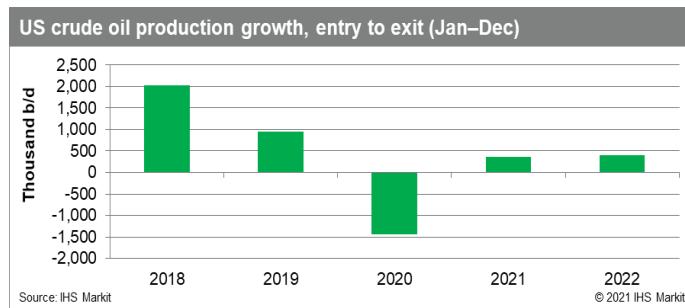


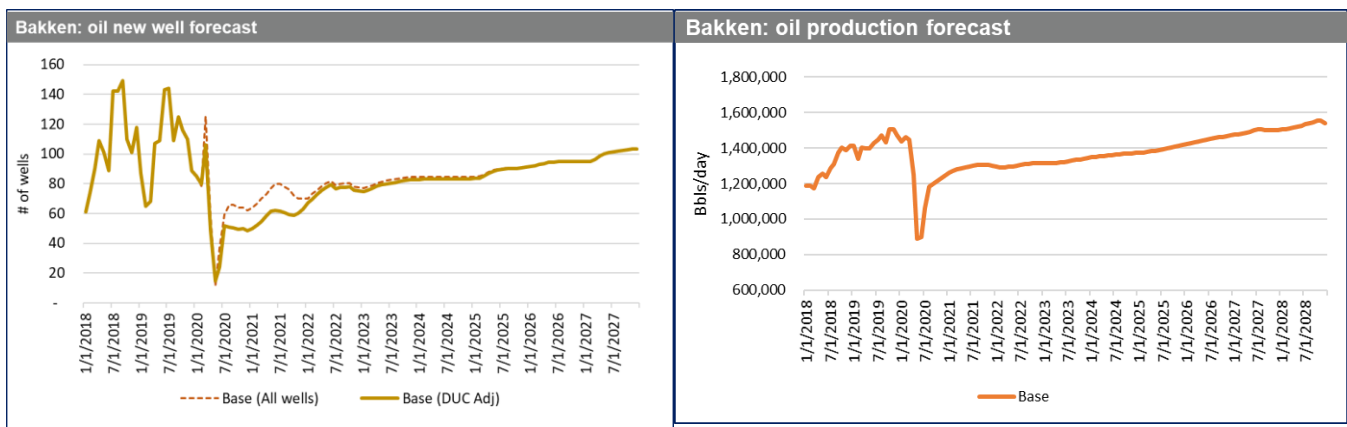
Figure 3-3: US production decline and growth

already underway as producers were being forced by the investment community to spend within their means, and access to borrowing capital had greatly diminished. The decrease in cash flows brought on by lower commodity prices greatly exacerbated this spending reduction trend, which will likely continue even when prices recover to the mid-\$60/bbl level. We anticipate that through 2021, operator caution will keep investment levels above 2020, but well below that of 2019.

Current production cuts reflect the overall pessimism in the global energy demand as longer-term price projections have also been reduced. Likewise, the US production and drilling forecasts have decreased from what they were at the beginning of 2020 due to the sudden drop in drilling and production and lowered expectations of future cash-flow to be generated by upstream assets. The more recent long-term US forecast suggests that while the commercial below ground resources remain abundant, it will require more years of drilling at a slower rate to produce them.

### Bakken Forecast

The shorter-term Bakken drilling and production history and forecast reflects the overall situation in the US, where a sudden drop in drilling activities in March-May 2020 was followed by a modest activity gain into 2021. The number of wells completed dropped from approximately 100-120 per month in January-March to less than 20 in May. Base case wells, while currently at the mid 60 per month range, (including DUCs) will increase modestly throughout the year fueled largely by DUC (drilled uncompleted) wells. The longer-term outlook calls for approximately 80 to 100 monthly well completions, which will help maintain production in the 1.2 to 1.5 MMbbl/day range in the Base scenario (figure 3-4).



**Figure 3-4 Comparison of February 2020 and current drilling and production forecasts**

Recent production history reflects (1) wells being shut in and then reactivated and (2) a significant decrease in new well completions. The rapid recovery of July through September is attributable to shut-in wells being reactivated, whereas, the future outlook will depend on the number of new well completions.

Due to steep initial decline rates, new well completions must occur at a rapid rate just to maintain current production rates. In some years, well completion rates may exceed declines resulting in slightly increased production levels, whereas a decrease in well completion rates, such as occurred this past year, results in notable production

decreases. The Bakken trend requires about 65-70 monthly well completions to maintain production rates of about 1.2 MMbbl/day; hence the sudden decrease in well completions was partially responsible for the drop of about 200 Mbbl/day to the current rate of about 1.25 MMbbls/day.

Determining the number of recent historical well completions can be challenging, given reporting lags, multiple sources, and the contribution of DUC wells. IHS monthly totals for late 2020 are higher than that indicated by the North Dakota Directors' Cut (figure 3-5); nevertheless, both suggest a large contribution of DUC wells. In 2020 we estimate that ~367 (44%) of the ~840 new wells brought on-line during the year were DUC wells.

IHS Markit projects that in the base case, about 44% of new well completions from 2021 through 2022 will be DUC wells. By that time the DUC inventory of 668 at the end of 2020 will be exhausted. Since a DUC well only requires about 65% of the capital that a completely drilled and uncompleted well requires, operators are likely to rely on this inventory to maintain production levels until DUC exhaustion is reached. This reduced contribution of the DUC inventory is built into future revenue projections.

As mentioned previously, the surge in production during the July-September time frame is due to shut-in wells coming back on-line. Back in April-May 2020, well shut-ins of nearly 500,000 bbls/day, spanning from a severe shortage of storage capacity and market access, were a major contributor to the sudden production drop in Bakken production. Even with low rig counts of 14-15 seen during the latter half of 2020, the current surge in production is due to most of the shut-in wells being reactivated. In December 2020, there were 15,798 actively producing wells in Bakken, which is ~97% of the number of wells producing in March.

### Bakken Resources

The Bakken/Three Forks could begin to face well inventory exhaustion of core areas within the next decade, although the projected slowdown in drilling activity largely allays some of these short-term concerns. The current outlook is likely to push the time frame of inventory exhaustion back several years. Nevertheless, available drilling inventory is likely to emerge as a pressing concern over the longer term and has to be integrated into the forecast.

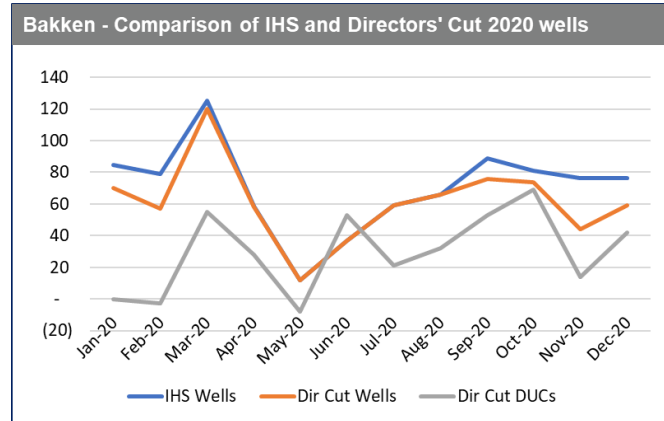


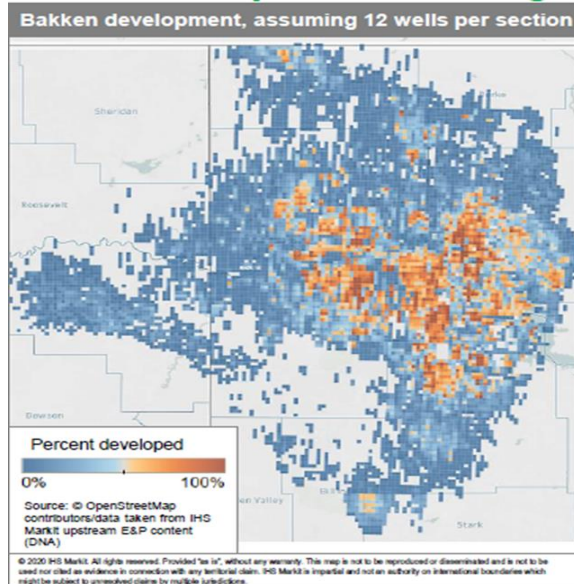
Figure 3-5: New wells coming on stream in 2020

Figure 3-6, which provides a view of the entire Bakken play, shows that core areas have been heavily drilled and some acreage has been completely drilled out.

To date, a total of about 15,835 wells have been drilled in the play. While IHS Markit estimates that there are potentially 55,000 – 60,000 remaining locations, many are not commercial. Current breakeven prices (WTI- \$/bbl) for quintiles of currently producing wells help us determine where and how much drilling will occur at given forecasted prices and are listed below:

- Quintile 1 - \$35.88 – 1440 locations
- Quintile 2 - \$45.20 – 4726 locations
- Quintile 3 - \$55.92 – 7745 locations
- Quintile 4 - \$62.84 – many locations
- Quintile 5 – \$80.56 – many locations

While we are keeping an eye on possible sweet spot exhaustion, our analysis indicates that there are still sufficient numbers of Quintile 1 to Quintile 3 remaining locations (which breakeven at or below forecasted prices) to contribute to our forecast through 2027.



**Figure 3-6 Bakken well development, including core areas**

### Alternative Price Forecasts Underlying Low-Base-High Drilling and Production Forecasts

Uncertainty regarding the recovery from the COVID-19 pandemic and the disposition of Saudi Arabia's 4.5 MMbbls/day of shut-in production contribute to a broad range of short-term price forecasts. For the Base case, IHS Markit assumes that effective COVID-19 vaccines are available in mid-2021, which will stimulate an economic recovery through 2021 with global economic growth averaging 5.0% in 2021 and 4.2% in 2022. As economic activity improves, oil demand will also recover gradually. With this in mind, the most recent short-term price forecast anticipates that

- Global oil demand, at 93–94 MMb/d in fourth quarter 2020 and first quarter 2021, will grow by 5 MMb/d by third quarter 2021, driven by a broad vaccination campaign.
- After production cuts through May of 2021, Saudi Arabia raises output along with other OPEC+ producers during the rest of 2021.
- US crude oil production grows 0.3 MMb/d between the first and fourth quarters of 2021 and 2022 each—far less than the 1.0 MMb/d growth during the same period of 2019.
- While US operator will be returning more cashflow to operators, upstream capex in 2021 is down only 33% compared with that in 2019

- Demand gets to pre-pandemic levels only by end-2022
- The easing of sanctions under US President Biden results in Iranian production rising to 2.7 MMbbl/d in 3<sup>rd</sup> qtr. 2021 and further to 3.4 MMbbl/d in 4th qtr. 2022

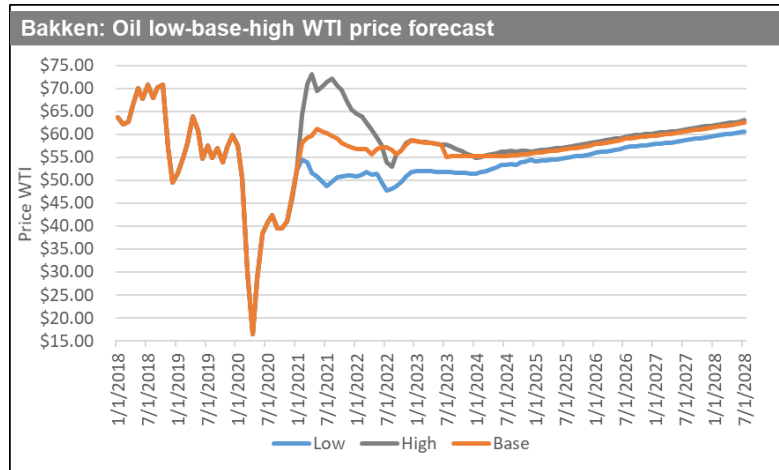


Figure 3-7: Price forecasts based on recovery from COVID 19

A higher price outlook is contingent on a faster than anticipated recovery from COVID-19, which will result in stronger demand growth and bigger supply deficits in late 2021 and early 2022. Enthusiasm related to hopeful vaccines and rapid declines in new COVID 19 cases are likely to lead to business and international travel recovering faster than expected in 2021. Higher prices will result from temporary shortages in 2021, but thereafter price will drift downward and converge with the base price forecast as the market supply adjusts.

Weaker demand will drive the lower price outlook which would result from COVID-19 cases remaining high throughout 2020 and into 2021. Nevertheless, this case also reflects the reluctance of OPEC+ to drive prices lower in order to retain market share. In effect they are likely to maintain a \$50/bbl price floor or greater over the longer term. Once the world gets past the pandemic, we expect that prices will slowly rise converging with the base case in 2024 (figure 3-9 and table 3-2).

Year	Low Price	Base Price	High Price
2020	\$ 36.37	\$ 36.37	\$ 36.29
2021	\$ 51.23	\$ 58.59	\$ 68.08
2022	\$ 50.25	\$ 56.88	\$ 58.72
2023	\$ 51.79	\$ 56.67	\$ 57.39
2024	\$ 53.05	\$ 55.42	\$ 55.92
2025	\$ 54.81	\$ 56.71	\$ 57.19
2026	\$ 56.93	\$ 58.84	\$ 59.31
2027	\$ 58.64	\$ 60.54	\$ 61.01
2028	\$ 60.52	\$ 62.42	\$ 62.90

Table 3-1: Average annual WTI price forecast

**Low-Base-High New Well Forecast**

Alternate forecasts of new well completions are based on (1) the low, base and high price forecasts, (2) the amount of available cash flow being spent on capital expenditures, (3) the availability of quality locations in the Bakken/Three Forks drive and (4) possible shut-down of DAPL.

Figure 3-8 compares percentage of cash flow that operators are likely to spend on capital expenditures for drilling and completing new wells. These percentages are similar for each of the cases and consider that operators will return a significant portion of the cash flow back to investors. For example, in late 2020 through 2022, operators will use only about 50%of cash flow for capital investment, which will rise to an

average of about 60% over the longer term. This amount is lower than what we have seen historically. The spike in March and April is attributable to much lower cash flows due to the price collapse, and while fewer wells were drilled during that time, the capital expense still exceeded cashflow.

As mentioned previously, breakeven prices for remaining locations are also an important driver of incentive to drill and complete wells. There are more than Quintile 1 and 2 remaining locations that breakeven below \$46/bbl, with an additional 7745 Quintile 3 locations that breakeven at under \$56/bbl.

Breakeven prices suggest that when the oil price reaches the high \$50's/ bbl, almost 14,000 wells (Quintile 1 – 3) become economic and higher levels of activity will occur. While contributions from all three quintiles will be required to fulfill the forecast, the total wells for all three forecasts, are well within this range. The high case total through 2027 is about 9000 wells,

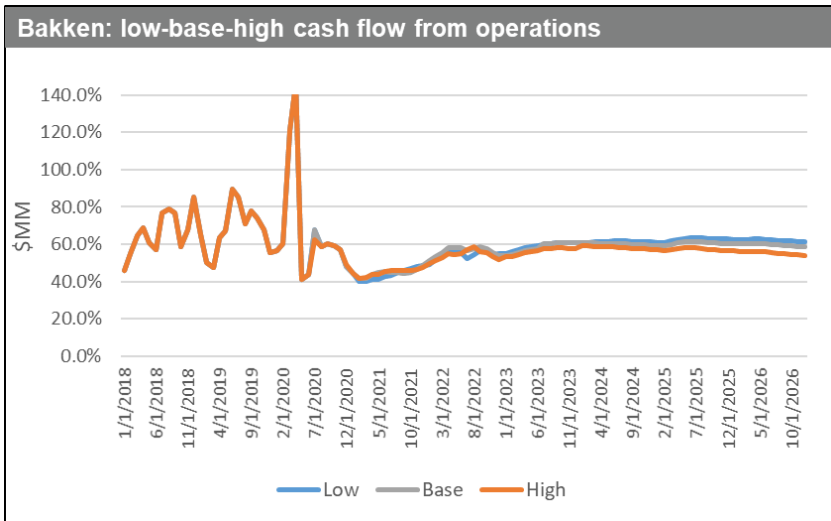


Figure 3-8: comparison of percent of cash flow used for Capex

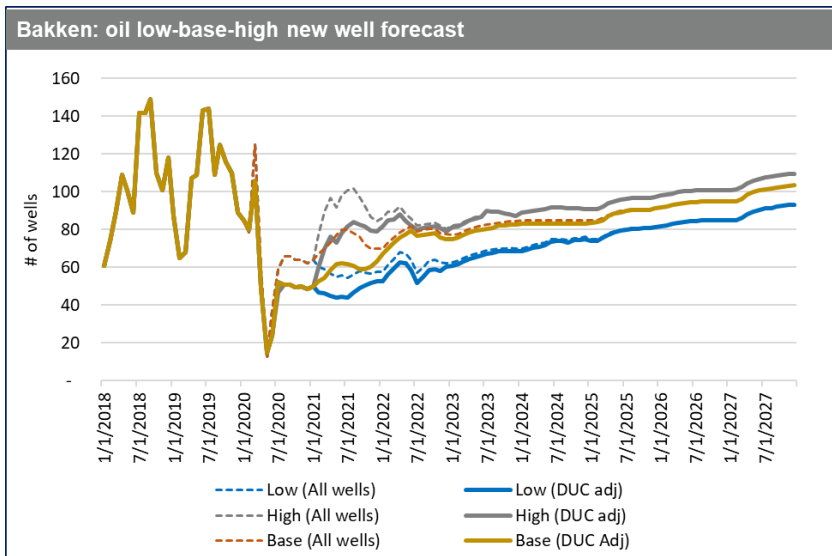


Figure 3-9: Drilling forecast for low-base-high cases

Figure 3-9 displays the forecast of number of wells completed each month through 2027. Increases in new well completions are a direct response to prices increasing to the \$60+/bbl range. For example, when responding to a higher price forecast there is an increase in new wells to around 80 by mid-2021. Table 3-2 provides annual well totals for each forecast case.

Another factor that could influence the drilling forecast toward the lower outlook would be the shut down of the DAPL as more oil would have to be transported by rail, which in effect would lower the realized price outlook (see detailed discussion at the end of this section).

Capital expenditures for the low-base-high new well forecast cases underlay tax model forecast cases. This well completion forecast includes all wells that are put into production including approximately 668 DUC wells. In general, the amount of capital expenditure attributable to drilling and completion is approximately 30% for drilling, 65% for completion (fracking) and 5% for facilities and artificial lift. In order to better reflect capital expense, the well counts which are used in the tax models have been adjusted (DUC adj) by using the formula:

$$new\ drills \times 1 + DUCs \times 0.65 = DUC\ adj$$

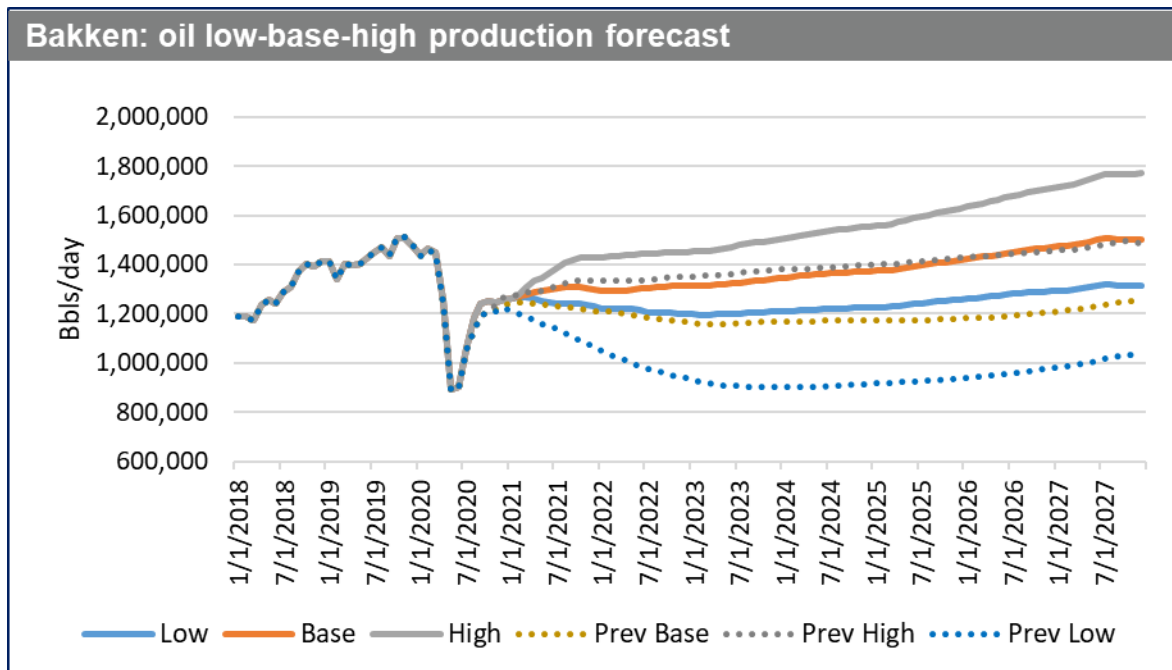
To further clarify Figure 3-11, the total number of wells, including DUCs is shown with a dotted line for each case, and the adjustment in well counts indicated by reducing the DUC portion of the forecast is indicated by the solid lines.

Year	Low Price	Base Price	High Price
2020	660	660	660
2021	570	703	895
2022	693	903	990
2023	792	956	1,035
2024	869	997	1,089
2025	942	1,060	1,140
2026	1,007	1,128	1,201
2027	1,078	1,201	1,274

### Low-base-high production forecasts

**Table 3-2: Total number of wells (DUC adj.) completed annually**

For the high case, oil production in the Bakken/Three Forks is forecast to begin increasing rapidly in 2021 and then increase more gradually reaching pre-pandemic levels of 1.4 MMbbl/day by 2024. The base case will begin to recover more slowly and reach the pre-pandemic levels by 2026. The base forecast will follow a similar track as the high case, albeit at a rate of about 150-200 Mbbl/day lower. The low case predicts a slight decline in production until 2023, when it bottoms out around 1200 Mbbl/day and gradually increases thereafter (see Figure 3-10).



**Figure 3-10: Production forecast for low-base-high cases**

The substantial increase in all three price outlooks has had a large increase in the drilling and production outlooks with production commensurate increased outlooks for

all three cases. This again, clearly demonstrates the effect of prices on both the economics of drilling and the cash flow available for increased drilling and completion. Historically 95 to 100 wells were required to be completed each month to increase and maintain production at 1.4 to 1.5 MMbbls/day. To maintain constant at specific production levels, it will require the number of well completions listed as follows:

- Low case: 65 – 75 wells to maintain 1.2 – 1.3 MMbbls/day
- Base case: 75 – 85 wells to maintain 1.3 – 1.4 MMbbls/day
- High Case: 95-100 wells to maintain 1.4 – 1.5 MMbbs/day

### Changes in the price forecast and drilling forecast since September

Figure 3-13 provides insight into how the price and drilling forecasts change since we presented this outlook in January 2021. At that time, we had predicted lower price outlooks and lower well forecasts. Recent increases in WTI have infused optimism into the markets to the point that prices are now at pre-pandemic levels. Continued production cuts by Saudi Arabia and an optimistic outlook at COVID-19 recovery have also influenced upward revisions in all three cases. Previously, we forecasted that prices would increase gradually through 2021; however, current WTI prices are now above those late 2021 price points and expected to be maintained throughout the year.

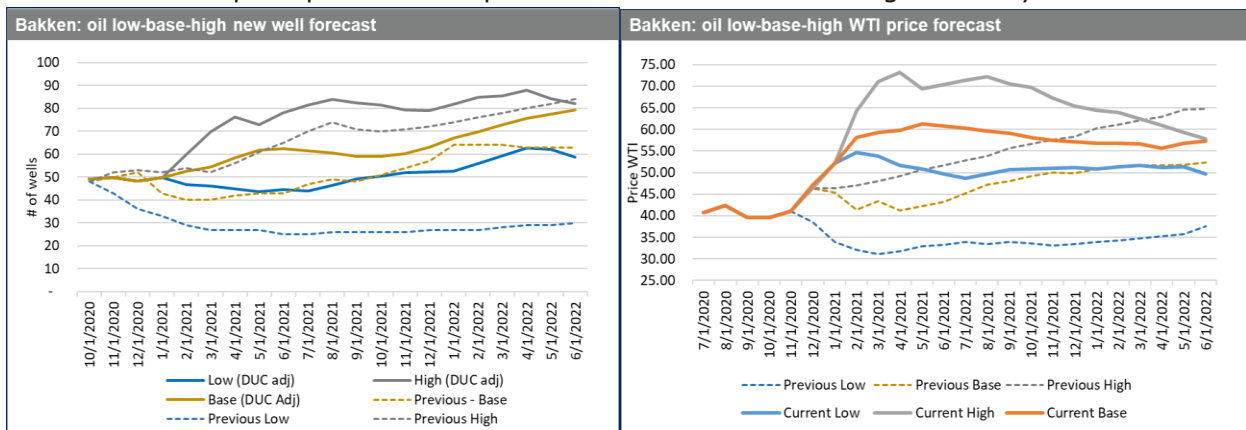


Figure 3-11 Comparison of previous 2020 and current WTI and drilling forecasts

COVID-19 and increase in the latter half of the year.

Adjustments to the base drilling and completion forecast also coincide with these similar modifications in the base case price forecast, with an expected systemic recovery in new wells to begin immediately. Likewise, the price outlook increases between the high and low-price forecasts is also reflected in the increased range between the high and low new well forecasts.

### The Dakota Access Pipeline

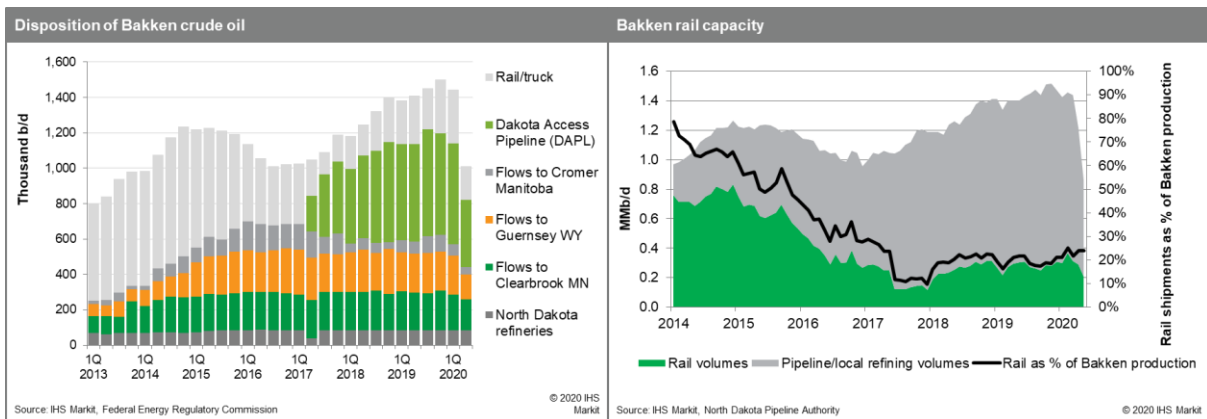
IHS Markit’s price, drilling, and production forecasts are built around an assumption that the Dakota Access Pipeline (DAPL) will remain open for oil takeaway to midwestern markets. Today, the DAPL provides the biggest outlet for Bakken crude, and the loss of its 570,000 bbls/day takeaway capacity would put downward pressure on production. On 6 July, US federal judge ordered to shut down the DAPL within 30 days, as the court

had earlier ordered a new environmental review of the project. In August 2020, Energy Transfer, the operator, obtained a temporary stay on the shutdown order while the case is being appealed.

Unfortunately, On January 26, the DAPL lost a key court appeal, which greatly increased the risk that the pipeline might be shut-down, at least for a period of time, until the Army Corps of Engineers provided a more complete environmental impact assessment of the Missouri River crossing easement. Currently this federal easement is technically “null and void” and the Biden Administration could elect to shut down the pipeline for this cause. Furthermore, there are also pending court cases filed by the Native American tribes that could also cause possible future shutdowns.

The DAPL has been running near capacity, transporting more than a third of all Bakken production. Most other pipelines out of the region are smaller and have also been running at high utilization. Some of the DAPL barrels may shift to these pipeline systems moving crude through the Rockies; however, the remaining oil would move by rail if the DAPL is shut down by court in 2021 (see Figure 3-12). Bakken producers would likely have to accept lower wellhead prices for their crude in order to cover the higher transportation cost of moving more crude by rail.

Bakken output is down more than 250,000 bbls/day from its peak of 1.5 MMbbls/day as producers have been bringing shut in wells back on stream. An adverse DAPL decision could motivate producers to delay drilling, although over the longer term, legal issues are likely to be resolved. IHS Markit currently projects a positive differential of \$1-\$2 of Bakken-Clearbrook to WTI based on our view that the DAPL will stay open; however, if the closing of the pipeline persists, some Bakken crude is likely to be penalized by up to \$9/bbl for rail transport. While it is difficult to project the outcome, we could see as



**Figure 3-14: Bakken/Three Forks pipeline takeaway capacity and rail capacity**

much as 50-60% of Bakken oil transport by rail, which may raise WTI differentials to pre-DAPL levels of \$5-\$8 dollars. This rise could in-effect, could shift our base case drilling forecast toward the low case outlook.

**Other matters**

New Biden Administration Restrictions on Federal Lands: Some increased federal restrictions such as fracking bans, slow walking permits and increased environmental regulations are likely to occur due to the change in administration. While many of these will be challenged in court, this is nevertheless a matter of concern. Although there are

virtually no BLM lands within North Dakota's Bakken trend, a portion of the core area is occupied by the Fort Berthold Indian Reservation. Historically the Bureau of Indian Affairs (BIA) works with the BLM in managing these lands which include resource evaluation, approval of drilling permits, mining and reclamation, production plans, mineral appraisals, inspection and enforcement, and production verification.

Normally lands managed by BIA and the BLM would incur similar restrictions since these agencies work in cooperation. However, indications are that lands managed by the BIA, including the Fort Bertrand Indian Reservation, would be an exception to recent permitting and leasing restrictions imposed by the Biden administration. IN other words, IHS believes that for the time being, operations will continue "business as usual" for the time being on the Fort Bertrand Indian Reservation.

Access to waters of the US (WATUS): Concern has been raised about access to water for fracking. While overall water use for fracking is small compared to many other industrial and agricultural uses, concerns about expanding the definition and limitation of water use could nevertheless impact the water source for fracking if a hostile administration chose to do so. IHS Markit view is that Changes to the definition of "Waters of the US" under the Clean Water Act and related regulations are likely to clarify and expand the definition of water bodies under federal jurisdiction and require oil companies and farmers to obtain permits for water discharge from point sources. Water use permits will not be impacted and will continue to be issued by the North Dakota State Water Commission.

## Agriculture

IHS Markit's recent US acreage forecast indicated that market prices, at levels not seen in several years, would incentivize US producer this year to plant fence row to fence row, figuratively speaking. Corn plantings will rise to 94.2 million acres, soybeans at 90.1 million acres, all wheat at 45.3 million acres, rice at 2.83 million acres, cotton at 11.5 million acres, and sorghum at 7.2 million acres. Including all other minor crops, total US plantings in 2021/22 will jump from 310.4 million acres to 322.2 million acres. The last time area mimicked this was in 2014/15 when total plantings settled at 326.9 million acres.

Costs for the US crop producer had been on a downward trend as grain and oilseed prices retraced to levels not seen since pre-2012 along with global raw material costs such as energy, which retraced levels deemed impossible during the 2008 bull run. Furthermore, the US producer has been gifted with record low interest rates and for the most part trend line production. Over the years this has been beneficial for balance sheet values as low interest rates and government stimulus, since the initial round of MFP payment was sent out, have been bid right back into land values and supported the continuation of farming practices in 2022. The US farmer has received large amounts of stimulus, has seen a rise in crop prices, and is slated to receive more stimulus in 2021 of \$13 billion. All levels of the crop input sector will benefit from this. Equipment sales have been stronger and fertilizer prices are on the rise. Costs of production are expected to rise in 2021 for all crops in our forecast driven by most categories less fuel lube and electricity. In the case of corn and soybeans, our forecast shows a healthy crop size in 2021 that will help to drive down commodity price in the 2021/22 marketing year. However, we do not expect costs to fall quickly in 2022, as in the past these cost increases stick around for a few more seasons.

The first-quarter livestock forecast for 2021 shows expectations for relative price stability relative to the massive swings in supply and demand during the initial COVID-19 impacts of 2020. However, despite the anticipation for ultimate price stability this year, a number of risks still remain for both supply and demand. Although production continues to hold firm overall, with plants projected to sustain and improve capacity as time passes, sudden disruptive shutdowns remain a possibility.

Domestic demand fluctuations have occurred owing to the influences of lockdowns and quarantines, reducing food service. Even with attention focused on recovery through vaccines and policies, expectations of rising demand remain out of focus. With the timing and magnitude of rebounding consumption still unclear, a slow or sudden shift could mean respective price swings for livestock, similar to the ones that occurred in 2020, although to a less drastic degree.

### **US farm income**

Net farm income has been revised higher to \$120.6 billion in 2020 and revised higher to \$104.5 billion in 2021. The bullish price move in grain and oilseed prices has led to this increase. As a result of our higher price path in the short term, ARC and PLC farm bill payments have been reduced.

US Net Farm income jumped 28% in 2020 and was the 4<sup>th</sup> consecutive year of increases and the highest level since 2013. However, that sharp jump in income was the result of

higher prices and record government payments due to supplemental and ad hoc disaster assistance for COVID-19 relief. Government payments to farmers in 2020 were a record \$46.5 billion or 34% of net farm income or double the share in a normal year. Government payments are expected to drop off sharply in 2021 and then stay relatively flat through the forecast period. This means net farm income will drop off to more historical levels in the forecast period.

US total cash receipts were at \$375.7 billion in 2020, up slightly from 2019 as higher crop receipts offset a decline in livestock receipts. Higher crop receipts for soybeans and fruit and nuts in 2020 more than offset lower receipts for corn and cotton. However, from 2021 to 2025 total marketing receipts are expected to increase primarily because of likely stronger growth in livestock receipts.

On the positive side, farm cash expenses are expected to remain relatively flat from 2021 to 2024.

US Cash Receipts, Government Payments, Net Cash & Farm Income and Cash Expenses(Billion \$)										
Item	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F
Total Cash Receipts	377.4	358.5	370.4	371.4	369.7	375.7	395.8	399.1	396.4	405.5
Livestock Cash Receipts	189.5	162.7	175.6	176.3	176.0	166.6	170.5	181.4	183.5	188.9
CropCash Receipts	187.9	195.8	194.9	195.1	193.7	209.1	225.3	217.7	212.9	216.6
Government Payments	10.8	13.0	11.5	13.7	22.4	46.5	18.9	7.4	8.5	7.8
Total Cash Income	422.6	399.4	413.2	414.2	426.9	453.1	443.5	435.4	434.0	442.6
Cash Expenses	315.8	303.8	311.9	311.4	317.5	315.8	328.0	327.0	324.3	329.8
Net Cash Income	106.8	95.6	101.3	102.8	109.4	137.3	115.4	108.4	109.7	112.8
Net Farm Income	81.7	62.3	75.1	81.3	83.6	120.6	104.5	90.5	90.6	95.1

Source: IHS Markit

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## US farm balance sheet

The US farm balance sheet is expected to stay relatively strong through the forecast period. Farm assets and equity are forecast to grow to record levels in 2024.

US Farm Balance Sheet										
Item	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F
Farm Assets (bil \$)	2,880	2,914	3,006	3,027	3,075	3,121	3,183	3,255	3,327	3,403
Farm Liabilities (bil \$)	357	374	390	402	419	435	436	441	449	459
Farm Equity (bil \$)	2,523	2,540	2,616	2,625	2,657	2,685	2,746	2,814	2,879	2,944

Source: IHS Markit

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## US Crop Balance Sheets

### Soybeans

US soybean stocks are forecast to decrease in 2020/21 because of smaller production. Stocks are expected to continue relatively low in 2021/22 as US soybean exports rebound as a result of the agreement with the US and China. The lower stocks will help boost soybean farm prices in 2020/21 and 2021/22. Prices though are expected to drop in ensuing forecast years as stocks begin to build again as expected larger soybean acres will increase production.

**Supply:** The bullish momentum in soybean futures has indicated in the IHS Markit January area survey that this year's US soybean crop will reach 90.1 million acres and with yields at 52 bushels per acre, while soybean production for the 2021/22 season will

jump to 4.64 billion bushels. The lingering price strength in the short-term forecast has led to a revision higher in our 2022/23 area outlook for soybeans.

**Demand:** Even with the soybean price rally, US crush margins have been at levels high enough the crushing industry has not taken their foot off the gas, according to the monthly reports from both the US Department of Agriculture (USDA) as well as National Oilseed Processors Association (NOPA). As a result, the 2020/21 domestic crush forecast was revised higher to 2.2 billion bushels, which is almost 2% larger than the previous season. Although the export forecast is slightly weaker than the previous outlook, the bullish story has not changed with exports estimated to reach 2.25 billion bushels.

**Price risk:** With a tighter stock level, the average farm level soybean price in 2020/21 was revised to \$12.00 per bushel and to \$10.50 per bushel in 2021/22. There remains great price risk to the forecast if demand does not slow on the export front. The market will never truly run out of beans, but it is the market's job to curtail demand when participants fear that very scenario. Looking at the stocks-to-use ratio, it would point to soybean futures needing to be closer to \$15 rather than \$14.0 per bushel. As noted in previous reports, that bullish sentiment has been the wrong position to take since the 2013/14 season as global supplies between the two hemispheres met demand and, in a few seasons, led to a build in global stocks just in the nick of time. The market anticipates large plantings and will need those large plantings to replenish stocks. Any stumble in either area or yields over the next 6 months will awaken the bull once again. The bottom line is that stocks are tight, but there are several months left in the 2020/21 marketing year to shift perceptions.

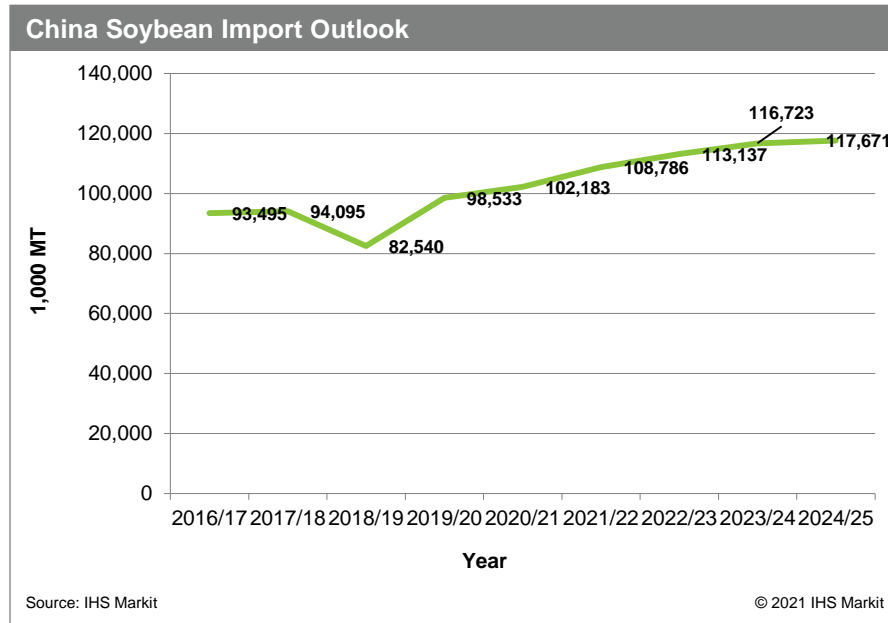
US Soybean Fundamentals										
Marketing Year Beginning September 1	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26
<b>Prices (Dollars Per Bushel)</b>										
Marketing Year Average Price	9.47	9.33	8.48	8.57	12.00	10.50	10.08	10.35	10.19	9.75
Central IL Processor Price	9.77	9.53	8.53	8.83	12.24	10.73	10.29	10.57	10.41	9.96
<b>Soybean to Corn Price Ratio</b>	2.82	2.78	2.35	2.41	2.61	2.50	2.79	2.74	2.74	2.66
<b>Acreage (Million Acres)</b>										
Planted Area	83.5	90.2	89.2	76.1	83.1	90.1	89.2	87.4	87.6	87.4
Harvested Area	82.7	89.5	87.6	74.9	82.3	89.2	88.4	86.6	86.9	86.7
Harvested Area % of Planted	99%	99%	98%	98%	99%	99%	99%	99%	99%	99%
<b>Yield (Bushels Per Acre)</b>	51.9	49.3	50.6	47.4	50.2	52.0	52.3	52.6	53.1	53.6
<b>Supply (Million Bushels)</b>										
Beginning Stocks					0.16					
Production	197	302	438	910	523	106	237	430	525	632
Imports	4,296	4,412	4,428	3,552	4,135	4,638	4,621	4,554	4,610	4,646
Imports	22	22	14	15	20	20	15	15	15	15
Total Supply	4,515	4,735	4,880	4,477	4,679	4,764	4,873	4,999	5,150	5,293
<b>Domestic Disappearance</b>										
Crush	1,901	2,055	2,092	2,166	2,200	2,190	2,067	2,051	2,087	2,138
Seed & Residual	146	108	203	105	123	137	138	139	143	146
Total Domestic Disappearance	2,047	2,163	2,295	2,271	2,323	2,327	2,206	2,190	2,230	2,284
<b>Exports</b>	2,167	2,134	1,676	1,682	2,250	2,200	2,236	2,285	2,288	2,356
<b>Total Disappearance</b>	4,214	4,297	3,971	3,954	4,573	4,527	4,442	4,475	4,518	4,640
<b>Ending Stocks</b>	302	438	910	523	106	237	430	525	632	653

Source: IHS Markit

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China is the world's largest importer of soybeans and China's imports of soybeans during the forecast period are expected to continue to grow. But export competition

from Brazil is also expected to grow as Brazils exports are forecast to increase by more than 10.0 MMT in the forecast period.



## Corn

**Supply:** The January IHS Markit area survey confirmed initial expectations that the recent rally will entice US corn farmers to plant a few more acres this year. The survey points to initial estimates of 94.2 million acres, up from 90.8 million acres in 2020 and the largest corn plantings since 2016/17. Keep in mind these are expectations and in the past this initial estimate was overruled by spring planting conditions. Nonetheless the profit potential given prices along with the revenue backstop provided by crop insurance will be a rather large bullish carrot. The yield forecast has not deviated from the November forecast staying at 181 bushels per acre but with larger area production has been revised higher by 346 million bushels to 15.66 billion bushels. Obviously at this time summer weather could turn this crop into a 16.0-billion bushel crop or drop it to a 13-billion bushel crop. With our new supply, demand, and price expectations for the 2021/22 season, the US area expectation in 2022 has been revised higher to 91.4 million acres.

**Demand:** With the smaller crop size the feed and residual use category has reduced this forecast to 5.65 billion bushels for the 2020/21 season. The larger crop size in 2021/22 pushes feed and residual higher to 5.88 billion bushels. Corn for ethanol use has stabilized at 4.85 billion bushels in 2019/20 and rises to 5.05 billion bushels in 2020/21. At this time, we are optimistic that corn for ethanol use will move back closer to our original forecast in 2021/22 with the expectation that US consumers will hit the roads once again. Given the discussions surrounding EV goals here in the United States we would like to reiterate that the IHS Markit automotive group forecast an EV adoption rate, which is incorporated into the motor gasoline demand forecast. The important aspect of our corn for ethanol use forecast hinges on a slow expansion of the E-10

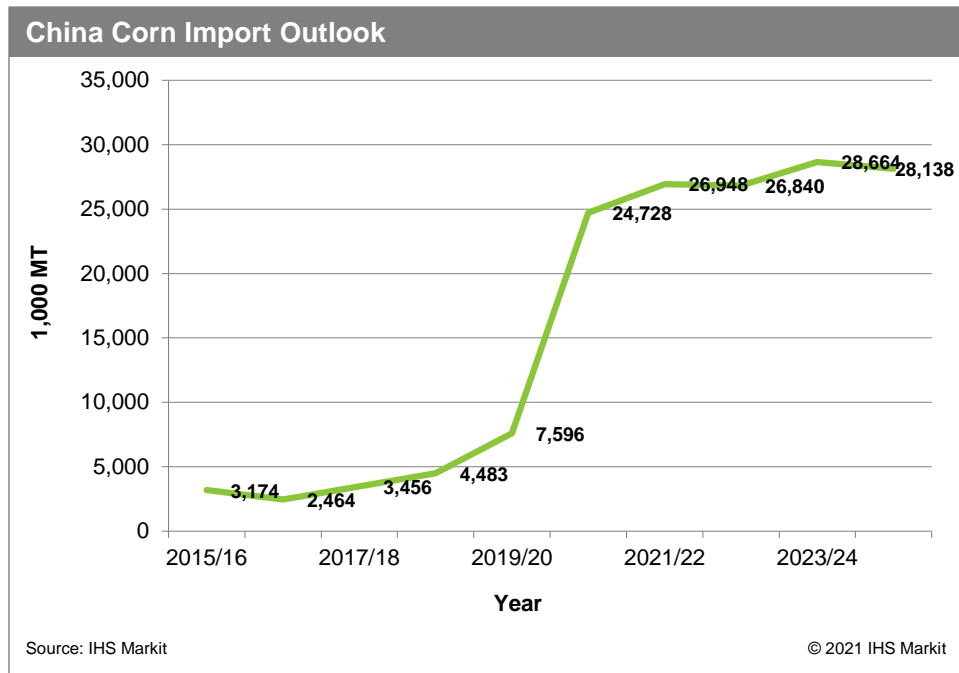
mandate to a blend rate closer to E-13 to offset the loss demand from a downward trend in motor gasoline use.

Like the explosive growth seen in soybeans, US corn exports have been the key factor in providing corn prices a story of their own beyond just soy. Our latest estimate is for US corn exports to increase from 1.78 billion bushels in 2019/20 to 2.9 billion bushels this season. The key behind this change is the strong appetite from mainland China. Even though our 2021/22 estimate weakens season over season, US exports will remain at a relatively large level of 2.52 billion bushels. As a result of the changes to both supply and export demand from November, our ending stock forecast has been tightened to 1.09 billion bushels. This is in stark contrast to our September 2020 forecast that indicated stocks of 2.8 billion bushels in 2020/21 and 3.3 billion bushels in 2021/22. The 2020/21 stocks-to-use ratio now stands at 7.3% versus its 10-year average of 11.8% but rises to 10.7% in 2021/22. The key take home point is that this stocks-to-use ratio in 2020/21 is right in line with the level seen in 2011/12 and 2012/13.

**Price risk:** With tighter carryover stocks in 2021/22 our corn price has been revised higher to \$4.20 per bushel. From a risk standpoint there are a few different paths forward. The first is that prices peaked in February and decline into May. Another path is something like 2008 and prices rally into May. The bottom line is that most anticipate larger area this spring owing to price, the end user has their fingers crossed that farmers meet that area goal as the pipelines will be running tight, our demand forecast is heavily dependent on meeting export goals, and finally we are assuming average weather. For end users of corn, spring weakness will be an opportunity to reduce risk for the summer growing season but understand price may not top until May. A growing risk this summer will be sourcing physical supplies just prior to harvest given the stock situation. There could be areas in the United States that will be running a corn deficit and will be forced to tighten basis levels.

US Corn Fundamentals										
Marketing Year Beginning September 1	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26
<b>Prices (Dollars Per Bushel)</b>										
Season Average Farm Price	3.36	3.36	3.61	3.56	4.60	4.20	3.61	3.77	3.72	3.67
Central IL Spot Market Price	3.37	3.34	3.60	3.50	4.90	4.13	3.55	3.71	3.66	3.61
FOB, U.S. Gulf	3.95	4.07	4.29	3.93	5.07	4.63	3.98	4.16	4.10	4.04
<b>Acreage (Million Acres)</b>										
Planted Area	94.0	90.2	88.9	89.7	90.8	94.2	91.4	87.8	88.2	87.0
Harvested Area	86.7	82.7	81.3	81.3	82.5	86.5	83.9	80.5	80.9	79.8
Harvested Area % of Planted	92%	92%	91%	91%	91%	92%	92%	92%	92%	92%
<b>Yield (Bushels Per Acre)</b>										
	174.6	176.6	176.4	167.5	172.0	181.0	182.7	184.6	186.1	187.9
<b>Supply (Million Bushels)</b>										
Beginning Stocks	1,737	2,293	2,140	2,221	1,913	1,090	1,618	2,073	2,053	2,105
Production	15,148	14,609	14,340	13,620	14,182	15,658	15,333	14,866	15,063	14,990
Imports	57	36	28	42	25	30	25	25	25	25
Total Supply	16,942	16,939	16,509	15,883	16,120	16,777	16,976	16,965	17,141	17,120
<b>Domestic Disappearance (Million Bushels)</b>										
Feed & Residual	5,470	5,304	5,429	5,910	5,650	5,875	5,616	5,566	5,622	5,603
Fuel Alcohol (Ethanol)	5,432	5,605	5,378	4,852	5,052	5,350	5,317	5,299	5,371	5,346
HFCS	467	459	441	419	431	423	421	409	407	405
Seed	29	30	29	30	31	30	28	29	28	28
Food, Other	957	963	944	980	967	981	999	1,002	1,010	1,017
Total Domestic Disappearance	12,355	12,361	12,222	12,191	12,130	12,659	12,381	12,305	12,437	12,399
<b>Exports (Million Bushels)</b>										
	2,294	2,438	2,066	1,778	2,900	2,500	2,522	2,606	2,599	2,603
<b>Total Disappearance (Million Bushels)</b>										
	14,649	14,798	14,288	13,970	15,030	15,159	14,903	14,911	15,036	15,002
<b>Ending Stocks (Million Bushels)</b>										
	2,293	2,140	2,221	1,913	1,090	1,618	2,073	2,053	2,105	2,118
Source: IHS Markit								© 2021 IHS Markit		

US share of world exports is expected to hold steady in the forecast period partly due to potential increase in exports to China. China in recent years removed its support prices for corn production and that combined with growing feed demand in China is expected to increase China's imports of soybeans from 7.6 million tonnes in 2019/20 to over 28 million tonnes in 2025/26. However, Brazil is expected to increase its corn exports during the forecast period so export competition for the US will be strong.



## Wheat

**Supply:** The late January IHS Markit planting survey showed all wheat plantings in 2021/22 will increase over 2020/21 to 45.3 million acres with winter wheat jumping to 32.0 million acres, durum rising slightly to 1.8 million acres while other spring declines to 11.5 million acres. With yields at 49.4 bushels per acre production will rise to 1.9 billion bushels, a season-over-season gain of 4.2%.

**Demand:** Food and industrial use for 2020/21 has been revised higher to 951 million bushels and feed and residual use increases 95 million bushels. With the supply issues in other major exports like Russia, we have revised our export forecast higher to 1.0 billion bushels. Ending stocks have been revised to 856 million bushels with a stocks-to-use ratio at 40.6%, which is below its 10-year average of 42.2%. Stocks tighten further to 789 million bushels in 2021/22 as weaker carryover stocks do not offset the small decline in total demand.

**Price risk:** The 2020/21 all wheat price has been increased to \$5.75 per bushel and rises to \$5.80 per bushel in 2021/22.

US Wheat Fundamentals										
Marketing Year Beginning June 1	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26
<b>Prices (Dollars Per Bushel)</b>										
Marketing Year Average Price	3.89	4.72	5.16	4.58	5.75	5.80	5.26	5.45	5.46	5.46
<b>Acreage (Million Acres)</b>										
Planted Area	50.1	46.0	47.8	45.5	44.3	45.3	44.9	43.6	43.9	44.0
Harvested Area	43.9	37.5	39.6	37.4	36.7	38.5	37.6	36.5	36.9	37.0
Harvested Area % of Planted	87%	82%	83%	82%	83%	85%	84%	84%	84%	84%
<b>Yield (Bushels Per Acre)</b>										
	53	46	48	51.7	50	49	50	50	51	51
<b>Supply (Million Bushels)</b>										
Beginning Stocks	976	1,181	1,099	1,080	1,028	856	789	802	775	775
Production	2,309	1,740	1,885	1,932	1,826	1,902	1,869	1,831	1,871	1,894
Imports	118	158	135	105	110	100	112	114	114	113
Total Supply	3,402	3,078	3,119	3,117	2,964	2,859	2,769	2,747	2,760	2,782
<b>Domestic Disappearance</b>										
Food and Industrial	949	964	954	962	951	960	970	970	976	981
Seed	61	63	59	60	62	70	68	68	69	69
Feed & Residual	161	46	88	101	95	90	117	94	84	85
Total Domestic Disappearance	1,171	1,073	1,102	1,123	1,108	1,120	1,154	1,132	1,128	1,136
<b>Exports</b>										
	1,051	906	937	965	1,000	950	813	839	856	868
<b>Total Disappearance</b>										
	2,222	1,979	2,039	2,089	2,108	2,070	1,968	1,972	1,985	2,003
<b>Ending Stocks</b>										
	1,181	1,099	1,080	1,028	856	789	802	775	775	779

Source: IHS Markit

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World wheat exports are expected to increase marginally during forecast period but still be below 2019/20 exports. US to face greater competition from EU exports which are likely to rebound sharply.

## Cattle and Beef Sector

Total cattle and calves in the United States for 1 January 2021 held flat year on year (y/y) at 94.7 million head, a slight increase from the prior forecast, reinforced by stronger supply side activity in 2020. However, the peak of the cattle cycle has been called for some time, with previous estimations predicting inventories would peak in 2020. As placements started to recede in late 2020, the downward trend anticipated for cattle inventories in 2021 is to result in a 2.5% y/y decrease at the beginning of 2022 at 92.4 million head. Overall, this downward trend in inventories will extend throughout the next several years, with the 2025 cattle inventory expected to drop 7.1% from 2021 to 88.0 million head. US cattle slaughter in 2021 is to consequently measure 5.1% y/y higher, but then recede by 2.0% y/y in 2022. A majority of 2020 saw softening heifer slaughter, showing more retention and less liquidation relative to the initial months of 2020, helping contribute to the elevation of 2021. Total cattle slaughter in 2025 is forecast to decline by 7.5% compared with 2021, falling to 32.3 million head along the anticipated reductions over the next several years. Following along the overall downward trend in the supply side of the beef market, the calf crop will also shrink over the next few years. In 2021, the calf crop is projected to fall by 2.4% y/y to 34.9 million head, and in 2022 this decrease will be another 2.3% y/y. By 2025, the calf crop is to measure at 33.6 million head, a 3.9% loss from 2021. Beef cow slaughter will recede 2.1% y/y, in similar fashion to the rest of the market in 2021, while the decline is a further 3.0% y/y in 2022. Out to 2025, beef cow slaughter will fall 6.0% compared with 2021. Although carcass weights grew significantly in 2020 by 4.0% owing to COVID-19

impacts that kept cattle on feed for longer, this trend is to reverse and correct by a 2.7% y/y loss in 2021. However, along historical growth trends, cattle weights will grow overall in the longer term. Cattle weights in 2022 are to rise by 0.9% y/y, and 2025 measuring stronger than 2021 by 2.8%, highlighting modest and steady gains into the future. Beef production in total will hold flat y/y in 2021 at 27.5 million pounds, along this reduction trend. This light reduction trend in beef production will overall extend across the next several years, reaching 26.6 million pounds in 2025, a 3.5% reduction from 2021.

US Cattle Sector Fundamentals										
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Prices (Cents per Pound)</b>										
1100 - 1300 #,										
5-area Direct Steers	120.89	121.90	117.07	117.15	107.67	109.54	111.15	115.04	117.71	119.01
Change	-18.6%	0.8%	-4.0%	0.1%	-8.1%	1.7%	1.5%	3.5%	2.3%	1.1%
600 - 650 #, Oklahoma										
City Feeder Steers	153.44	155.82	159.20	153.65	145.83	130.08	142.74	147.80	150.06	151.29
Change	-32.3%	1.5%	2.2%	-3.5%	-5.1%	-10.8%	9.7%	3.5%	1.5%	0.8%
Utility Cows, Sioux Falls	71.61	62.01	55.86	56.66	70.40	55.94	54.78	57.70	58.69	58.49
Change	-31.6%	-13.4%	-9.9%	1.4%	24.2%	-20.5%	-2.1%	5.3%	1.7%	-0.3%
Boxed Beef Cutout	206.77	209.90	213.97	222.62	238.93	220.64	222.10	226.73	230.47	232.45
Beef Retail (Dollars per pound)	5.96	5.91	5.92	6.04	6.38	6.25	6.01	6.14	6.24	6.28
<b>Cattle Inventories as of January 1 (Million Head)</b>										
Beef Cows (Jan. 1)	30.2	31.2	31.5	31.8	31.3	31.0	30.4	30.2	30.0	29.7
Dairy Cows (Jan. 1)	9.3	9.3	9.4	9.4	9.3	9.4	9.4	9.2	9.2	9.1
Cattle and Calves (Jan. 1)	91.9	93.7	94.3	94.8	94.4	94.7	92.4	90.0	88.8	88.0
Calf Crop	35.1	35.8	36.4	36.3	35.8	34.9	34.1	34.0	33.8	33.6
Calf Death Loss	2.1	2.1	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.0
Calf Slaughter	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6
Beef Cow Slaughter	2.6	2.8	3.1	3.2	3.3	3.2	3.1	3.1	3.1	3.1
Dairy Cow Slaughter	2.9	3.0	3.2	3.3	3.1	3.5	3.5	3.4	3.4	3.4
Bull Slaughter	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Steer and Heifer Slaughter	24.6	25.7	26.2	26.5	25.8	27.1	26.5	25.5	25.1	24.8
Total Slaughter	31.1	32.7	33.6	34.1	33.3	35.0	34.3	33.2	32.7	32.3
Cattle Imports	1.7	1.8	1.9	2.0	2.1	2.0	2.0	2.1	2.2	2.2
Cattle Exports	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2
Cattle Death Loss	2.3	2.4	2.4	2.5	2.4	2.4	2.4	2.3	2.3	2.3
Residual	0.0	-0.2	0.0	-0.1	0.0	0.0	0.0	-0.1	-0.2	-0.2
<b>Cattle and Calves (Dec. 31)</b>	<b>93.1</b>	<b>93.7</b>	<b>94.2</b>	<b>93.8</b>	<b>94.1</b>	<b>91.7</b>	<b>89.4</b>	<b>88.2</b>	<b>87.4</b>	<b>86.6</b>
Cattle on Feed	13.2	13.1	14.1	14.4	14.7	14.7	14.7	14.0	13.6	13.4
<b>Beef Supply (Million Pounds)</b>										
Beginning Stocks	683	757	649	664	610	592	623	632	616	611
Imports	3,015	2,993	2,999	3,057	3,343	3,615	3,003	2,820	2,775	2,833
Production	25,221	26,228	26,867	27,148	27,469	27,546	27,750	27,049	26,725	26,585
Total	28,919	29,978	30,515	30,870	31,422	31,753	31,376	30,501	30,116	30,029
<b>Beef Disappearance (Million Pounds)</b>										
Domestic Use	25,673	26,371	26,665	27,167	27,867	28,414	27,797	27,175	26,862	26,796
Exports	2,556	2,860	3,155	3,022	2,958	3,088	2,947	2,710	2,643	2,623
Total	28,229	29,231	29,820	30,189	30,824	31,503	30,743	29,885	29,505	29,419
Ending Stocks	757	649	664	610	592	623	632	616	611	610
<b>Per Capita Consumption (Pounds)</b>										
Carcass Weight	79.2	80.8	81.1	82.3	84.6	86.0	83.9	81.6	80.2	79.6
Retail Weight	53.0	54.1	54.4	55.2	56.7	55.6	56.3	54.7	53.8	53.4
Change	2.9%	2.0%	0.7%	1.4%	2.7%	-2.1%	1.3%	-2.7%	-1.7%	-0.8%

Source: IHS Markit

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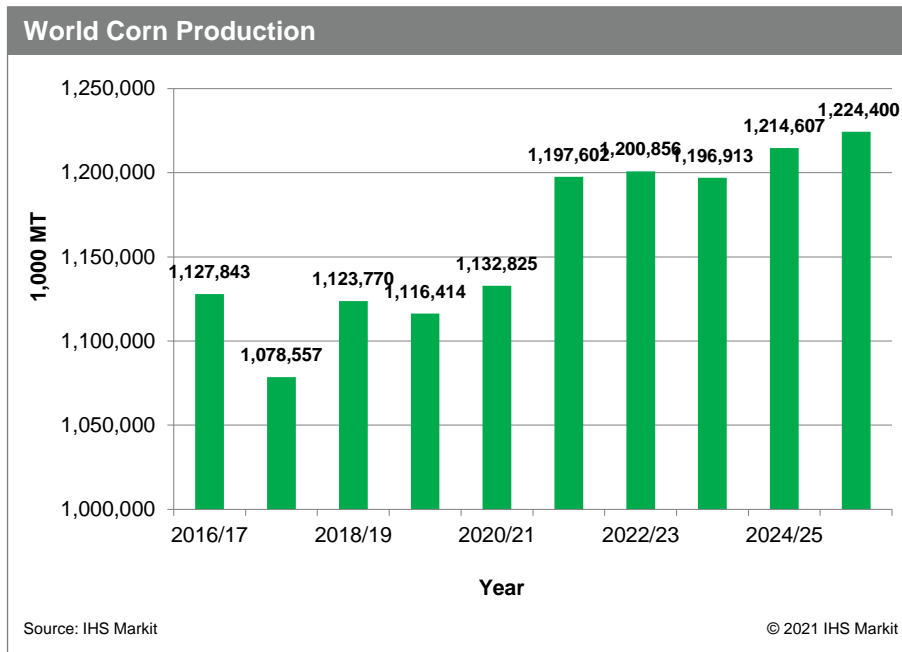
Beef prices in 2021 will see a notable retraction, returning prices closer to average values observed in 2019, following the massive COVID-19 supply shutdown impacts in 2020 that had prices spiking to substantial record values. However, with beef prices back down to normal levels as of July 2020, values in 2021 will remain along this level, as well. Across recent months, reemerging talks on slaughter facility hurdles and potential quarantines have shone the light on possible price swings. While prices have shifted outside of prior expectations at times more recently, the moves have not been nearly as sharp as early COVID-19 impacts, and have been quickly correcting back down to more suppressed values. Beef prices are projected to average at \$220.6 per hundredweight (cwt) in 2021, a 7.7% y/y decline, although this follows the 7.3% y/y jump that occurred in 2020. Beef prices will overall climb modestly into the future, as overall supply and demand will lightly decline together. In 2022, the boxed beef cutout is to rise by 0.7% y/y to \$222.1 per cwt. Further out over the next few years, prices will rise to \$232.5 per cwt in 2025, a 5.3% gain over the price expected for 2021.

ND Cattle ranchers are slowly rebuilding their herd Inventory of all cattle and calves as of January 1, 2020 totaled 1.90 million head, up 4% from a year ago. Cash receipts from ND cattle marketings totaled \$983 million in 2019, down 5% from the previous year's marketings.

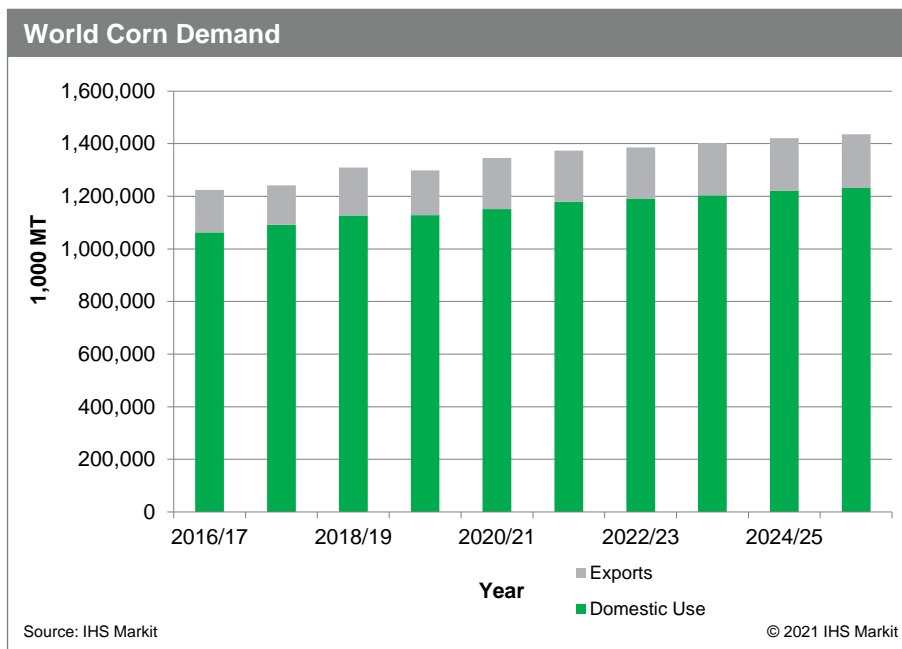
## **Global Outlook and Assumptions**

### **Corn**

**Supply:** Global corn production is forecast at 1.13 billion metric tonnes in 2020/21, up about 2% from the previous year based primarily on expected larger US production. World corn production is projected to continue to grow through 2025/26 reaching a record 1.22 billion MT. The largest production increases are forecast for Brazil (to increase by about 12 MMT) and Ukraine (to increase by about 8 MMT during the forecast period increasing export competition for the US).

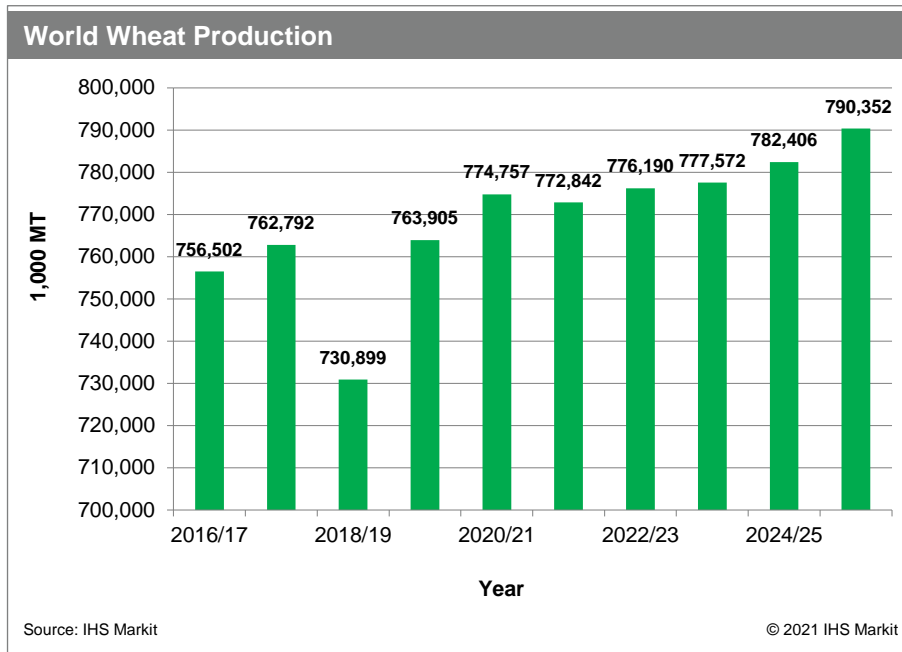


**Demand:** World corn imports are forecast to increase by 15 MMT in 2021/22. World corn imports are forecast to increase about 20 MMT from 2021/22 to 2025/26 mainly because of expected higher imports by China. This large increase in imports bodes well for exporting countries such as the US. As a result, US exports could increase by about 10 MMT, Brazil’s exports by about 6 MMT and Ukraine’s by 3 MMT during the forecast period.

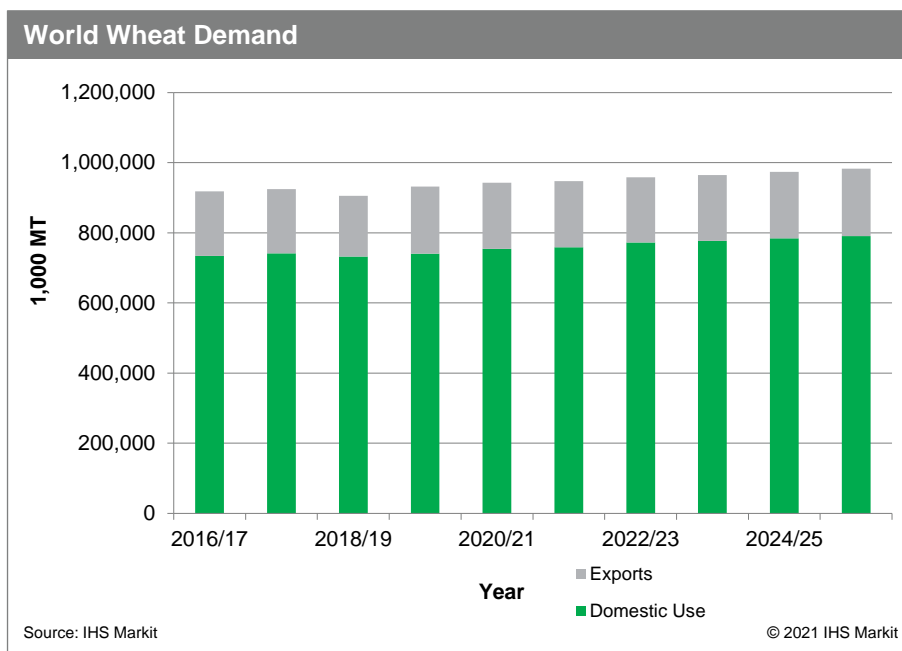


## World Wheat

**Supply:** World wheat production is forecast at 774.8 MMT in 2020/21, up only 1% from the previous year. World wheat production is projected to continue to grow through 2025/26 reaching a record 790 MMT. The largest production increases are forecast for the EU which could increase over 16 MMT during the forecast period. US production during the forecast period is forecast to increase by about 2 MMT.



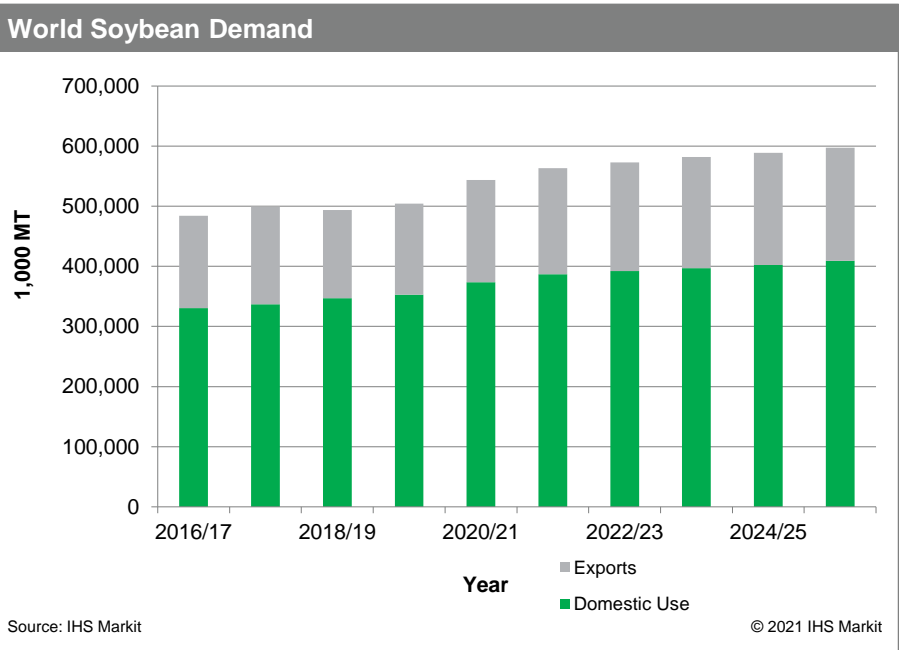
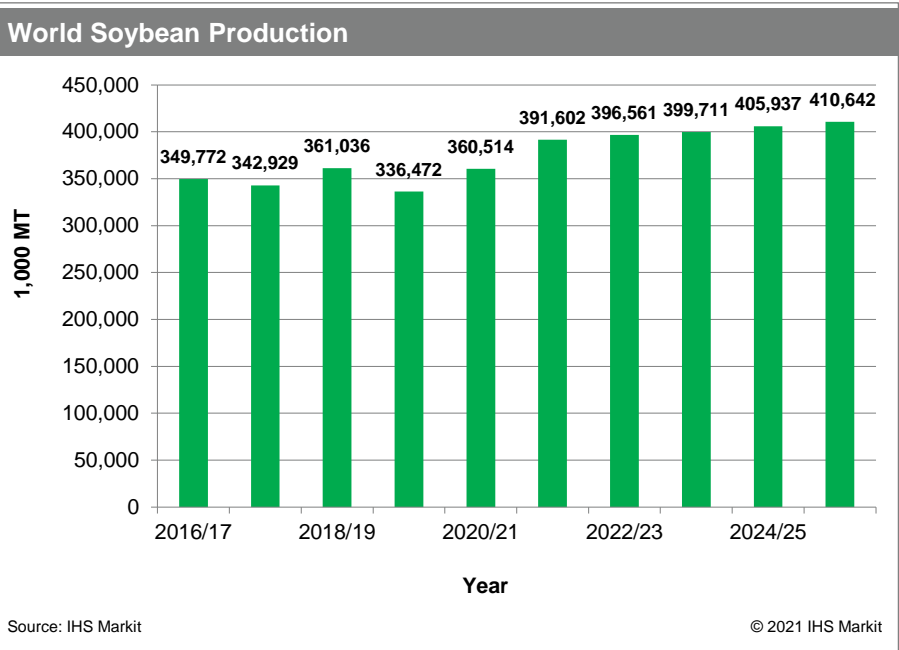
**Demand:** World wheat imports are forecast to increase by over 5 MMT in 2020/21. But world wheat imports are forecast to increase by about 14 MMT from 2021/22 to 2025/26 mainly. Africa is expected to account for at least half the increase in world wheat imports during the forecast period. This larger increase in imports bodes well for exporting countries. Russia and Ukraine are expected to gain the lion’s share of the increase in wheat exports during the forecast period. US exports are expected to remain relatively flat.



## Soybeans

**Supply:** World soybean production is forecast at 373.2 MMT in 2020/21, up 9% from the previous year based mainly on a rebound in US production. World soybean production is projected to continue to grow through 2025/26 reaching a record 394 MMT. The largest production increases are forecast for Brazil and Argentina which combined could increase over 18 MMT during the forecast period. US production during the forecast period is forecast to down slightly.

**Demand:** World soybean imports are forecast to increase by over 5 MMT in 2020/21 with China accounting for most of that increase. World soybean imports are forecast to increase by about 14 MMT from 2021/22 to 2025/26 mainly because of expected increased by China. This larger increase in imports bodes well for exporting countries such as the US, Brazil and Argentina.



## **Farm Policy Issues**

### **Climate and Conservation Policy**

President Biden indicates climate change will be a major focus of his Administration. There is interest in establishing and expanding programs to encourage farmers, ranchers, and landowners to adapt farm management practices that scientists believe can help draw down atmospheric carbon and they can sell those carbon credits. The management practices could include conservation tillage, planting cover crops, reforestation, and using methane digesters for livestock operations.

The USDA may also use the government-owned Commodity Credit Corporation to create a federal "carbon bank" that would offer credits for the carbon sequestered by sustainable management practices. However, it has not yet been determined whether CCC can be used. Suggestions are that \$1 billion could be allocated to purchase carbon credits at \$20 per ton, which could reduce greenhouse gas emissions by 50 megatons every year.

### **China and Phase 1 Commitments**

At this time, President Biden does not appear likely to change the agreement in terms of impacting imports. It is not clear if the structural market access changes made by China to increase imports will be discussed or changed. For example, the number of meat plants that can export to China increased from 1500 to 4000.

### **WOTUS**

The Trump administration Navigable Water Protection Rule is now in effect across the US in the wake of a recent federal appeals court reversing a lower court ruling that had blocked it from taking effect in Colorado. The Tenth Circuit Court of Appeals ruled that the Colorado ruling was in error as it did not agree that there would be irreparable harm if the rule were to take effect.

The Biden Administration is reviewing the rule and then will decide if and what changes are needed. Then, depending on the changes, there will be legal challenges which will take time.

### **Infrastructure**

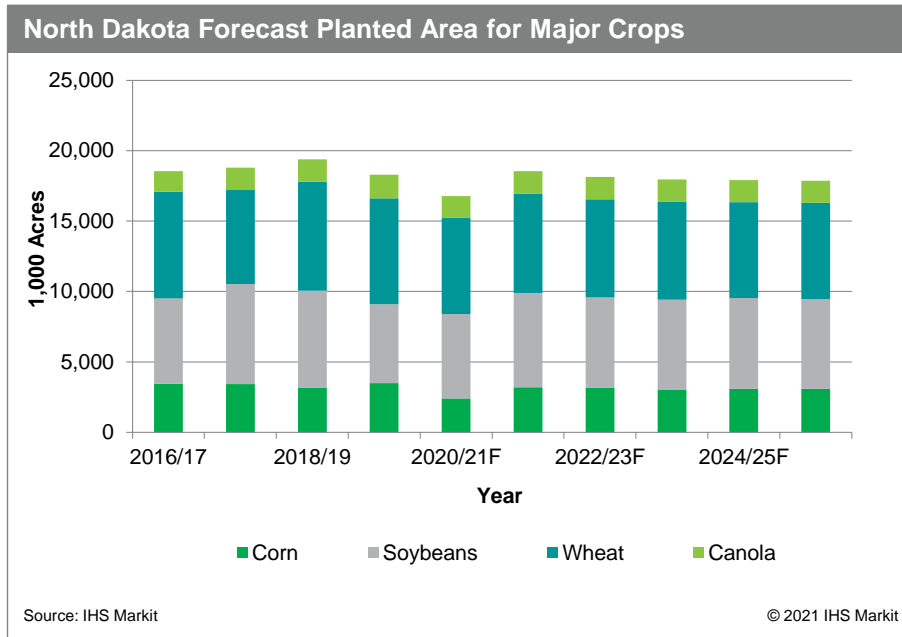
Infrastructure legislation maybe the only issue where there could be bi-partisan agreement in Congress.

### **Farm Bill 2023**

Not too early to start thinking about because work on the Farm Bill will gain steam once it starts.

### **North Dakota Outlook**

North Dakota planted area for corn, wheat, and canola in 2020/21 was reduced by a combined 1.5 million acres for corn wheat and canola as weather events prevented some planting. Soybeans was the only major crop that increased marginally in 2020/21. Normal planting conditions for 2021/22 should allow for the combined area for these four crops to increase by 1.77 million acres and exceed 2019 plantings. But plantings are forecast to decrease slowly through the rest of the forecast period following somewhat US prospects for these same crops.



North Dakota soybean area declined from 7.1 million acres in 2017 to 5.6 million acres in 2019. Area though increased to 5.75 million acres in 2020 and is likely to follow the US area forecast based on higher prices.

US canola planted area was down 188,000 acres from 2019/20 to 2020/21 due to prevent plant. Area is expected to rebound in 2021/22 and be relatively flat through the rest of the forecast period. US farm canola prices are expected to range between 15 cents per pound to 17 cents during the forecast period. The North Dakota canola acreage in 2020/21 was down by 250,000 acres in 2020/21. As a result, ND production was down 7% in 2020/21. But area and production is expected to rebound in 2021/22 and follow the US trend for the rest of the forecast period.

North Dakota is the top wheat producing state followed by Kansas. The 2020 North Dakota wheat crop was down 3% from the previous year based on smaller area. North Dakota wheat plantings are forecast to follow the US trend during the forecast period.

North Dakota sugar beet production in 2020/21 was 5.4 million tons, up 1.0 million tons from the previous year weather reduced harvest based on improved yields. North Dakota is the number three sugar beet producing state. The number one producing state is Minnesota.

North Dakota is the top producer of dry edible beans in the US, typically accounting for 25% or more of total production. Total production for the state in 2020 came in at 14.6 million CWT based on higher yields and nearly double the weather reduced harvest in 2019.

### Changing Farm Structure: US and North Dakota

The agricultural landscape continues to change rapidly. Farming continues to become more high-tech; the largest operations are getting bigger and the smaller operations are carving out their own niche markets. The farm sector continues to become more concentrated and commercial operations, many on a very large scale, are becoming more dominant. At the other end of the scale some small farmers are becoming more specialized such as in organic production or other niche products supplemented by greater non-farm income.

Total US harvested cropland has steadily increased, up 17.3 million acres from 2002 to 2017. But only farms with 2,000 acres or more and farms with less than 10 acres have increased their share of total harvested cropland area. Larger farms are changing the value chain. The larger farms can take advantage of economies of scale. Bigger farms are in a position to get better deals on inputs because of their size or hold product off the market to wait for better prices. They are also more diversified, growing different crops.

US: Change in Number of Cropland Acres by Farm Size					
Item	2002	2007	2012	2017	Chng 2002-2017
Under 10 Acres	249,242	291,828	285,875	360,990	111,748
10 to 49 Acres	4,111,751	4,296,973	4,115,755	4,068,888	-42,863
50 to 69 Acres	2,468,654	2,451,606	2,457,020	2,183,352	-285,302
70 to 99 Acres	4,649,652	4,500,846	4,415,577	3,925,972	-723,680
100 to 139 Acres	6,114,934	5,775,871	5,737,126	5,181,887	-933,047
140 to 179 Acres	7,273,320	6,590,706	6,341,110	5,803,430	-1,469,890
180 to 219 Acres	6,217,966	5,588,532	5,610,170	5,008,450	-1,209,516
220 to 259 Acres	6,455,901	5,730,418	5,523,418	5,014,346	-1,441,555
260 to 499 Acres	34,088,945	30,444,392	28,780,760	26,950,862	-7,138,083
500 to 999 Acres	56,659,861	51,556,447	49,471,560	45,887,053	-10,772,808
1,000 to 1,999 Acres	72,787,584	69,844,694	68,663,555	66,222,703	-6,564,881
2,000 or more Acres	101,619,442	122,535,288	133,562,674	149,433,925	47,814,483
<b>Total</b>	<b>302,697,252</b>	<b>309,607,601</b>	<b>314,964,600</b>	<b>320,041,858</b>	<b>17,344,606</b>

Source: IHS Markit © 2021 IHS Markit

North Dakota is following the same trends in consolidation as the US but at a bigger scale. North Dakota's largest farms with 2,000 acres or more have increased their share of harvested cropland from increased their share of total cropland from 59% in 2002 to 75% in 2017 while the largest US farms increased their share of harvested cropland from increased their share of total cropland from 34% in 2002 to 47% in 2017.

<b>North Dakota: Change in Number of Cropland Acres by Farm Size</b>					
<b>Item</b>	<b>2002</b>	<b>2007</b>	<b>2012</b>	<b>2017</b>	<b>Chng 2002-2017</b>
1 to Acres	345	476	461	889	544
10 to 49 Acres	31,924	37,058	39,602	36,985	5,061
50 to 69 Acres	29,084	29,764	37,287	26,040	-3,044
70 to 99 Acres	66,081	77,635	79,283	60,538	-5,543
100 to 139 Acres	95,827	107,257	103,923	79,621	-16,206
140 to 179 Acres	271,739	311,509	302,564	218,351	-53,388
180 to 219 Acres	114,659	125,983	120,373	92,153	-22,506
220 to 259 Acres	135,453	165,645	137,258	104,174	-31,279
260 to 499 Acres	1,114,352	1,238,939	977,865	783,282	-331,070
500 to 999 Acres	2,553,071	2,394,008	1,971,167	1,549,416	-1,003,655
1,000 to 1,999 Acres	6,348,159	5,650,208	4,500,189	3,976,361	-2,371,798
2,000 or more Acres	15,745,783	17,388,698	18,877,268	21,023,866	5,278,083
<b>Total</b>	<b>26,506,477</b>	<b>27,527,180</b>	<b>27,147,240</b>	<b>27,951,676</b>	<b>1,445,199</b>

Source: IHS Markit

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## IV. Deep Dive into the Tax Streams

To forecast the tax revenues for North Dakota, IHS has developed custom econometric models for major sources of state tax revenue.

- > The forecasted amounts are based on quarterly data with quarterly economic drivers associated with the underlying economic activity. The economic drivers were carefully selected after reviewing historical data and comparing economic data to the tax collections.
- > Quarterly forecast are aggregated into fiscal year totals and biennial totals.
- > The forecast amounts were be updated in March to reflect the most current information available for the economic outlook.

### March 2021 Final Forecasts

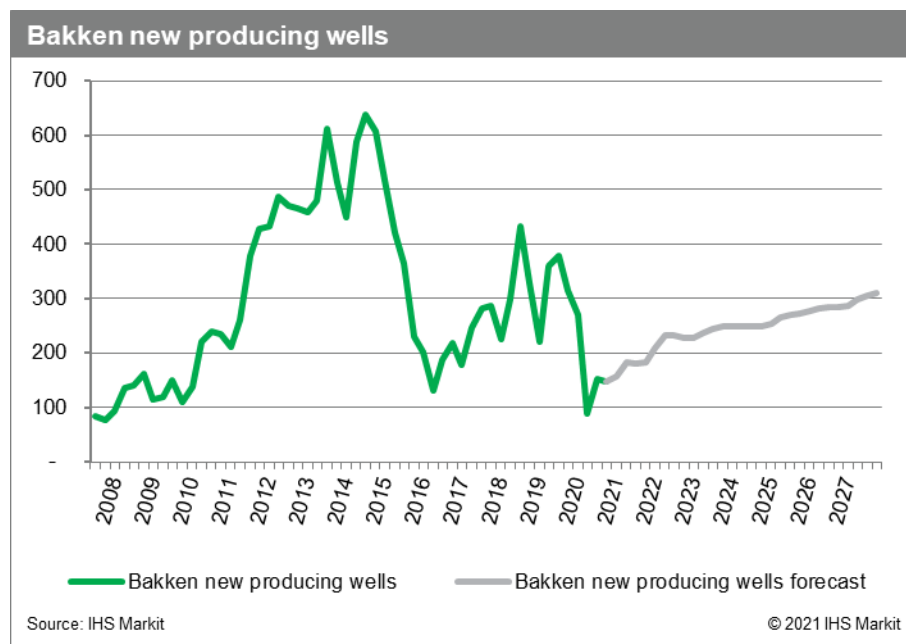
Revenue Source	2017-19 Biennium Actual	2019-21 Biennium Forecast (Original)	2019-21 Biennium Forecast	2021-23 Biennium Forecast
<b>Sales and use tax</b>	<b>1,786,479,717</b>	<b>1,868,262,000</b> 4.6%	<b>1,779,129,718</b> -0.4%	<b>1,795,249,810</b> 0.9%
<b>Motor vehicle excise tax</b>	<b>239,039,038</b>	<b>249,951,800</b> 4.6%	<b>244,275,345</b> 2.2%	<b>260,940,310</b> 6.8%
<b>Individual income tax</b>				
Total individual income tax collections	961,072,888		1,034,478,144 7.6%	1,059,247,861 2.4%
Transfer to refund reserve accounts	(183,000,000)		(249,800,000)	(251,000,000)
<b>Net individual income tax collections</b>	<b>778,072,888</b>	<b>803,305,000</b> 3.2%	<b>784,678,144</b> 0.8%	<b>808,247,861</b> 3.0%
<b>Corporate income tax</b>				
Total corporate income tax collections	299,456,537		272,125,376 -9.1%	277,944,529 2.1%
Transfer to refund reserve accounts	(58,000,000)		(64,000,000)	(75,000,000)
<b>Net corporate income tax collections</b>	<b>241,456,537</b>	<b>132,268,000</b> -45.2%	<b>208,125,376</b> -13.8%	<b>202,944,529</b> -2.5%

Note: The percentages in the table reflect the change from the prior biennium

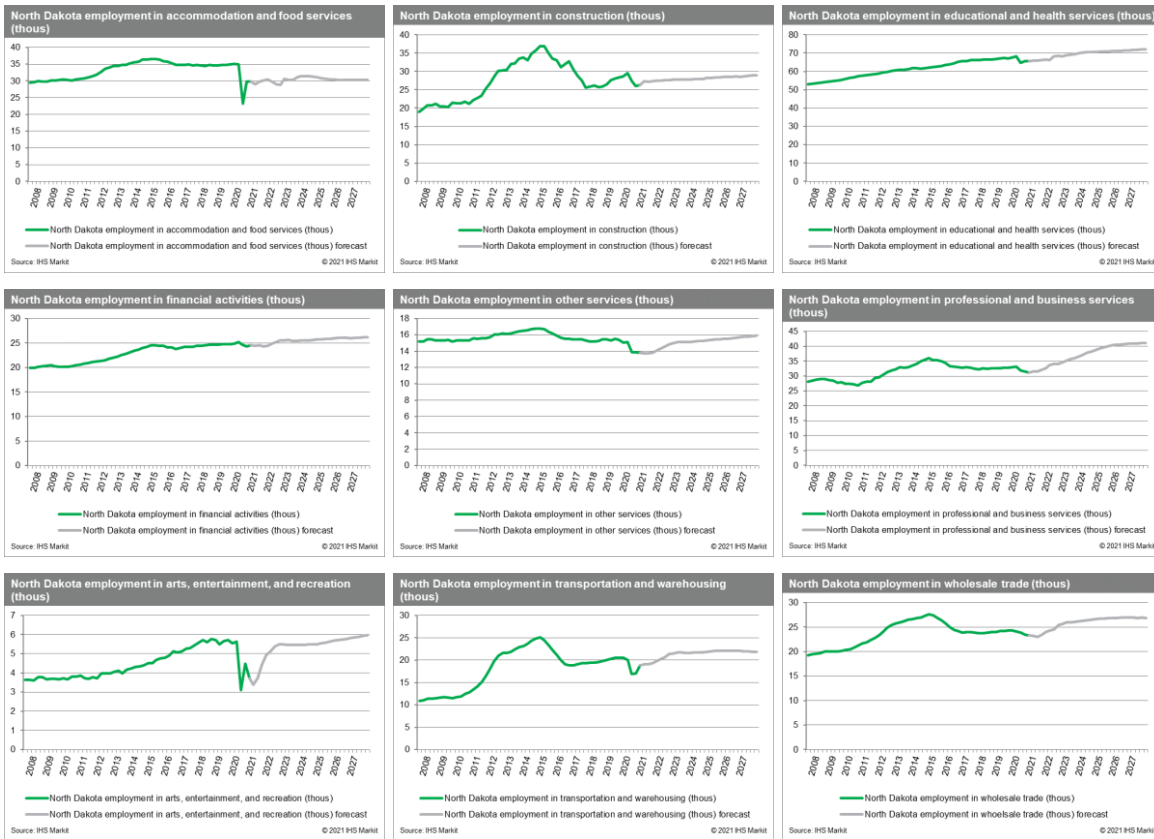
The specific market drivers and concept behind each of the forecasted tax streams are provided in detail below.

## Sales and use tax

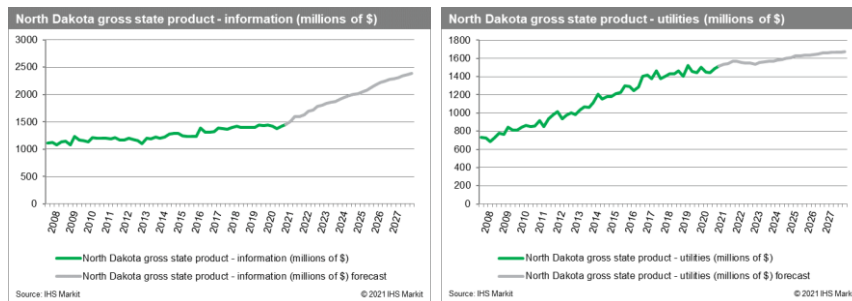
- > To forecast the sales and use tax revenue, each taxable sales sector is modeled and a forecast is produced. The sector forecasts are summed to a total taxable sales forecast. The tax rate is applied to the total taxable sales forecast to calculate sales and use tax revenue.
- > Of the fifteen taxable sales sectors, nine sectors have a strong correlation with energy markets, thus (1) new producing wells is used as the driver in these equations. The nine sectors are accommodation and food services, construction, financial services, manufacturing, mining and oil, miscellaneous, other services, transportation and warehousing, and wholesale trade. In 2020, new producing wells plummeted as a consequence of COVID-19 shutdowns and the oil price war from Russia and Saudi Arabia. With the vaccine rollout and production cuts by Saudi Arabia, the well count will increase in 2021. The acceleration of new producing wells will continue through 2022, then grow at a slower pace through the end of the forecast period.



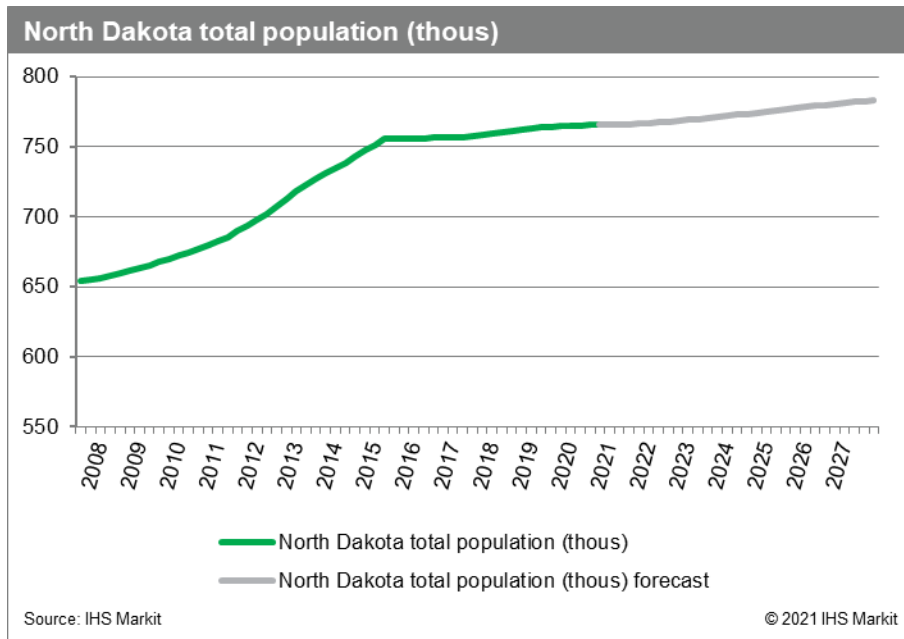
- > Another driver used in some of the sector-level equations is (2) employment in North Dakota by sector and can be found in the models for accommodations and food services, construction, education, health care, and social services, financial services, other services, professional services, arts and recreation, transportation and warehousing, and wholesale trade.
- > Employment in many sectors experienced positive growth in the fourth quarter of 2020. The transportation and warehousing sector had the largest quarter-over-quarter increase from its 2020Q3 levels. The arts, entertainment, and recreation sector has the most substantial decline from the previous quarter. By the middle of 2022, employment in most sectors will return to pre-pandemic levels, with the exception of the construction sector and accommodation and food services sector.



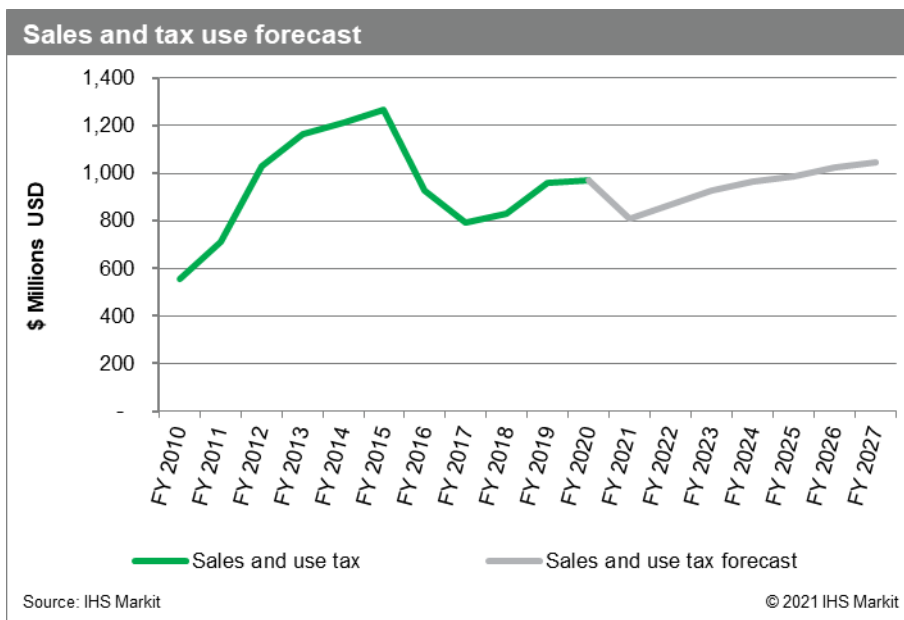
- > (3) Gross state product in North Dakota by sector captures changes in the variations in taxable sales in information industries and utilities. Both the gross state product for information and utilities reached pre-pandemic levels by the fourth quarter of 2020. Growth for information gross state product accelerates through the forecast horizon. On average, the year-over-year growth of information gross state product is 7.5%. For the gross state product in utilities, growth is more modest with the average year-over-year growth in the forecast horizon at 1.8%.



- > The taxable sales in retail trade is driven solely by (4) population in North Dakota. IHSM assumes per-capita purchases are stable, even through the pandemic.

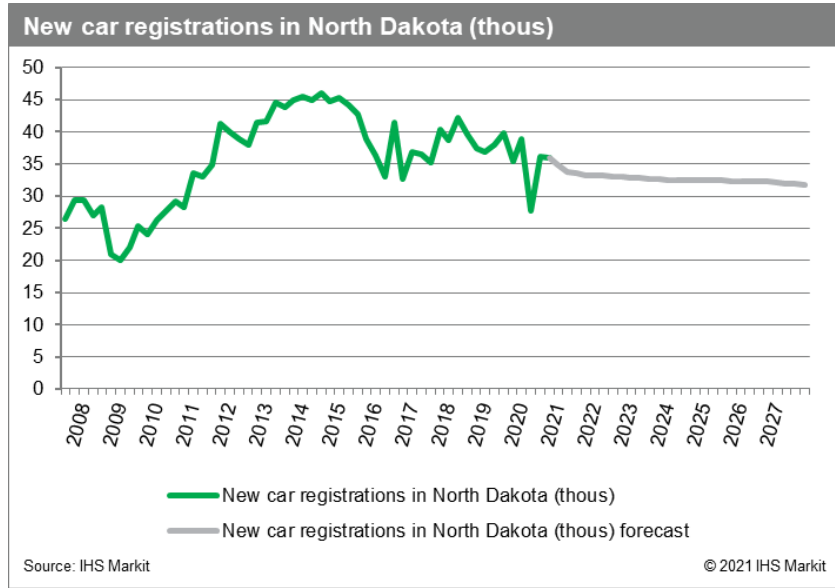


- > After summing the sector-level taxable sales to a total and applying the 5% tax rate and 91.3% for transfer to the general fund, IHSM forecasts a 16.7% decline in sales and use tax in FY 2021, followed by growth of 7.2% in FY 2022 and 7.1% in FY 2023.

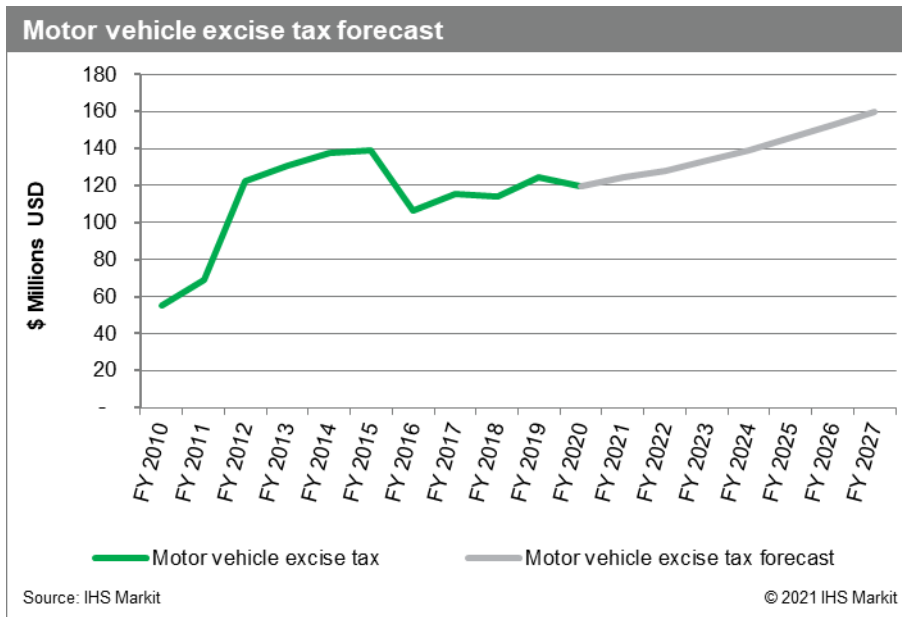


**Motor vehicle excise tax**

- > The main driver of motor vehicle excise tax is (1) new passenger and light truck registrations for the state. New car registrations have declined since the peak in 2014 and dropped significantly in the second quarter of 2020 from waves of shutdowns affecting vehicle manufacturers and nonessential businesses. Though registrations jumped in the the second half of 2020, they still remained 7.5% below pre-pandemic levels. New car registrations will gradually decline through the end of the forecast horizon.

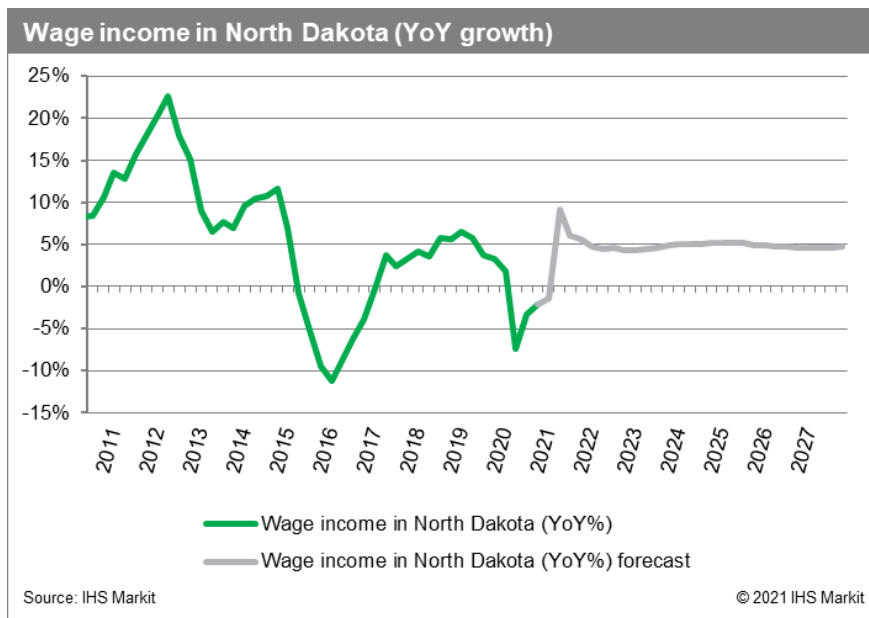


- > Resulting from the more positive new care registrations forecast, IHSM expects motor vehicle tax to grow by 4.4% in FY 2021, 2.3% in FY 2022, and 4.4% in FY 2023.

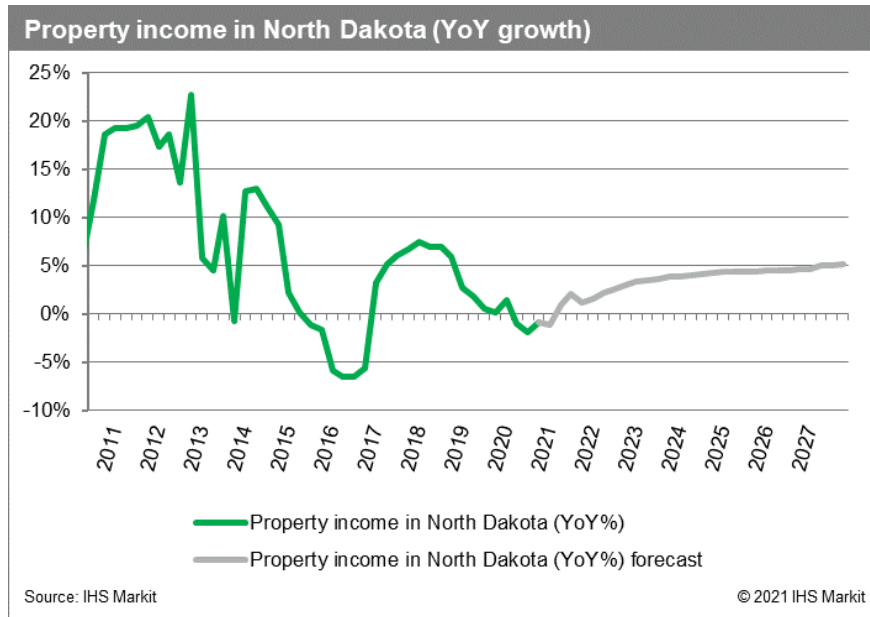


**Individual income tax**

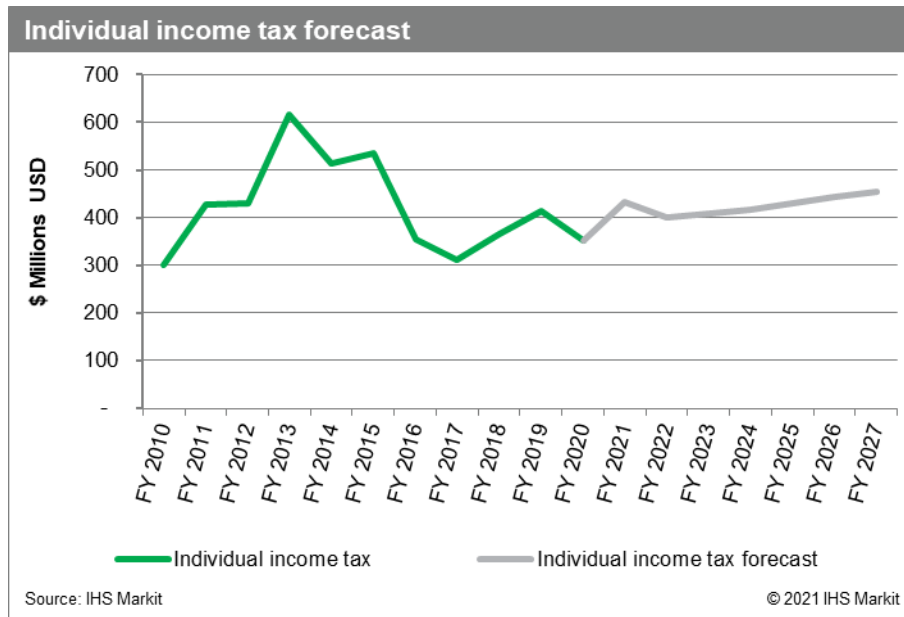
- > To model and forecast individual income tax revenues, IHSM built separate models for individual income tax submitted as withholdings versus as estimated payments.
- > Our model for individual income tax submitted as withholdings has a single driver: (1) total wage income in North Dakota. As income withholding is relatively stable and largely driven by total wage income in the state, the elasticity of income withholding with respect to total income is approximately one. This means that one percent growth of wage income will translate to one percent of withholding. After a spike in the middle of 2021, wage income falls back to the 5% growth range. Therefore, IHSM expects individual income submitted as withholding to grow around 5% by 2022 through the end of the forecast horizon.



- > The tax base of individual income tax submitted as estimated payments, on the other hand, is more volatile due to the nature of capital gains realization. That being said, a reasonable amount of variations in the tax base of individual income estimated payments is captured by changes in the (1) state's property income, i.e., personal rental income, personal dividend income, and personal interest income. State property income is the single driver for individual income tax submitted as estimated payments.

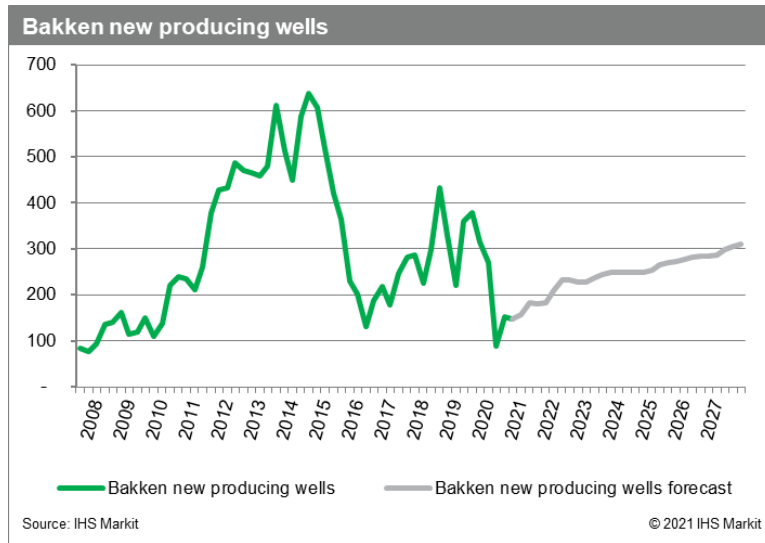


- > Insight about the estimated transfer to reserve fund accounts was provided by NDLM. About 23.7% rounded to the nearest million of the gross individual income tax revenue at the annual level is transferred to the reserve fund account. The percentage is based on the average of the past five years.
- > In total, IHSM expects net individual income tax collections to grow at 22.9% in FY 2021, followed by -7.3% in FY 2022 and 1.5% in FY 2023.
- > The big volatility in gross individual income tax collections in FY 2020, FY 2021 and FY 2022 reflects the filing and payment extension from April 2020 to July 2020. It is estimated that the annual changes of gross income tax collection would be 3.2%, 0.3%, 2% in FY 2020, FY 2021 and FY 2022 respectively barring the impacts of the extension.

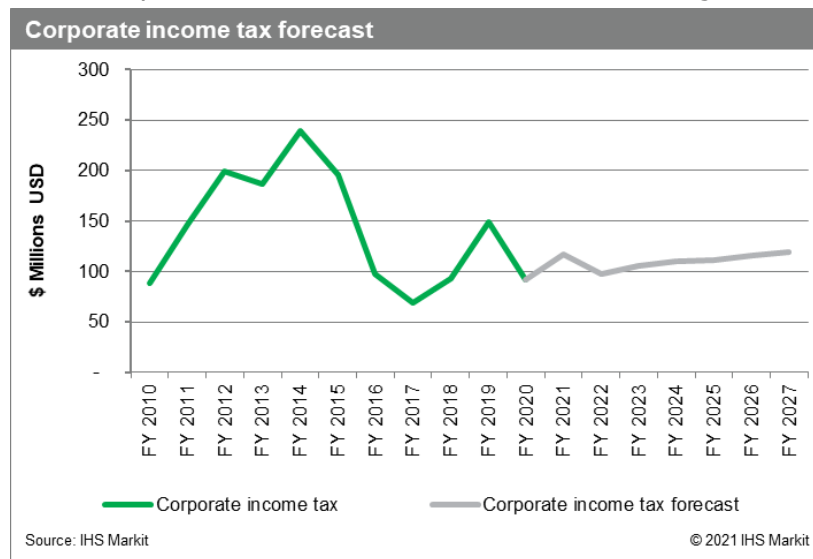


**Corporate income tax**

- > Gross corporate income tax collections are affected by (1) new producing wells in the Bakken play as an indicator of the well-being of oil companies. After increasing from the low in the second quarter of 2016, the new well count started to drop at the end of 2019 and hit levels not seen since 2008 by the second quarter of 2020. In 2021, well counts rise as the COVID-19 vaccine is rolled out. Though not as fast as 2021, the number of new producing wells grow through the forecast horizon.



- > Insight about the estimated transfer to reserve fund accounts was provided by NDLM. About 26.8% rounded to the nearest million of the gross corporate income tax revenue at the annual level is transferred to the reserve fund account. The percentage is based on the average of the past five years.
- > The IHSM forecast for net corporate income tax collections is 27.1% growth in FY 2021 followed by a 16.0% decline in FY 2022 and a 7.3% growth in FY 2023.



## V. Scenarios

Given the significant fiscal impacts of oil price variations in North Dakota, IHSM customizes high/low scenarios. The Optimistic scenario assumes demand growth is stronger than in the Baseline. The Pessimistic scenario assumes that new COVID-19 cases remain high and demand continue to be weak. IHSM then runs the model under each scenario to create forecast for major revenue streams.

Revenue Source	2019-21 Biennium Baseline	2019-21 Biennium Optimistic	2019-21 Biennium Pessimistic
Sales and use tax	1,779,129,718 -0.4%	1,799,519,085 0.7%	1,760,059,613 -1.5%
Motor vehicle excise tax	244,275,345 2.2%	244,737,333 2.4%	243,510,876 1.9%
Net individual income tax	784,678,144 0.8%	787,200,855 1.2%	780,848,566 0.4%
Net corporate income tax	208,125,376 -13.8%	212,917,229 -11.8%	204,704,966 -15.2%

Revenue Source	2021-23 Biennium Baseline	2021-23 Biennium Optimistic	2021-23 Biennium Pessimistic
Sales and use tax	1,795,249,810 0.9%	1,880,238,002 4.5%	1,682,844,338 -4.4%
Motor vehicle excise tax	260,940,310 6.8%	268,159,108 9.6%	256,423,137 5.3%
Net individual income tax	808,247,861 3.0%	830,978,304 5.6%	784,825,060 0.5%
Net corporate income tax	202,944,529 -2.5%	221,277,843 3.9%	181,014,880 -11.6%

Note: The percentages in the table reflect the change from the prior biennium

## V. Disclosures

The forecasts included in this report, including, but not limited to, those regarding tax revenues, are estimates, which have been prepared on the basis of certain assumptions and hypotheses. No representation or warranty of any kind is or can be made with respect to the accuracy or completeness of, and no representation or warranty should be inferred from, these forecasts. The tax revenue forecast contained in this report is based upon assumptions as to future events and, accordingly, is subject to varying degrees of uncertainty. Some assumptions inevitably will not materialize and, additionally, unanticipated events and circumstances may occur. Therefore, for example, actual tax revenues inevitably will vary from the forecasts included in this report and the variations may be material and adverse.

## **APPENDIX B – IHS Markit Sample State Economic Analysis Report**

The following pages provides an IHS sample of the State Economic Analysis Report for the state of Pennsylvania.

Diversification and robust high-tech sector boosting Pennsylvania economy

## Analysis

### *At a glance*

The state of Pennsylvania has mostly reopened for business with the spring decline of COVID-19 cases. That reopening, combined with warmer weather and apparent public confidence about the safety of resuming normal activity, has spurred a modest resurgence in payroll growth in the state after some rather weak winter months. Comparisons with year-earlier levels look impressive on the surface, but that is largely because of timing. State payrolls in May were up nearly 20,000 from April (on a seasonally adjusted basis), led by gains in food and accommodations along with private-sector educational services.

Beyond that, assessing the state's employment situation very much depends upon the frame of reference. May 2021 payrolls were more than a half-million higher than the year before but remain around 400,000 jobs below the pre-pandemic level of February 2020. Another way to look at it is that by May the state had regained nearly two-thirds of the jobs lost from February to April 2020. Of the jobs lost, 95,000 are in food and accommodations; restaurants are seeing a resurgence in traffic while hotel visits are gradually increasing, but activity in the sector remains well below pre-pandemic highs. Healthcare and social assistance jobs also have been stubbornly slow to return, with the sector still down 58,000 workers (-5.4%) from February 2020. Segments of professional and business services have also been slow to return, along with other services and arts and recreation.

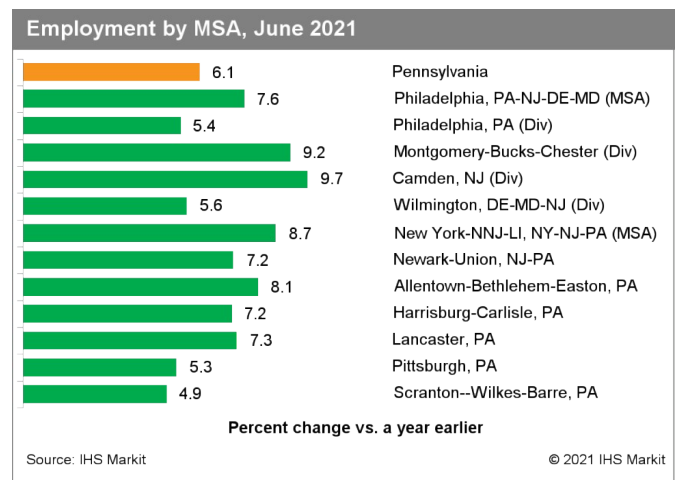
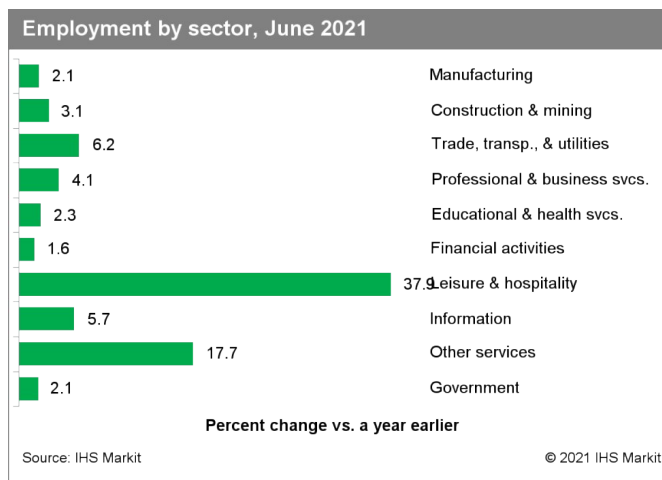
The "missing" jobs are mostly low-wage jobs; that issue is common across the country, not just in Pennsylvania. Several factors are involved, including potential health-related concerns about returning to work, lack of available childcare for working parents, shortages of workers with the right skills, or that business has not returned to adequate levels. Custodial and other support services for office buildings, for example, may still be facing layoffs because of the slow return to offices. Daycare centers, restaurants, and other small businesses may have gone out of business over the past year and not been replaced. The availability of unusually generous unemployment benefits with loosened eligibility requirements has also been named as a potential factor; the state has moved to reinstate work requirements to some degree, but so far has not joined the 25 states that have opted to end supplemental unemployment benefits prior to September.

State and local government payrolls also remain short by more than 30,000 jobs compared with February 2020. Most of those jobs are in public-sector educational areas, including support staff; the slow return of public schools and universities has caused a drop in payrolls. Most of those jobs are expected to return over the course of the summer and by the fall, when schools are expected to be reopened to students for fulltime in-person learning.

While the number of jobs remains well below the year-earlier level, wage and salary disbursements in the first quarter of 2021 were 1.6% higher than the year-earlier level. That further illustrates the point that most of the jobs lost over the past year were relatively low wage. Wage rates in lower-paying sectors are reportedly increasing rapidly as employers compete for workers, while remaining workers may be logging more hours than they were a year earlier.

The state's unemployment rate is well below the April 2020 level of 16.2% but has hovered in the 7.0% range for several

months. The decline is due partly to job gains and partly to a marked decline in the official labor force. Most of those “missing” workers are likely still living in the state and should return to the workforce as wages rise and jobs continue to become more available.

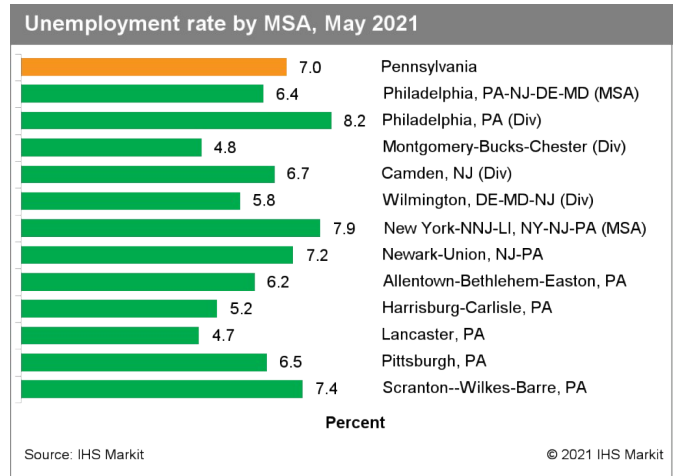
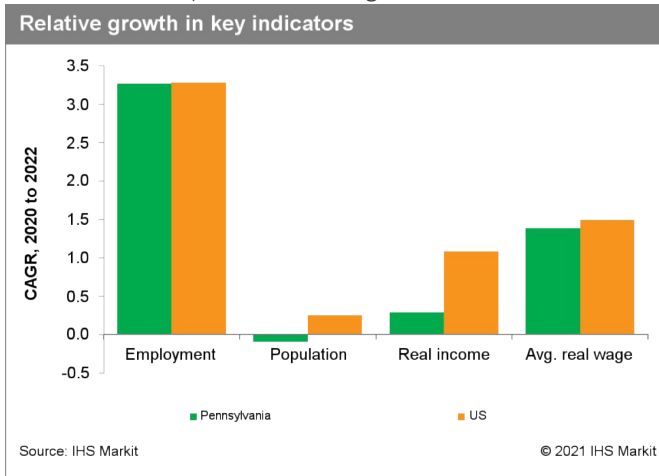


## Issues to watch

- Two steel plants in Beaver County are set to restart in the coming months, as Tenaris brings back production of seamless tubing and other products for the oil and natural gas industries. Around 250 workers will be recalled or hired this summer.
- U.S. Steel has postponed \$1.5 billion worth of planned upgrades at its Mon Valley Works facilities in western Pennsylvania as it reevaluates its capital investment strategy. The company’s previously announced plans included a state-of-the-art casting and rolling mill along with a cogeneration power plant. Work had been planned to begin in late 2020 and be finished by the end of 2022 but has been “delayed indefinitely.” The Mon Valley Works employs around 3,000 workers. The absence of fans and concertgoers at arenas and stadiums has prompted the layoffs of thousands of workers, many of them part-time, from food service and other roles in Pennsylvania’s major-league sports cities. In October 2020, Aramark reported the layoff of over 1,200 employees in Pittsburgh and around 1,800 in Philadelphia. These jobs should gradually return as limits on crowd size are relaxed, although that may not occur until well into 2021. Aramark also laid off 200 workers at the Pennsylvania Convention Center in Philadelphia because of its lack of activity.
- The life sciences industry continues to thrive in the Philadelphia region, with many research and development projects under way as well as investment in manufacturing facilities for pharmaceuticals and other products. A new phase of development is set to begin at the Philadelphia Navy Yard, with plans in place for a 100,000-square-foot lab and office complex along with a build-to-suit bio-manufacturing facility. In the meantime, plans are in place to redevelop recently vacated office space just south of City Hall on Broad Street into life science research lab space.
- Construction activity is well under way at the Schuylkill Yards Innovation Neighborhood, located between 30th Street Station and University City in Philadelphia. The site’s proximity to University City has made it a hot destination for life sciences space. In addition to a great deal of planned new construction over the next several years, existing space is being redeveloped for multiple purposes, many of them related to the life sciences.
- Among the myriad funding initiatives in the Biden administration’s proposed infrastructure package is funding for plugging abandoned oil and gas wells, which could leak hazardous materials as well as greenhouse gases. Pennsylvania has thousands of these wells, and the funding could help to create and sustain jobs to permanently close the wells.
- The *Philadelphia Inquirer* has closed its print shop in Montgomery County, idling 528 workers as it opts to

outsource its printing operation.

- Vanguard announced the transfer of nearly 1,000 workers in its Malvern headquarters as part of its deal with Infosys to outsource some back-office operations. The workers will now be employed by Infosys, which has reportedly committed to keeping the jobs in the area for at least a year. The move raises the risk of a significant number of well-paying jobs leaving the Philadelphia suburbs by late 2021.
- Honeywell has chosen Pittsburgh's Strip District to be the home of a technology center to develop artificial intelligence applications, machine learning, and advanced robotics for use in warehouses. Called Honeywell Robotics, the center will work with AI researchers at Carnegie Mellon's National Robotics Engineering Center to develop new technologies.



## Near-term developments

The ongoing reopening of the economy will allow state payrolls in the fourth quarter of 2021 to be 4.7% higher than the year-earlier level. Even then, payrolls will be 3% below their pre-pandemic peak. The jobs lost to the pandemic are not expected to return completely until late 2023, as the prolonged recovery expected in leisure and hospitality and some other low-wage sectors holds down the total. The combination of job gains and higher average wages will push total 2021 wage disbursements 8.3% higher than in 2020, when total payouts fell by 1.3%. In contrast, the multiple rounds of federal stimulus checks, supplemental unemployment benefits, and other government aid to households boosted total personal income in both 2020 and 2021, with gains of 7.0% and 6.0%, respectively. The (assumed) expiration of federal stimulus later in 2021 will cause shrink personal income slightly in 2022 despite a strong overall economy.

## Pennsylvania outlook over the next four quarters

	Baseline scenario			Pessimistic			Optimistic		
	Level	Percent	Rank	Level	Percent	Rank	Level	Percent	Rank
<b>Year-over-year change (2022Q2)</b>									
Employment	+272,587	+4.8	11	+248,724	+4.4	8	+292,915	+5.1	11
Personal income (mil.\$)	+6,585	+0.8	32	-4,238	-0.5	28	+18,150	+2.2	33
Real gross state product (mil. 2012\$)	+44,350	+6.1	10	+38,047	+5.2	8	+55,850	+7.7	13
<b>Level (2022Q2)</b>									
Unemployment rate (%)	4.9		11	5.4		10	4.6		11
Housing starts	26,175		15	24,188		15	26,511		15

Source: IHS Markit

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# Outlook

## Changes to the forecast (short term)

Real GSP	Higher
Employment	Higher
Personal income	Lower
Unemployment rate	Higher
Housing starts	Unchanged

Source: IHS Markit

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## Recovery will continue, but results will vary greatly by industry

Pennsylvania's economic growth over the next few years depends greatly on maintaining the progress made in preventing and treating COVID-19, as that will be key to a full reopening of the global economy. Even then, the leisure and hospitality sector may take several years to fully recover as travelers gradually return to the roadways and air; the future of business travel, including conventions, is a big wildcard for major cities. The return of workers to offices, especially in urban centers, also will influence the number of jobs in certain service sectors, including food service, retail, mass transit, and other personal services.

The return of jobs, and of the labor force, also depends on the reopening of schools and daycare centers. Some parents may decide to keep their children in remote learning, whether provided by public- or private-sector schools. The extent of that shift will affect the return of women in particular to the workforce.

IHS Markit analysts expect Pennsylvania payrolls to return to pre-slump levels by late 2023. Healthcare services should recover quickly from the early impact of the pandemic, and growth is likely to return to pre-COVID-19 levels, while social work roles should return as COVID concerns ease. State and local government employment also should recover quickly as schools return to mostly in-class learning by August or September. The future of administrative, custodial, and other types of office-support roles, along with other types of services, depends on the timing and extent of a return to in-office work after a year of remote work for many.

Professional, scientific, and technical services will continue to be a bright spot for the state in terms of job growth and economic output gains. High-tech fields such as artificial intelligence, industrial automation, and bio-sciences will see the most growth, while more traditional fields such as legal services will see more moderate gains.

Employment in the state's manufacturing sector will gradually increase over the next two years but remain below the pre-pandemic level. Manufacturers benefitted from strong demand during the pandemic, thanks to ample federal stimulus payments to households, low interest rates, and a shift away from spending on leisure travel, dining out, and other activities during the pandemic. Demand will remain relatively strong over the next two years as supply chains get restocked and demand remains solid. Job growth in the sector still faces longer-term challenges that existed even prior to 2020, such as a shortage of skilled workers and competition from process automation. In the meantime, older manufacturing plants in some sectors may no longer be profitable compared with newer facilities in other locations.

The state's healthcare and social service sector will continue to be a reliable source of job gains, but overall growth may be slower than in years past. Gains will be focused in the large metro areas, while smaller towns and rural areas feel the effects of low (or negative) population growth and fewer available services.

The natural resource and mining sector will start to regain jobs in 2022 after some big losses in 2020 and 2021. The ongoing gradual closures of coal mines is playing a role, but the sharp decline in fuel prices due to the pandemic also hurt natural gas activity. The state's natural gas industry will not return to the pace of growth seen 10 years ago, but solid

demand for thermal uses plus the development of new markets for natural gas liquids should allow for growth that more than offsets gradual declines in the coal sector.

The construction sector is getting a boost from the recent surge in home prices, which has spurred gains in single-family home building as well as activity in multifamily projects. The sector could get a further boost from the proposed American Jobs Plan, or a similar federal infrastructure package, if and when that is passed by Congress and signed by the president. For now, the parameters or likelihood of any such plan are unclear, so our forecast does not include a new infrastructure package. Construction of pipelines has slowed considerably and well drilling continues at a moderate pace, but downstream projects such as the Royal Dutch Shell ethane cracker in western Pennsylvania will provide jobs in the short term and could lead to more work in the longer term if chemical or plastics plants are built to take advantage of local supplies of natural gas liquids.

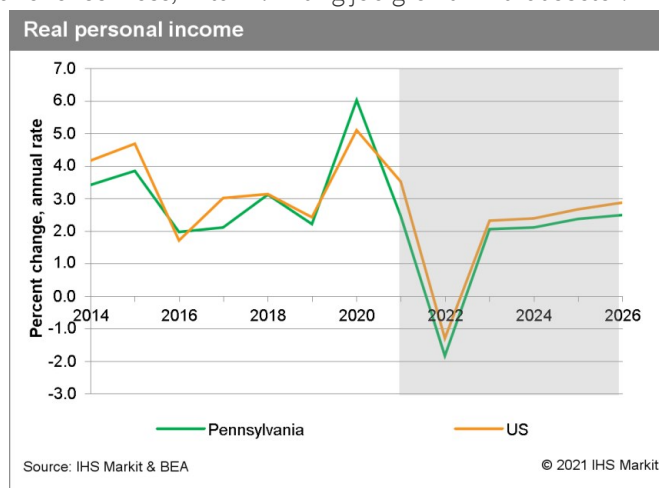
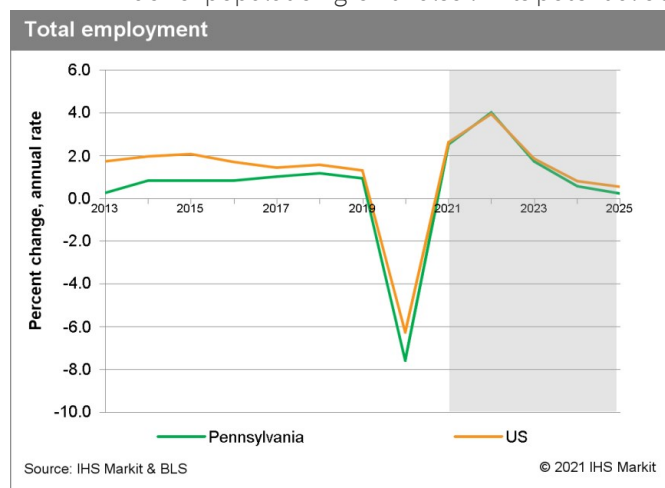
Real gross state product will grow by an annual average of 3.3% per year from 2020 to 2025, a bit below the national rate of 3.6%. Personal income will rise 3.6%, compared with 4.2% for the country.

## Strengths

- The Marcellus Shale natural gas deposit is a long-term asset for the state and region, although drilling activity has slowed to a crawl due to low prices for natural gas. The buildout of infrastructure to get the gas to market continues, with construction of pipelines, compressing stations, and processing facilities.
- Portions of the state, especially the Pittsburgh area, have become magnets for high-tech jobs such as software development. The state's numerous high-quality research universities are certainly playing a role in this development.
- Discussions of "high-tech" sectors often overlook healthcare, but they should not. The outbreak of the pandemic requires cutting-edge research into potential treatments and vaccines.

## Weaknesses

- An aging population and limited in-migration restrict labor-force growth.
- Lack of population growth also limits potential demand for services, in turn limiting job growth in that sector.



## Economic key indicators

	Historical									
	data edge	2017	2018	2019	2020	2021	2022	2023	2024	2024
Real gross state product (mil. 2012 \$)	2020	695,561	708,857	726,166	694,195	734,906	773,209	789,423	803,712	
Real gross state product (% change)	2020	0.6	1.9	2.4	-4.4	5.9	5.2	2.1	1.8	
Total employment (thous.)	2020	5,941	6,010	6,066	5,604	5,745	5,976	6,079	6,113	

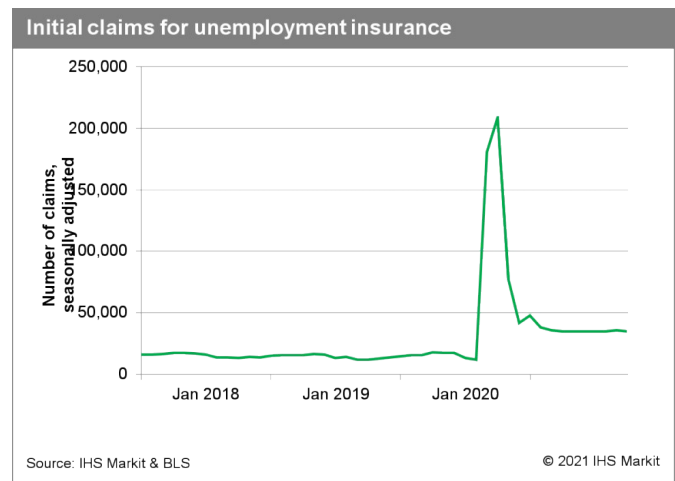
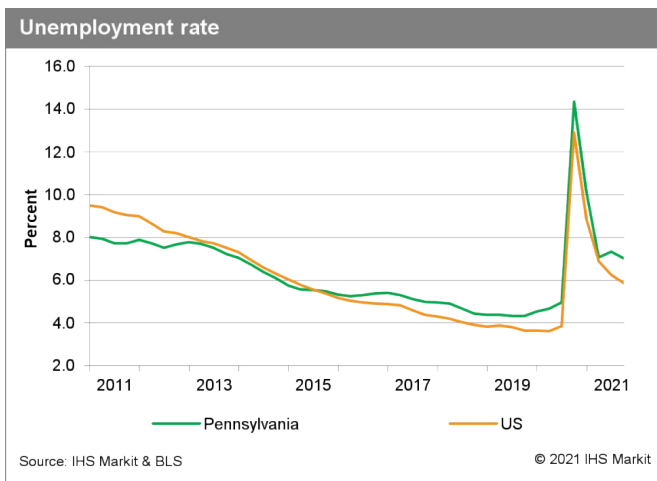
## Economic key indicators

	Historical								
	data edge	2017	2018	2019	2020	2021	2022	2023	2024
Total employment (% change)	2020	1.0	1.2	0.9	-7.6	2.5	4.0	1.7	0.5
Manufacturing employment (thous.)	2020	563	571	575	538	544	555	556	551
Nonmanufacturing employment (thous.)	2020	5,378	5,439	5,491	5,067	5,201	5,421	5,523	5,562
Population (thous.)	2020	12,950	12,980	12,993	12,993	12,969	12,968	12,978	12,991
Population (% change)	2020	0.2	0.2	0.1	0.0	-0.2	0.0	0.1	0.1
Unemployment rate (%)	2020	5.0	4.5	4.5	9.1	6.6	4.8	3.9	3.8
Personal income (% change)	2020	2.9	5.2	3.6	7.2	5.7	0.3	4.0	4.1
Real gross domestic product (% change)		2.3	3.0	2.2	-3.5	6.6	5.0	2.1	2.0
Employment (% change)		1.6	1.6	1.3	-5.7	2.8	3.7	1.7	0.7

Source: IHS Markit

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## Business climate



## Jobs report

Reported	Location	Company	Industry	+/-	Date	Reason
21-Apr	Philadelphia	Cancer Treatment Center	Healthcare	-365	2021q2	Closure
	Pittsburgh MSA	Nexii Building Solutions	Building material mfg.	300	2022	New plant
	Pittsburgh MSA	Tenaris	Steel manufacturing	250	2021	Plant reopening
21-Mar	Allentown MSA	XPO Logistics	Transp. and warehousing	-1,072	2021q2	Closure
	Pittsburgh MSA	Filterbuy Inc.	Air filter mfg.	120	2022	Expansion
21-Feb	Philadelphia	American Airlines	Transp. and warehousing	-1,060	2021q1	Temp. layoff
	Altoona MSA	Appvion Operations	Paper manufacturing	-293	2021q2	Closure
21-Jan	Clearfield County	GEO Secure Services	Corrections	-265	2021q1	Closure
20-Nov	York	Driv Inc.	Transp. and warehousing	-233	2021q2	Closure

## Jobs report

Reported	Location	Company	Industry	+/-	Date	Reason
20-Oct	Philadelphia MSA	Phil. Inquirer Printing Plant	Printing	-528	2020q4	Closure
	Pittsburgh	Aramark/PPG Paints Arena	Sports and entertainment	-626	2020q4	Temp. layoff
	Pittsburgh	Aramark/PNC Park	Sports and entertainment	-599	2020q4	Temp. layoff
	Philadelphia	Aramark/Wells Fargo Center	Sports and entertainment	-721	2020q4	Temp. layoff
	Philadelphia	Aramark/PA Convention Center	Sports and entertainment	-199	2020q4	Temp. layoff
	Philadelphia	Aramark/Citizens Bank Park	Sports and entertainment	-1,080	2020q4	Temp. layoff
20-Jul	Pittsburgh MSA	Consol Energy	Coal mining	-233	2020q3	Layoff
20-Feb	Pittsburgh MSA	Chevron	Energy	-288	2020	Closure
	Pittsburgh MSA	FirstEnergy Generation	Electrical utility	-113	2019q4	Closure
	Pittsburgh	Amazon	Retail distribution	800	2020	New facility
Jul-19	Philadelphia	Philadelphia Energy Solutions	Petroleum refinery	-1,024	2019q3	Closure
	Pittsburgh	LifeCare Hospitals of Pittsburgh	Healthcare	-215	2019q3	Closure
	St. Marys	Ledvance, LLC	Lighting mfg.	-170	2019q4	Closure
Jun-19	Pittsburgh	Riverbend Foods	Food mfg.	-396	2019q3	Closure
	Philadelphia	Hahnemann Univ. Hospital	Healthcare	-2,572	2019q3	Closure
May-19	Kreamer	Wood-Mode Inc.	Furniture mfg./cabinets	-938	2019q2	Closure
	Reading	Reading Eagle Company	Information/newspaper	-221	2019q2	Closure
	Scranton MSA	Bimbo Bakeries	Food mfg.	-151	2019q3	Closure
	York Co.	Specialty Industries	Packaging	-180	2019q3	Closure
Apr-19	Philadelphia MSA	Glen Mills Schools	Education	-250	2019q2	Layoff
Feb-19	Allentown MSA	New England Motor Freight	Transportation	-200	2019q1	Closure
	Harrisburg MSA	New England Motor Freight	Transportation	-150	2019q1	Closure
	Pittsburgh MSA	New England Motor Freight	Transportation	-100	2019q1	Closure
	Philadelphia MSA	Synergy Pharmaceuticals	Biopharmaceuticals	-137	2019q2	Closure
Jan-19	Lancaster	UPMC Pinnacle Lancaster	Healthcare	-505	2019q1	Closure
	Pittsburgh	Ferro Corporation	Coatings	-206	2019q1	Closure
Dec-18	Scranton MSA	Valmont Industries	Fabricated metals mfg.	-180	2019q1	Closure
Nov-18	Philadelphia	Bartash Printing	Printing	-163	2018q4	Closure
Sep-18	Various	Darrenkamp's	Food retailing	-641	2018q4	Closures
Aug-18	Wilkes-Barre	WNS Global Services	Business services	-107	2018q4	Closure
	Bucks County	Dedicated Logistics	Transp./warehousing	-120	2018q4	Closure
	Chester County	U.S. Traffic Network	Information	-118	2018q4	Closure
	Scranton	Merakey	Social services	-171	2018q4	Closure
Jul-18	Philadelphia	Dream Center Education	Private education svcs.	-171	2018q3	Closure
Jun-18	Lancaster County	Worley & Obetz	Retail energy svcs.	-183	2018q2	Closure
	Harrisburg	AT&T	Information	-101	2018q3	Layoff
	Pittsburgh MSA	The Lash Group	Healthcare svcs.	-202	2018q3	Layoff
May-18	Philadelphia	Philadelphia Shipyard	Ship manufacturing	-275	2018q3	Layoff
	Allentown MSA	NFI Interactive Logistics	Transp./warehousing	-261	2018q3	Layoff
Apr-18	Scranton MSA	Quad Graphics	Printing	-167	2018q2	Closure
	Philadelphia	Worldwide Flight Svcs.	Transportation	-161	2018q2	Layoff
Mar-18	Bedford	Schneider National Carriers	Transportation	-155	2018q2	Layoff
	Pittsburgh	Riverbend Foods	Food manufacturing	-512	2018q2	Closure

## Jobs report

Reported	Location	Company	Industry	+/-	Date	Reason
	Altoona	Cenveo	Printing	-144	2018q2	Closure
Feb-18	Montgomery Co.	Arcelor Mittal Plate	Manufacturing	-125	2018q2	Layoff
Jan-18	Pittsburgh MSA	MEPCO	Mining	-370	2018	Closure
	Pittsburgh MSA	Pittsburgh Glass Works	Manufacturing	-118	2018q3	Closure
	Harrisburg	Sodexo	Food service	-389	2018q1	Layoff
Nov-17	Bethlehem	Wells Fargo	Finance	-468	2017q4	Closure
Oct-17	Philadelphia MSA	Johnson & Johnson	Pharmaceuticals	-297	2017q4	Closure
	Philadelphia MSA	Merck	Pharmaceuticals		2018q1	Closure
Aug-17	York	Excel/DHL	Transportation	-223	2018q1	Layoff
Jun-17	Wilkes-Barre	Air Products	Manufacturing	-156	2017q3	Closure
May-17	Philadelphia MSA	Blossom	Healthcare	-179	2017q3	Layoff
	Philadelphia MSA	Kellogg	Food mfg./distribution	-292	2017q3	Closure
	Pittsburgh	Kellogg	Food mfg./distribution	-211	2017q3	Closure
Dec-16	York	Quad Graphics	Printing	-193	2017q1	Closure
Nov-16	Philadelphia MSA	Almac Group	Pharmaceuticals	312	2017-19	Expansion
Nov-16	York County	CEVA Logistics	Transportation	-193	2017q1	Layoff
Sep-16	Philadelphia	Sodexo	Food service	-266	2016q4	Layoff
Aug-16	Philadelphia MSA	Merck & Co.	Pharmaceuticals	-148	2016q3	Closure
Aug-16	Pittsburgh MSA	Caterpillar	Machinery mfg.	-155	2016q4	Closure
Jul-16	Pittsburgh MSA	Murray American Energy	Mining	-276	2016q3	Layoff
Jul-16	Pittsburgh MSA	FedEx Ground	Transportation	-139	2016q3	Layoff
Jun-16	Lehigh Valley	KraftHeinz	Food mfg.	-341	2016q3	Closure
May-16	Pittsburgh MSA	Education Mgmt. Corp	Education	-222	2016q3	Layoff
Mar-16	Venango Co.	Joy Global Mining	Mining	-382	2016q1	Layoff
Feb-16	Pittsburgh MSA	ATI Flat Rolled Products	Metals mfg.	-241	2016q2	Layoff
Feb-16	Philadelphia MSA	Quad Graphics	Printing	-152	2016q1	Closure
Jan-16	Delaware Co.	Sunoco	Transportation	-176	2016q2	Layoff
Jan-16	Philadelphia	Cardone	Auto parts mfg.	-1,366	2016-18	Layoff
Jan-16	Philadelphia	North Phila. Health System	Healthcare	-700	2016q1	Closure

Source: IHS Markit

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## Real estate and construction

### Real estate key indicators

	Historical data edge	2017	2018	2019	2020	2021	2022	2023	2024
<b>Construction activity</b>									
Housing starts, total private	2020	22,995	23,181	21,527	22,994	33,686	26,328	25,280	25,428
Housing starts, total private (% change)	2020	-3.4	0.8	-7.1	6.8	46.5	-21.8	-4.0	0.6

## Real estate key indicators

	Historical								
	data edge	2017	2018	2019	2020	2021	2022	2023	2024
Single-family units	2020	18,064	18,484	16,278	17,557	23,242	20,027	19,561	19,723
Multifamily units	2020	4,932	4,698	5,249	5,437	10,444	6,301	5,719	5,705
<b>Prices and sales</b>									
Home price, existing average (\$)	2020	211,794	218,868	226,607	238,187	254,890	263,403	271,714	279,876
Home price, existing average (% change)	2020	3.2	3.3	3.5	5.1	7.0	3.3	3.2	3.0
Home sales, existing single-family units (thous.)	2020	169.4	156.5	155.9	163.4	181.9	170.8	163.3	159.6
Home sales, existing single-family units (% change)	2020	-0.4	-7.6	-0.4	4.8	11.3	-6.1	-4.4	-2.2

Source: IHS Markit

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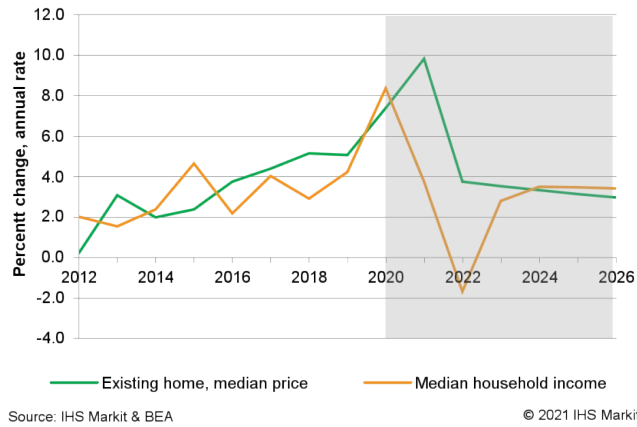
The Federal Housing Finance Agency's Purchase-Only House Price Index was 11.9% higher than a year earlier in the first quarter of 2021 in Pennsylvania. That was slightly below the national average price appreciation of 12.6% over the same period. Pennsylvania's home prices have surged for most of the same reasons as those across the country, led by a dearth of homes available for sale. The rate of housing starts has kicked in in the state over the past year, but that is after years of relatively subdued activity in the wake of the 2008 housing crisis.

Construction of single-family homes in particular was sluggish over the past decade, while multifamily units were boosted by population gains in cities along with gains in senior living units and an apparent disinterest among younger homeowners in lawn maintenance, home repairs, and other aspects of single-family living. The COVID-19 pandemic flipped that script to some extent, with a move to remote work and a desire for social distancing boosting demand for single-family homes much more rapidly than supply could be increased. High costs of materials, a shortage of qualified labor, and ongoing challenges related to zoning in many areas are hampering efforts to boost construction while low mortgage interest rates and high personal incomes stimulate demand.

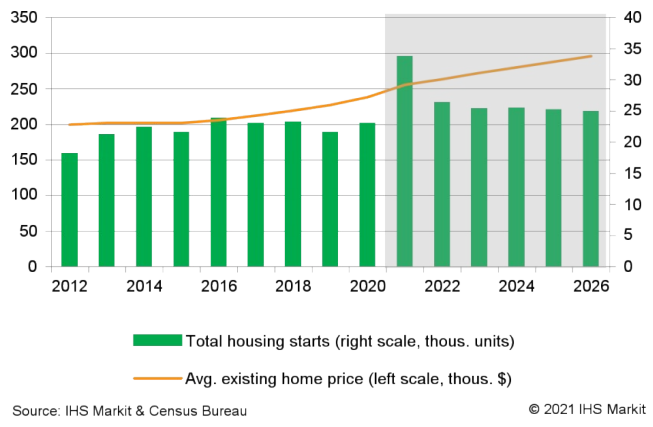
Even with the challenges faced by homebuilders, housing starts reached 23,000 units in Pennsylvania in 2020, on a par with the levels since 2013. We expect starts to increase to over 34,000 units in 2021, with strong gains in single-family and multifamily units. The pace of starts will drop to around 26,000 units in 2022, then settle around 24,000 units for the next few years as homebuilders continue to catch up with demand. Of course, much of this depends on factors such as interest rates remaining relatively low, an adequate supply of labor, and homebuilders overcoming zoning challenges in some areas.

In the meantime, construction activity related to the state's natural gas industry has cooled after years of work completing new wells and building pipelines to transport the new supplies of natural gas and liquids to market. Persistently low market prices have slowed well drilling, while the buildout of pipeline infrastructure is mostly complete for now. The ethane cracker plant is still being built in Beaver County, which when completed will provide an important outlet for natural gas liquids produced in western Pennsylvania.

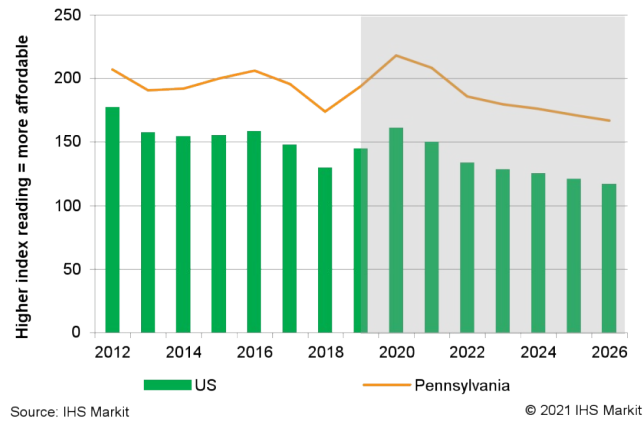
Home prices vs. median household income



Home prices vs. housing starts



Housing affordability



## Key mortgage foreclosure statistics for Pennsylvania

	Share of Total Loans	U.S. Average	U.S. Rank
Total loans in foreclosure, end of 2021Q1	0.8%	0.5%	9
Loans in foreclosure, begun during 2021Q1	0.1%	0.0%	8
Conventional loans in foreclosure, end of 2021Q1	0.7%	0.5%	8
FHA loans in foreclosure, end of 2021Q1	1.1%	0.9%	15

Source: Mortgage Bankers Association

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## Profile

### Economic structure

Pennsylvania's economy is relatively diverse compared with many other states, as evidenced by the distribution of employment and output among major industry sectors. The state is bookended by two of the larger metro areas in the

country in Philadelphia and Pittsburgh, with the rest of the state featuring smaller cities and towns that support both service and goods-producing sectors.

The combined education and healthcare industry, the so-called eds and meds sector, is a vital part of the state economy. The state's education providers, especially its notable research universities, not only provide jobs on campus but also help to nurture new businesses. The Pittsburgh region has seen rapid growth in high-tech fields such as software development and robotics, thanks in part to the presence of its universities and the graduates they produce. Philadelphia's universities continue to support regional health systems and spawn startups in the life sciences that are a major economic driver in the region.

The state's manufacturing sector may not be what it was during the heydays of Pittsburgh's dominance in the steel industry and Philadelphia's claim to be "Workshop of the World," but the state's share of manufacturing employment remains above the national average. Output of pharmaceuticals remains an engine of growth, while the rapid increase in the state's production of natural gas liquids provides the basis for gains in production of chemicals and plastics.

Pennsylvania's transportation and warehousing sector continues to benefit from its location in the midst of tens of millions of people along the Northeast Corridor, and access via interstate highways, railroads, ocean and river ports, and air cargo hubs. The northeastern part of the state in particular provides a lower-cost distribution hub for cargo coming through the ports around New York City.

## Pennsylvania - Employment structure

	2010		2020		2030	
	Share of total	Location quotient (US avg = 100)	Share of total	Location quotient (US avg = 100)	Share of total	Location quotient (US avg = 100)
<b>Construction</b>	<b>3.8%</b>	<b>90</b>	<b>4.3%</b>	<b>87</b>	<b>4.2%</b>	<b>86</b>
<b>Natural Resources and Mining</b>	<b>0.5%</b>	<b>88</b>	<b>0.4%</b>	<b>95</b>	<b>0.5%</b>	<b>109</b>
<b>Manufacturing</b>	<b>10.0%</b>	<b>113</b>	<b>9.4%</b>	<b>112</b>	<b>8.8%</b>	<b>114</b>
Durables	6.0%	110	5.6%	107	5.2%	109
Nondurables	4.0%	118	3.8%	120	3.6%	123
<b>Trade, Transportation, and Utilities</b>	<b>19.1%</b>	<b>101</b>	<b>18.6%</b>	<b>101</b>	<b>16.8%</b>	<b>103</b>
Wholesale Trade	3.9%	94	3.6%	91	3.8%	93
Retail Trade	11.1%	99	10.0%	97	7.6%	97
Transportation and Warehousing	3.7%	117	4.6%	121	5.2%	121
Utilities	0.4%	100	0.4%	105	0.3%	106
<b>Information</b>	<b>1.7%</b>	<b>80</b>	<b>1.5%</b>	<b>76</b>	<b>1.4%</b>	<b>73</b>
<b>Financial Activities</b>	<b>5.5%</b>	<b>95</b>	<b>5.5%</b>	<b>95</b>	<b>5.1%</b>	<b>95</b>
Finance and Insurance	4.5%	103	4.4%	105	4.1%	103
Real Estate and Rental and Leasing	1.0%	70	1.1%	71	1.0%	71
<b>Professional and Business Services</b>	<b>12.3%</b>	<b>95</b>	<b>13.4%</b>	<b>95</b>	<b>16.1%</b>	<b>93</b>
Prof., Scientific, and Technical Svcs	5.4%	94	6.0%	94	7.8%	93
Management of Companies	2.1%	143	2.2%	136	2.0%	140
Admin/Support and Waste Mgt	4.8%	84	5.2%	85	6.3%	85
<b>Education and Health</b>	<b>20.1%</b>	<b>131</b>	<b>21.5%</b>	<b>133</b>	<b>21.7%</b>	<b>133</b>
Educational Services	4.0%	171	3.9%	159	4.0%	161
Healthcare and Social Services	16.0%	124	17.6%	129	17.8%	128
<b>Leisure and Hospitality</b>	<b>8.9%</b>	<b>89</b>	<b>9.5%</b>	<b>87</b>	<b>8.9%</b>	<b>86</b>
Arts, Entertainment, and Recreation	1.6%	108	1.7%	102	1.9%	99

## Pennsylvania - Employment structure

	2010		2020		2030	
	Share of total	Location quotient (US avg = 100)	Share of total	Location quotient (US avg = 100)	Share of total	Location quotient (US avg = 100)
Accommodation and Food Services	7.3%	86	7.8%	85	7.0%	83
<b>Other Services</b>	<b>4.5%</b>	<b>112</b>	<b>4.3%</b>	<b>112</b>	<b>4.9%</b>	<b>116</b>
<b>Government</b>	<b>13.7%</b>	<b>79</b>	<b>11.7%</b>	<b>77</b>	<b>11.6%</b>	<b>77</b>
Federal Government	1.9%	85	1.6%	87	1.6%	86
State and Local Government	11.8%	78	10.0%	75	10.0%	75

Source: IHS Markit & BLS

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## Labor force and demographics

Recent data from the Census Bureau's American Community Survey indicate that Pennsylvania's population decreased by around 10,000 residents from mid-2019 to mid-2020, to just under 12.8 million. The state's rate of "natural increase," the number of births minus the number of deaths, was only slightly positive, at just under 1,000. Pennsylvania's relatively low birthrate is partly a function of its aging population—at 18.2%, the proportion of residents aged 65 or older exceeds the US average of 16.0%.

Net in-migration from outside the United States has been a steady source of population gains for Pennsylvania, thanks partly to the presence of major research universities which attract a global student body. The state's estimated gains from immigration from 2019 to 2020 were less than half the previous year's level, dropping from 33.0 million to 14.7 million. National policies that limit immigration, both legal and otherwise, likely limited inflows, along with travel and migration restrictions stemming from the COVID-19 outbreak in early 2020.

Net domestic migration, the number of people who move to Pennsylvania from other states less the number who move from the state to another, runs consistently negative. The net outflow is estimated at nearly 26,000 residents from mid-2019 to mid-2020. That loss is 5,000 more than in the previous year, but below other recent years, and around half the net loss from mid-2016 to mid-2017, when net out-migration topped 50,000. Many factors contribute to these losses, including relatively high costs of living in some areas and the move of retired folks to warmer climes.

Notwithstanding the recent loss in population, Pennsylvania remains the fifth-most-populous state in the country. Its growth rate of -0.1% from 2019 to 2020 ranked 41st among all states, with nine states suffering even more rapid population declines. In all, 14 states had population declines last year, according to this set of estimates. The full set of population estimates by state based on the 2020 decennial Census will be released later this year.

## Age distribution

	Percent of population, 2019		Average annual percent change	
	Pennsylvania	United States	2014-19	2019-24
0-24	29.7	31.7	-0.8	-0.6
25-34	13.3	14.0	1.1	-0.8
35-44	11.7	12.6	-0.4	1.0
45-54	12.9	12.7	-2.1	-1.0
55-64	14.1	12.9	0.8	-0.9

## Age distribution

	Percent of population, 2019		Average annual percent change	
	Pennsylvania	United States	2014-19	2019-24
65+	18.2	16.0	2.2	2.2

Source: IHS Markit

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## Population characteristics (percent of total population, 2019)

	Pennsylvania	United States
High school diploma *	91.0	88.3
Higher education **	40.4	41.2
Foreign-born	7.2	13.7
Non-US citizen	3.3	6.8
Median household income	60,905	61,937

\*Population over 25 years of age

\*\* Associate's, Bachelor's, or  
Advanced Degree

Source: American Community Survey

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## Pennsylvania's top-five counties by per capita income (2019)

	Income (\$)	Encompassing MSA
Chester, PA	87,500	Montgomery Cty-Bucks Cty-Chester Cty (Division of Philadelphia MSA)
Montgomery, PA	82,000	Montgomery Cty-Bucks Cty-Chester Cty (Division of Philadelphia MSA)
Bucks, PA	75,900	Montgomery Cty-Bucks Cty-Chester Cty (Division of Philadelphia MSA)
Delaware, PA	69,800	Philadelphia (Division of Philadelphia MSA)
Allegheny, PA	65,800	Pittsburgh

Source: U.S. Bureau of Economic  
Analysis and IHS Markit

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## Personal income indicators

	Historical								
	data edge	2017	2018	2019	2020	2021	2022	2023	2024
Per capita personal income (thous. \$)	2019	52.6	55.3	57.2	61.3	64.9	65.1	67.6	70.4
Per capita personal income (% change)	2019	2.7	5.0	3.5	7.2	5.9	0.3	3.9	4.0
Average annual wage (thous. \$)	2020	54.4	56.1	58.0	62.3	65.9	67.5	69.7	72.3
Average annual wage (% change)	2020	3.0	3.1	3.4	7.4	5.7	2.5	3.1	3.8

## Personal income indicators

	Historical								
	data edge	2017	2018	2019	2020	2021	2022	2023	2024
Total personal income (mil. \$)	2020	681,659	717,255	742,924	796,499	842,145	844,400	877,843	914,188
Total personal income (% change)	2020	2.9	5.2	3.6	7.2	5.7	0.3	4.0	4.1
Wage disbursements (mil. \$)	2020	325,282	339,201	353,818	350,711	380,732	405,725	425,651	443,989
Wage disbursements (% change)	2020	4.0	4.3	4.3	-0.9	8.6	6.6	4.9	4.3
Other labor income (mil. \$)	2020	82,385	85,310	87,650	86,403	91,847	97,139	101,702	105,715
Other labor income (% change)	2020	2.7	3.6	2.7	-1.4	6.3	5.8	4.7	3.9
Dividends, interest & rent (mil. \$)	2020	119,485	128,503	131,208	129,981	132,766	141,398	146,221	150,322
Dividends, interest & rent (% change)	2020	5.5	7.5	2.1	-0.9	2.1	6.5	3.4	2.8
Transfer payments (mil. \$)	2020	129,940	138,843	143,936	204,757	208,002	174,272	178,810	186,938
Transfer payments (% change)	2020	0.7	6.9	3.7	42.3	1.6	-16.2	2.6	4.5
Other income (mil. \$)	2020	24,566	25,398	26,312	24,648	28,797	25,865	25,459	27,224

Source: IHS Markit

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## Tax and revenue picture

Pennsylvania's tax revenue picture is much better than was expected a year earlier. The availability of remote work allowed many jobs to be preserved or restored quickly, especially in higher-wage sectors. Pandemic-related restrictions on service-sector businesses certainly hampered business in several areas, but also may have shifted some spending toward goods; to some extent, this also shifted consumer spending away from non-taxable services and toward taxable goods, boosting sales tax revenues. Very solid demand for automobiles also boosted tax revenues from higher-value items. Federal stimulus ended up being much higher than expected at the start of the pandemic, which supported overall business activity and indirectly boosted tax revenues.

The American Rescue Plan of 2021 also will steer ample funds directly to states and cities. These funds will ease budget pressures in many areas and help to avoid cuts in state services and employment.

## Pennsylvania tax revenue

	Latest quarter		Total of latest four quarters			Share of total revenue (percent)
	Qtr ended	Year/year	Year ended	Year/year	Five-year	
	March 2021 (thous. \$)	change (percent)	March 2021 (thous. \$)	change (percent)	avg. change (percent)	
Total Tax Collections (Thousands)	12,173,111	5.5	42,158,631	-2.6	2.5	-
General Sales and Gross Receipts	3,101,102	6.3	12,293,357	0.7	3.9	29.2
Individual Income	3,699,855	10.9	14,078,466	-2.5	3.3	33.4
Corporate Net Income	588,986	9.9	3,079,993	-4.3	5.9	7.3
Motor Fuel Sales	687,004	-12.3	2,849,886	-12.1	-0.7	6.8
Motor Vehicle and Driver's License	316,331	7.3	1,304,854	-0.9	5.7	3.1
Alcoholic Beverage Sales	100,952	7.1	405,288	-3.4	1.8	1.0
Tobacco Product Sales	232,441	7.7	1,229,097	-1.8	5.5	2.9
Other Taxes	3,446,440	2.5	6,917,690	-3.5	-1.6	16.4

## Energy

Production of natural gas in Pennsylvania totaled 6.8 trillion cubic feet in 2019, as expanded pipeline capacity allowed the state's production to reach more markets. The state's natural gas production has grown exponentially since the introduction of hydraulic fracturing of shale gas deposits more than 10 years ago. We expect the rate of gain to slow in the near future, but remain positive, as the development of additional takeaway capacity via pipeline is being challenged on many fronts. Natural gas was welcomed as an alternative to coal for electricity production, but usage for home heating and appliances is starting to face resistance in some areas due to apparent concerns about the release of methane and other greenhouse gases.

Demand for coal has been under pressure for years due to concerns over greenhouse gas emissions and climate changes. Coal production in Pennsylvania totaled 50 million tons in 2019. That was slightly higher than the previous two years, but down from the recent peak of 60 million tons in 2014 and down by roughly one-third from 2001 production of 74 million tons. Exports of coal, especially metallurgical coal used in the production of steel, provide a source of supplemental demand. Several coal-burning power plants have been shuttered in recent years, but others remain as source of base-load production for energy grids.

Four operating nuclear power plants remain in operation in the state following the permanent shutdown of the Three Mile Island facility south of Harrisburg in 2019. The Beaver Valley nuclear plant, in the Pittsburgh region, was scheduled to shut down in 2020 but that decision was reversed after Governor Wolf decided to join the Regional Greenhouse Gas Initiative (RGGI). Provisions of the RGGI will provide an advantage to carbon-free energy producers by levying fees in coal, gas, and oil-fired plants. One reactor unit has been shut down at the Peach Bottom Atomic Power Station, but two units remain in operation.

### Pennsylvania average electricity prices for quarter ended March 2021

	Price (cents/kWh)	Relative price (US avg. = 1)	State price rank (highest = 1)	Year/year change	Five-year avg. change
Residential	13.4	1.0	16	-4.2	-1.1
Industrial	6.1	0.8	37	-0.4	-2.2
Commercial	8.5	0.7	47	-1.2	-2.0

Source: IHS Markit, EIA

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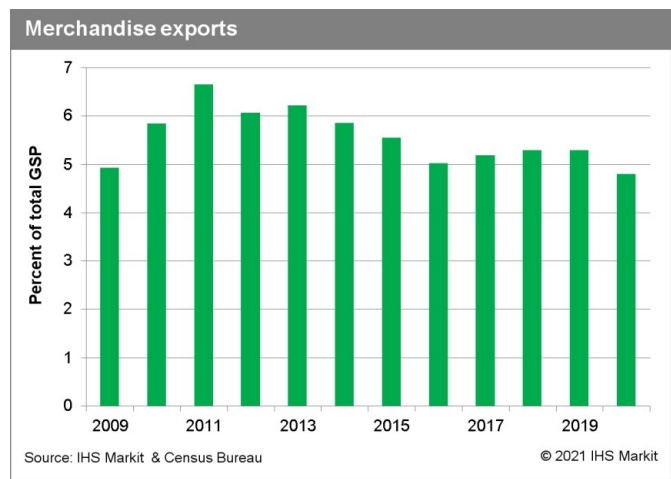
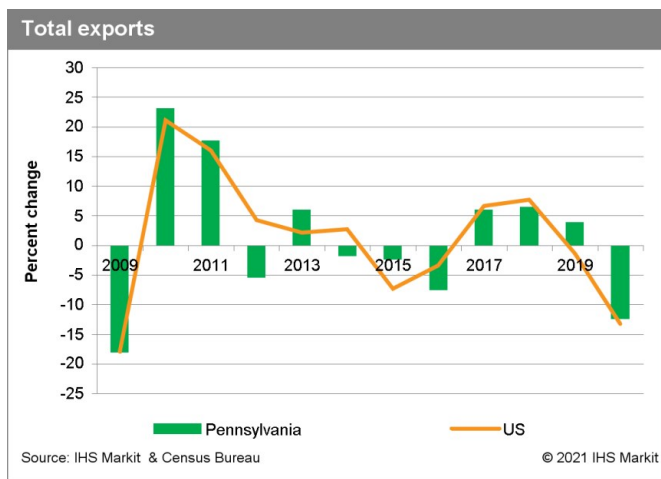
### Pennsylvania average natural gas prices for quarter ended March 2021

	Price (dollars/million btu)	Relative price (US avg. = 1)	State price rank (Highest = 1)	Year/year change	Five-year avg. change
Residential	12.7	1.0	26	-4.0	2.4
Industrial	7.9	1.6	6	1.9	1.7
Commercial	9.3	1.2	14	-3.8	2.6

Source: IHS Markit, EIA

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## Export performance



Pennsylvania's export merchandise value fell 12% in 2020 due to the effects of the pandemic, settling at \$37.5 billion. As every state faced the same limitations, Pennsylvania's share of the US export market remained the same at 2.6%. That puts Pennsylvania in 10th place among states in terms of export value, with South Carolina and Georgia close behind and gaining rapidly. In 2020, the state's first- and fourth-largest export categories were related to vaccines, while the second and third largest were natural resources: propane and bituminous coal, respectively, accounting for about \$5 billion in exports.

Canada remained the state's primary export destination, receiving 26.0% of total export value. Mexico remained in second place with a 10.2% share of Pennsylvania's exports, up from 9.9% in 2019, and mainland China was in third place with a 7.3% share, up from 5.9% in 2019 and putting it more in line with where it was before the 2018–19 trade-rule negotiations caused it to briefly drop. Overall exports to Canada and Mexico were mostly unfazed by the uncertainty of the trade-rule renegotiation, while exports to mainland China decreased by just 2.1% in 2019 after holding steady in 2018.

### Pennsylvania's top export product categories in 2020

	Share of total (%)	Value (mil. \$)	Change y/y (%)
Chemicals	22.9	8,579	-6.4
Computer & electronic products	10.5	3,941	-3.4
Primary metal manufacturing	10.4	3,900	-2.0
Machinery	9.8	3,653	-7.9
Transportation equipment	5.9	2,217	-38.6
Electrical equipment	5.0	1,870	-17.8
Food manufactures	4.4	1,645	-3.4
Miscellaneous manufactured commodities	4.4	1,637	-2.4
Oil & gas	4.3	1,611	-5.4
Plastics & rubber products	4.2	1,587	-6.8
Other	18.2	6,815	-23.1

Source: Census Bureau

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## Pennsylvania's largest export destinations in 2020

	Share of total (%)	Value (mil. \$)	Change y/y (%)
Canada	25.9	9,699	-13.4
Mexico	10.2	3,805	-10.3
China (mainland)	7.3	2,740	7.7
United Kingdom	6.1	2,280	-6.3
Japan	4.5	1,668	-28.0
Germany	4.0	1,504	-2.4
Netherlands	3.5	1,311	-28.0
India	2.7	1,004	-34.5
Belgium	2.5	919	-48.9
Switzerland	2.1	779	85.5
Other	31.4	11,745	-12.3

Source: Census Bureau

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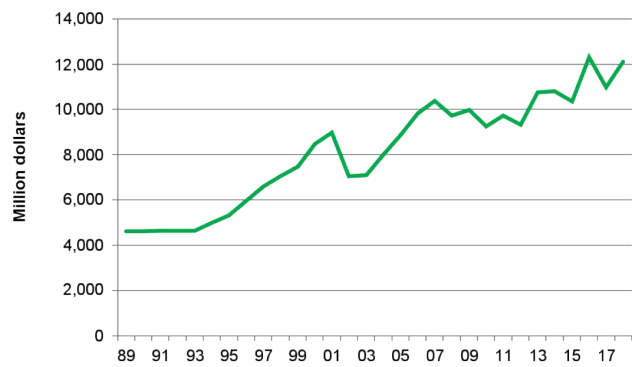
## High tech

Pennsylvania remains a leader in various high-tech sectors, particularly in the Philadelphia and Pittsburgh areas. Traditional pharmaceutical in southeast Pennsylvania has suffered setbacks over the past couple of decades, but the broader life sciences sector is booming. The city's universities and research hospitals are spawning numerous new and expanding ventures in biosciences, including companies such as Spark Therapeutics. The COVID-19 pandemic brought many challenges and opportunities to the sector, providing a boost to pharmaceuticals manufacturing while also opening the door to the conversion of vacated office space to research laboratories for bio-science firms.

In the meantime, Pittsburgh has emerged as a thriving research hub in areas like artificial intelligence, robotics, and autonomous driving. Much of this action has emerged from research programs at Carnegie Mellon University and the University of Pittsburgh, while their highly skilled graduates are attracting employers such as Google to the region. Pittsburgh-based Astrobotic is playing an integral role in the return of the United States to the moon by building lunar landers and serving as mission control for the first commercial mission to the moon.

Ventures such as these helped to boost payroll growth in scientific research and development services to a 3.4% annual average over the past 10 years, with a further gain of 5.1% per year over the next 10 years. Computer systems design and services continues to provide steady growth of well-paying jobs in the state, with average annual growth around 2.5%.

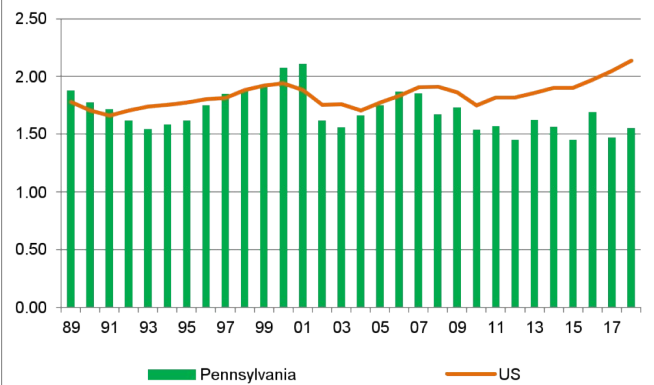
### R&D spending



Source: IHS Markit, National Science Foundation, BEA

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### R&D spending as a percentage of GDP



Source: IHS Markit, National Science Foundation, BEA

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## Pennsylvania: High-tech employment

NAICS	Employment level (Total jobs)			Average annual Percent change	
	2011	2021	2031	2011-21	2021-31
3254 Pharmaceutical & medicine mfg.	22,701	24,291	22,130	0.7	-0.9
3336 Turbine & power transmission Eq.	2,341	2,288	2,235	-0.2	-0.2
3341 Computer & peripheral eq. mfg.	3,153	1,885	1,219	-5.0	-4.3
3342 Communications eq. mfg.	2,707	2,494	1,846	-0.8	-3.0
3343 Audio & video eq. mfg.	267	194	124	-3.1	-4.4
3344 Semiconductor & comp. mfg.	7,756	7,083	7,152	-0.9	0.1
3345 Electronic instrument mfg.	14,329	14,952	14,252	0.4	-0.5
3346 Magnetic media mfg.	921	455	353	-6.8	-2.5
3353 Electrical equipment	6,656	5,857	4,114	-1.3	-3.5
3363 Motor vehicle parts mfg.	4,965	3,981	2,859	-2.2	-3.3
3364 Aerospace product & parts mfg.	9,919	11,436	9,414	1.4	-1.9
3391 Medical eq. & supplies mfg.	15,870	14,836	12,928	-0.7	-1.4
5112 Software publishers	7,478	10,298	10,685	3.3	0.4
5121 Motion picture & video industries	5,495	4,949	5,725	-1.0	1.5
5122 Sound recording industries	229	207	326	-1.0	4.6
5182 Data processing and hosting	13,421	13,696	12,649	0.2	-0.8
5413 Architectural, engin. & related svcs.	55,863	60,201	74,161	0.8	2.1
5414 Specialized design services	3,291	3,874	4,926	1.6	2.4
5415 Computer systems design & svcs.	56,076	72,729	91,342	2.6	2.3
5416 Management consulting services	44,144	52,938	68,492	1.8	2.6
5417 Scientific research & dev. svcs.	29,802	41,455	68,138	3.4	5.1
8112 Elec. & precision eq. repair & maint.	5,232	5,996	9,064	1.4	4.2
<b>State total</b>	<b>312,616</b>	<b>356,095</b>	<b>424,134</b>	<b>1.3</b>	<b>1.8</b>
<b>US total</b>	<b>8,351,890</b>	<b>10,513,713</b>	<b>13,050,242</b>	<b>2.3</b>	<b>2.2</b>

Note: 50% of motor vehicle parts is used in the analysis.

Source: US Business Markets Insights, IHS Markit

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# Manufacturing

## Manufacturing detail

	Historical		2017	2018	2019	2020	2021	2022	2023	2024
	data edge									
Manufacturing employment (thous.)	2020		562.9	570.9	574.7	537.6	543.7	554.8	556.4	550.5
Manufacturing employment (% change)	2020		0.4	1.4	0.7	-6.5	1.1	2.1	0.3	-1.1
Durables manufacturing employment (thous.)	2020		335.8	343.0	345.4	319.0	322.9	331.4	333.0	328.4
Durables manufacturing employment (% change)	2020		-0.1	2.1	0.7	-7.6	1.2	2.6	0.5	-1.4
Nondurables manufacturing employment (thous.)	2020		227.0	227.9	229.3	218.6	220.8	223.5	223.4	222.1
Nondurables manufacturing employment (% change)	2020		1.1	0.4	0.6	-4.7	1.0	1.2	0.0	-0.6

Source: IHS Markit

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## Philadelphia Federal Reserve Survey

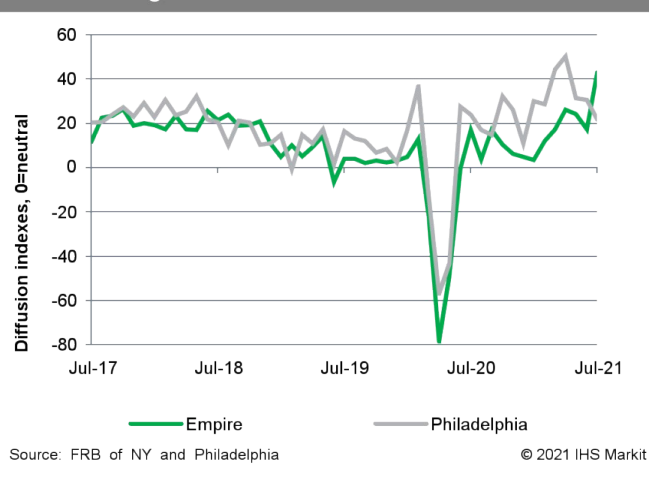
- The Philadelphia index of current general activity eased slightly in June to 30.7. This is the sixth consecutive month with a reading of at least 30.
- The index of new orders dropped by 10 points to 22.2, its lowest reading in 2021 but still pointing to solid demand.
- The index of current shipments rose to 27.2, up from 21.0 in May.
- The index of prices paid increased to 80.7, yet another record-high level for the series.

The Philadelphia Federal Reserve survey of manufacturing activity for June showed a modest decline in the share of firms reporting increased activity from the previous month. The index of current general activity declined modestly, from 31.5 in May to 30.7 in June. The index of new orders posted a bigger drop, falling by 10 points from 32.5 in May to 22.2 in June. That is the lowest reading of the index since December 2020 but still indicates solid demand for goods and steady work for production lines. The current shipments index increased to 27.2 in June, the sixth straight month with readings in the 20s.

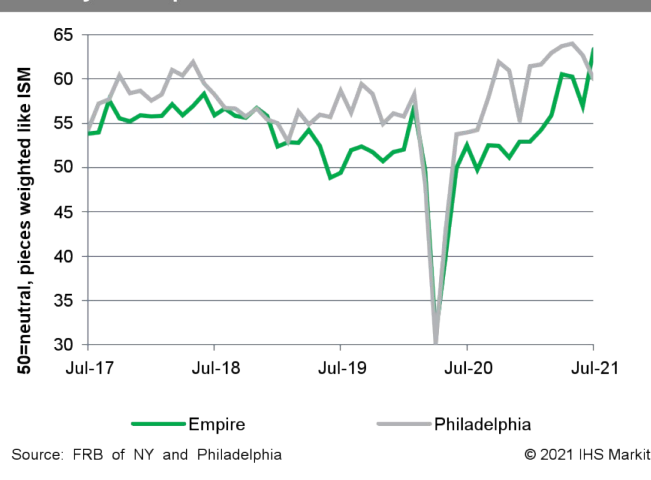
The index of prices paid for inputs continues to post record-high readings, with the June index rising to 80.7 from the May level of 76.8. It was not quite a unanimous verdict, with 1% of responding firms reporting lower input prices (versus 82% facing higher prices). Prices remain elevated owing to multiple causes, including strong demand, shipping delays, tight supplies of qualified workers, and shortages of some key components.

The decline in the number of firms reporting higher new orders this month may reflect the long-anticipated shift of consumer spending away from goods and back toward services, which would be a turn back toward the pre-pandemic normal pattern. Spending on many categories of services, especially travel and entertainment, was curtailed sharply because of restrictions on activity that began in March 2020. Some of those savings, combined with the boost in household income from federal stimulus checks, were directed toward increased spending on goods. The recent report on retail spending and other signals lend support to the idea that, while demand for goods is still solid, it is likely easing from the pace of the past several months. Higher prices in certain product segments may also be reducing consumption, or at least delaying purchases.

FRB district general business conditions



ISM-style rollups



**Federal Reserve Business Conditions Indexes -- July 2021**  
(Diffusion indexes, seasonally adjusted)

	Jul-21	Jun-21	May-21	Apr-21	Mar-21	Jul-20
<b>Empire (FRB NY)</b>						
Overall	43.0	17.4	24.3	26.3	17.4	17.2
Orders	33.2	16.3	28.9	26.9	9.1	13.9
Shipments	43.8	14.2	29.7	25.0	21.1	18.5
Prices Paid	76.8	79.8	83.5	74.7	64.4	14.9
<b>Philadelphia FRB District</b>						
Overall	21.9	30.7	31.5	50.2	44.5	24.1
Orders	17.0	22.2	32.5	36.0	38.2	23.0
Shipments	24.6	27.2	21.0	25.3	22.0	15.3
Prices Paid	69.7	80.7	76.8	69.1	72.6	15.7

*Transportation*

Pennsylvania’s transportation and warehousing sector continues to benefit from its location amid so much of the country’s population base, between its own population and that of neighboring states. It also enjoys port access via Philadelphia, and provides much-needed warehousing and distribution space for cargo coming through ports around New York City. The Allentown area in particular has thrived because of its proximity to New Jersey ports, as well as access to rail and to several interstate highways heading in all directions.

The disruptions caused by the COVID-19 pandemic provided a further boost to an e-commerce industry that was already growing rapidly. This has produced an explosion of new distribution facilities, especially smaller locations in big metro markets to better provide next-day delivery of everyday items. Along with the usual suspects, the pandemic forced just about every retailer to focus more resources on fulfillment of online orders and providing their own delivery services; this has boosted demand for truck drivers, couriers and messengers, and of course warehouse workers.

The pandemic proved a different story for other forms of transportation, though, especially air- and ground-based

passenger transportation. Payrolls in ground transportation dropped to half their year-earlier levels during the summer of 2020, and they remain around 25% below their pre-pandemic level, which had been steady at around 40,000 workers. Air carriers cut flights and employees as passengers trips declined dramatically, and activity was just beginning to return in the spring of 2021. A full, or mostly full, recovery of air transportation seems likely, while transit agencies and other providers of for-hire ground transportation will likely face persistently reduced demand as workers make fewer commutes to work or choose to travel with their own cars.

## **Analyst Contact Details: Tom Jackson**

## **APPENDIX C – Client Model Testing, Validation & Development – Technical Approach**

With respect to model validation and development, we begin with extensive validation at the equation level, what we call equation-by-equation “tender loving care.” Most importantly, this involves beginning with an estimable form of an equation that is consistent with the underlying theory and makes sense; defining all of the variables in a way that conforms with the theoretical concepts; and observing proper econometric technique. In evaluating estimated coefficients, it is important to examine the long run properties of the equation that has been estimated as well as the conformity of the coefficient signs and magnitudes with those suggested by theory, if any. As part of this process, we also look for structural breaks.

To judge forecasting performance, we typically will short fit each equation and test its out-of-sample dynamic fit. We realized long ago that a good model is not simply a collection of good equations. Because of the interactions among equations, it is necessary to run extensive full-model simulations during the model validation phase and ensure that each of these simulation exercises “pass the smell test.” That is, as experienced macroeconomic modelers and forecasters, we want to make sure that the results of the simulations can be understood in theoretical and empirical context. If not, we track down the offending equation or equations and go back to the drawing board.

Since we use the model every month to update our Arkansas forecast, we continuously monitor the out-of- sample performance of the estimated equations. We use adjustment factors over the short-term to correct for any emerging systematic misses. When it becomes apparent that an equation has broken down, we will re-estimate it and replace the equation in the model.

At the request of the BLR, IHS Markit can undertake an examination of the mechanics of the existing Arkansas equations and models for various tax revenues to identify possible areas where the model and interdepartmental revenue forecasting process could be improved to enhance forecast accuracy and rigor. Our team of skilled econometricians will review and test equations to determine the correctness and quality of the model for application in today’s economic and fiscal environment.

Concurrently, IHS Markit shall share with budget and planning staff the design and mechanics of our own econometric model for the Arkansas economy. This task will help inform staff of how the IHS Markit model projects economic activity for the state thereby providing insight to trends impacting tax receipts and potentially revealing areas where enhancements can be made within the state’s current model(s) or within the custom development of an IHS Markit Arkansas Revenue Model. A tailored model, which would typically leverage state receipts data, would allow IHS Markit to work with budget and planning staff to develop alternative revenue scenarios under various economic conditions if such a modeling effort is desired (beyond the current baseline, optimistic and pessimistic scenarios). The initial joint model review is a natural first task to any custom model development, but the findings and recommendations report is a deliverable unto itself.

As a proposed third task in the Joint Model Review process includes the enhancement of the IHS Markit econometric model of the MS economy to develop sectoral model equations responsive to tax parameters (economic activity as functions of tax structure). As a further step, we propose to develop tax revenue equations suitable for the model (tax revenues as functions of economic activity).

## APPENDIX D – SharpOwl Project Time & Billing Tracking System

Below is a sample of IHS Markit time reporting in SharpOwl for keeping track hours incurred each month by individual by project.

Navigation bar: |< < 0 of 1 > >| [Refresh] [100%] [Save] [Print] [Find | Next]

### Project Enquiry

This report is very similar to the Project Enquiry Application (PROJENQ.exe), and is typically used to analyse statistics of your project

				Actual Recorded Hours	
<input type="checkbox"/> ADOT_MPDO 014-20 Aviation Economic Impact Sty	<input type="checkbox"/> Flanagan, Robert	<input type="checkbox"/> CN Director	<input type="checkbox"/> T Delivery- Project	<input type="checkbox"/> Oct 21, 2020	1.000
				<input type="checkbox"/> Oct 24, 2020	2.500
				<input type="checkbox"/> Oct 26, 2020	3.500
				<input type="checkbox"/> Oct 27, 2020	3.000
				<input type="checkbox"/> Oct 28, 2020	4.000
	<input type="checkbox"/> Hopkins, Phil	<input type="checkbox"/> CN Associate Director	<input type="checkbox"/> T Delivery- Project	<input type="checkbox"/> Sep 02, 2020	1.000
				<input type="checkbox"/> Sep 08, 2020	1.000
	<input type="checkbox"/> McLaughlin, Dan	<input type="checkbox"/> CN Analyst	<input type="checkbox"/> T Delivery- Project	<input type="checkbox"/> Oct 09, 2020	2.000
				<input type="checkbox"/> Oct 12, 2020	2.000
				<input type="checkbox"/> Oct 13, 2020	5.000
				<input type="checkbox"/> Oct 14, 2020	5.000
				<input type="checkbox"/> Oct 23, 2020	4.000
	<input type="checkbox"/> Norton, Shane	<input type="checkbox"/> CN Associate Director	<input type="checkbox"/> T Delivery- Project	<input type="checkbox"/> Sep 08, 2020	2.000
				<input type="checkbox"/> Oct 14, 2020	2.000
				<input type="checkbox"/> Oct 15, 2020	1.000
				<input type="checkbox"/> Oct 28, 2020	1.000
				<input type="checkbox"/> Sep 01, 2020	0.500
				<input type="checkbox"/> Sep 03, 2020	0.500

### **APPENDIX E – 2015 Agreement**

A copy of the 2015 Agreement between IHS Markit and Arkansas BLR can be found on the following pages.



**IHS SERVICES AGREEMENT**

<p><b>THIS IHS SERVICES AGREEMENT ("Agreement") is entered into this 26th day of February (the "Effective Date") by and between IHS Global Inc., with its principal offices at 15 Inverness Way East, Englewood, CO 80112, on behalf of itself and IHS Affiliates ("IHS"), and Arkansas Bureau of Legislative Research, a corporation with its principal offices at Room 315, State Capitol Building, Little Rock, AR 72201 ("Client") (collectively, Parties)</b></p>			
<p><b>STATEMENT OF WORK NO. : 1</b></p>			
<p><b>Project name: Big River Steel Project Review</b></p>			
<p><b>Project Overview: Economic Analysis of the Proposed Big River Steel Plant</b></p>			
<p><b>Location(s) of Services: Philadelphia, Washington</b></p>			
<p><b>Term of Services:</b></p>		<p><b>Currency: USD</b></p>	
<p><b>Account #</b></p>	<p><b>Account Manager: O'Neil</b></p>	<p><b>Vertical Sales: ECR</b></p>	<p><b>Client Reference #:</b> <b>Client VAT#:</b></p>
<p><b>Scope of Services and Deliverables</b></p>			<p><b>Fees</b>  <input checked="" type="checkbox"/> <b>Fixed Fees</b>  <input type="checkbox"/> <b>Time-Based Fees per hour/day/month</b>  <input type="checkbox"/> <b>Unit - Based Fees</b>  <b>(ex-Taxes)</b></p>
<p><b>Task One: Review Project Development Costs and Financing</b>            The IHS project team will first confirm the accuracy, reasonableness, and completeness of project cost elements, including, but not limited to: building, equipment, land, permitting costs, architecture fees and contingency. Having accurate figures for all of the elements of the project's capital costs is essential to performing an accurate review of its statewide economic impacts. We will confirm the costs using a variety of sources, both internal to IHS Global Insight and external, including: capital costs for comparable steel production facilities compiled by our steel industry group; construction cost estimating guides such as Dodge, RS Means, and IHS sources to confirm unit costs for site improvements excluding the steel mill; and IHS engineering experts.</p>			<p>48,750.00</p>
<p><b>Task Two: Review and confirm Project's Direct Economic Impacts</b>            The second task will be to review and confirm the project's direct economic effects during the construction and operation phases. We will first determine the study area used in the analysis to ensure that it covers the geographic scope of the direct impacts; we assume that the study area will consist of Mississippi County for some impacts, and AR for the rest, especially for tax effects. For the construction phase, we will confirm such details as:</p> <ul style="list-style-type: none"> <li>• Schedule – starting month and ending month</li> <li>• Person years of construction labor by month</li> <li>• Number of workers and wages by occupation,</li> <li>• % project capital costs for labor compensation, including fringe administrative costs, and non-labor inputs.</li> <li>• Type and value of materials and equipment that will be purchased from within Arkansas (AR) during construction.</li> <li>• Confirm annual economic impacts during construction using IMPLAN or regional model</li> </ul>			
<p><b>Task Three: Review and Confirm the Types and Value of Economic Incentives</b>            IHS Global Insight will review all the economic incentives for the project to be awarded by state and local governments. We then confirm or calculate their values based on: 1) the dollar amount of the award; 2) the value tax revenues foregone in the case of tax abatements, deductions, or credits; 3) the value of cost savings to Big River (i.e., the annual savings in debt service costs provided by the \$50 million low interest loan from AR); and 4) cost of in-kind improvements or services to be provided by state and local governments.</p>			
<p>We will also confirm and describe as necessary regulations for the each of the different incentives that have penalty or claw-back provisions that will enable AR to recover a portion of incentives awarded, such as foregone tax revenues, if the proposed plant does not meet performance requirements such as the number and wage level of jobs created.</p>			
<p><b>Task Four: Confirm Levels of Annual State and Local Tax Revenues</b>            IHS will identify the state and local taxes that would be affected by the construction and operation activities performed at the proposed site, including the direct, indirect and induced effects. For example, construction activities will generate increases in sales taxes, personal income taxes, and corporate net income taxes; operations will generate increases in these same three taxes as well</p>			

as additional local real property tax revenues. We will compare this list to the individual taxes contained in the analysis to ensure that all significant ones were.

**Task Five: Review the Market Analysis of the Proposed Steel Plant**

IHS Global Insight will review the market analysis of the proposed Big River facility by performing the following sub-tasks:

- **End-market Demand:** IHS will review the forecast of tonnage for key steel end-markets targeted by Big River Steel such as automotive industry steel consumption and energy industry steel consumption. We will also offer the basic context of those end markets, including auto facility locations, shale oil and gas plays, etc. in order to better assess demand in a regional context.
- **International Context:** We will examine our forecast of imports and exports for the product categories Big River Steel will target (such as imports of hot-rolled sheet, OCTG, etc.). We do not have product level detail for electrical steel, one of the products that Big River Steel is targeting because AISI no longer publishes that detail. Our current forecasts of trade flows do not contain any assumption of a future Big River Steel project, so they represent an honest assessment of what the import expectations would be without the facility, allowing for an easy comparison to see the potential for import displacement.
- **Qualitative assessment.** IHS will perform a qualitative assessment of the degree to which the specifications Big River's steel products will be differentiate themselves enough to be successful in the market place. Their products will in many ways be competing with the output of other firms that beat them in on the "Southern Steel Renaissance" including Severstal Columbus and ThyssenKrupp Mobile. Those firms offer two comparison points for similar end markets and sell to similar geographies.
- **Statement or finding on long-term profitability of the plant:** Using IHS Global Insight's proprietary steel production cost models, we will assess the competitiveness of this mill on a global scale.

**Task Six: Review Estimates of Total Economic Impacts**

The IMPLAN input/output model will be used to verify the total statewide economic impacts during the construction and operation phases from the backward linkages. The total economic impacts will be compared to IHS's long-term economic forecast for AR to derive statewide percent impacts. Specific evaluation criteria to be used reviewing the components of the economic impact analysis for content and reasonableness of the results include:

- Did analysis consider both temporary construction impacts and permanent operations impacts?
- Review method and model used – IMPLAN, RIMS, state model
- Confirm that final demand changes – employment and output – were assigned to the appropriate IMPLAN industry sectors
- Determine which multiplier effects were considered – indirect or indirect and induced.
- Review reasonableness of derived multipliers by sector and by measure
- Review reasonableness of % changes in statewide economic activity

We will confirm that the estimates of the changes in the major state and local tax revenues include the direct, indirect and induced effects when appropriate.

**Task Seven: Review the Benefit/Cost analysis**

Finally, IHS Global Insight will review the benefit-cost (BC) analysis using the following criteria:

- Confirm time period for analysis – it should be the same as the length of the bond issue.
- Confirm key assumptions used in the analysis that have a significant impact on the BC analysis such as the discount rate; growth rates for costs, sales and wages; use of nominal or real data, etc.
- Confirm that all relevant costs have been included, including in-kind services provided by state and local governments
- Ensure that all relevant benefits, especially tax revenues accruing to AR governments, have been included, then confirm value of annual benefits
- Review and confirm results of BC analysis and the measures used: BC ratio, internal rate of return, net present value, and pay-back period. This includes reviewing a finding of whether and when the present value (PV) of tax revenues received by AR will exceed the total PV of incentives provided.

Finally, we will review, and replicate where necessary, the report's findings on the overall net economic benefits to AR over the project life, especially those that those address the crucial issue of whether Big River will be able to repay the \$50 million loan.

**Deliverable:** IHS will produce a technical memorandum, likely 10 to 15 pages in length, reviewing the major sectors of the report submitted by the AEDC. The report will be made available to members of the Arkansas General Assembly.

Client shall be responsible for IHS travel expenses associated with project execution		0.00
		<b>Total Fee</b> 48,750.00
		<b>Expenses</b> TBD
<b>Billing Address:</b> Bureau of Legislative Research One Capitol Mall, 5th Floor Little Rock, AR 72201 Telephone: 501-682-1937 FAX: 501-682-1936 http://www.arkleg.state.ar.us	<b>Client Contact' Name (Incl. E-mail Address &amp; Contact No.):</b> Marty Garrity, Director Bureau of Legislative Research One Capitol Mall, 5th Floor Little Rock, AR 72201 Telephone: 501-682-1937 FAX: 501-682-1936 http://www.arkleg.state.ar.us	
<b>Special Billing Instructions:</b>		
<b>Special Terms and Conditions:</b>		
Nothing in this agreement shall be construed as a waiver of Client's sovereign immunity.		
IHS hereby provides its consent for the Deliverables to be distributed to members of the Arkansas General Assembly. The Arkansas General Assembly shall not redistribute the Deliverables to any other third party and the Client represents and warrants that it is exempt from Freedom of Information Act requests with regards to the Deliverables provided herein.		
<b>Commencement Date of Services:</b> February 27, 2013		
<b>Expected Date of completion of Services:</b> March 31, 2013		
<b>Details of Milestones (if applicable):</b>	<b>Estimated Timing of Deliverables</b>	<b>Fee allocated per Milestone</b>
Economic Impact Analysis	March 8, 2013	\$13567
Steel Market Analysis	March 11, 2013	\$7554
Draft Report Development	March 12, 2013	\$12947
Final Report Development	March 19, 2013	\$7035
On-site Testimony	March 31, 2013	\$7647
a) The total estimate Fees for Services is \$48,750; provided, however, in no event will Client pay less than the rates set forth above for actual Services rendered if the Services performed are greater than this estimate. In no event will Client pay less than 75% of this estimate Fees, should actual Services performed be less than estimated above.		
b) Services are deemed accepted so long as IHS has performed tasks in accordance with the scope of Services as set forth above.		
c) Any services not specifically set forth herein, are excluded and will be quoted and provided on supplemental Statement of Work.		
d) The Fees for Services does not include reasonably incurred out-of-pocket Expenses and applicable tax, which will be billed separately.		
e) The pricing for Services under this SOW is valid for the duration of the Services, provided that Client executes and returns this SOW to IHS by <February 27, 2013>.		

**1. Definitions.**

**1.1 "Client Information"** means any confidential or proprietary information or data provided by Client to IHS specifically in order for IHS to perform its obligations under this Agreement.

**1.2 "Client"** means the party as identified above in this Agreement. Unless otherwise permitted by IHS in writing, the license to use the Deliverables is personal to Client and Clients Affiliates shall not use the Deliverables provided to the Client hereunder.

**1.3 Client' Affiliates"** means any entity that owns, is owned by or is under common ownership of either a holding company or any of the subsidiaries of Client. For purposes of this definition only, "ownership" or any other form of the word "ownership" means the ownership of more than 50% of the assets or stock of an entity, with control of the day-to-day operations. Client' Affiliates may license or procure Services/Deliverables from IHS or IHS' Affiliates under this Agreement, subject to; (i) Client' Affiliates' execution of the supplemental SOW(s); (ii) payment of additional Fees; and (iii) such affiliate(s)' agreement to be bound by the terms and conditions of this Agreement in such case, the term 'Client' shall include the applicable Client' Affiliate for the purposes of this Agreement. For the avoidance of doubts, each such supplemental SOW(s) duly executed by Client' Affiliates shall be treated as independent contract between IHS and Client' Affiliates.

**1.4 "Deliverables"** means the results of Services performed by IHS for Client under this Agreement, including without limitation materials, methods, processes, techniques, formulas, trade secrets, research, reports, data sheets, technical data, know-how, forecasts, analyses, commentaries and related findings, innovations conceived, developed,

used or supplied by IHS in connection with the Services and Deliverables.

**1.5 "Expenses"** means all reasonable and documented expenses incurred by IHS in providing Services to Client, (including, without limitation, media and shipping charges, if any, accommodation and meals, communications and/or administrative charges, courier and travel costs) and for which Client is obligated to pay IHS.

**1.6 "Fees"** means Fixed Fees or Time-Based Fees, as set forth in the SOW. Fees are exclusive of Expenses and taxes, which will be charged separately to the Client.

**1.6.1 "Fixed Fees"** means an agreed amount Client will pay to IHS as set out in the SOW, regardless of the time spent or costs incurred by IHS in performing the Services.

**1.6.2 "Time-Based Fees"** means an agreed amount per hour, day or month Client will pay to IHS as set out in the SOW, for the number of hours, days or months IHS spends in performing the Services.

**1.6.3 "Unit- Based Fees"** means an agreed amount Client will pay to IHS as set out in the SOW, for each or defined number of report(s) or datasheet(s) or other type of Deliverables as supplied by IHS in performing the Services.

**1.7 "IHS Affiliate"** means any entity that owns, is owned by or is under common ownership of either a holding company or any of the subsidiaries of IHS. IHS Affiliates are not deemed to be subcontractors for any term or condition hereunder or in any Schedule(s) that relates to the use of subcontractors.

**1.8 "Services"** means the work performed by IHS for Client under this Agreement.

**1.9 "Statement of Work" or "SOW"** means the written description, of the Services, Deliverables, Fees, estimated timeframe, or milestones, in the form and manner as specified above and as may be modified from time-to-time in writing, by mutual agreement of the Parties and which forms integral part of this Agreement. Supplemental SOW(s) may be executed by the Parties under this Agreement.

## **2. FEES.**

**2.1** IHS will invoice Client for all Fees (whether such Fees are Fixed Fees or Time-Based Fees or Unit- Based Fees) and Expenses as set forth in the SOW for providing the Services under this Agreement, such Fees and Expenses are quoted in the currency set forth therein and Client must pay in said currency. Except as otherwise stated herein, Fees for Services are not refundable.

**2.2** Client will pay IHS the Fees and Expenses set forth above or in a SOW within 30 days from date of an invoice issued to Client by IHS. Any payments not received by IHS by when due will be considered past due, and IHS may choose to accrue interest at the lesser rate of one and one half percent (1.5%) per month or the highest rate permitted in law. In addition to all other rights, IHS, in its sole discretion, may discontinue the provision of Services if Client does not pay any invoice within the cure period provided in section 9 of this Agreement. Client has no right of set-off.

**2.3** For all Services provided hereunder, the delivery is deemed to occur as Services (or each Service milestone, as applicable) are completed in accordance with the Statement of Work.

**2.4** All Fees and Expenses specified in this Agreement are exclusive of and Client is solely responsible for payment of all value-added, sales, use, import, duties, customs or other taxes applicable to the providing of Services under this Agreement, except for any taxes assessed upon the income of IHS. To receive tax exempt status, Client must submit applicable documentation proving tax-exempt status to IHS prior to IHS issuing the first invoice. Client must pay the said taxes invoiced prior to receipt by IHS of such documentation.

**2.5** If the Parties make changes to the SOW, as set forth herein, as may be agreed between the parties, then the Fees due under such SOW will be adjusted accordingly, as mutually agreed upon in writing.

## **3. TERM.**

**3.1** Unless sooner terminated in accordance with the provisions of this Agreement, the term of this Agreement as it applies to each SOW commences from the Commencement date of the Services and continues for a period as set forth in the relevant SOW.

**3.2** The terms contained herein shall apply to all Services referenced in the relevant SOW until such Services are completed in accordance with the estimated timeframe and/or milestones as specified in such SOW, where time is not the essence of this Agreement.

## **4. LICENSE/AUTHORIZED USE/INTELLECTUAL PROPERTY RIGHTS**

**4.1** Subject to Client's payment of the applicable Fees and compliance with the other terms and conditions of this Agreement, IHS hereby grants to Client, and Client hereby accepts, a limited, nonexclusive, nontransferable, nonassignable, right and license to use any Deliverables for Client's internal business purposes only.

**4.2** Client may only publish or republish Deliverables in any form solely for its internal use and only if: (a) such publication or republication is not primarily a copy of the Deliverables; and (b) Client credits to IHS in the following form: "Includes content supplied by [NAME OF IHS COMPANY]; Copyright (publication year) NAME OF IHS COMPANY."

**4.3** Client may only refer to or distribute the Deliverables externally upon IHS' prior written approval. Unless permitted herein, in no event shall Client sell, lease, transfer, sublicense, or otherwise make available, or permit access to the Deliverables or any portion thereof to any third party.

**4.4** Subject to the provisions of this Agreement, if Client is permitted to share the findings or conclusions derived from the Deliverables or any report contained in the Deliverables with any third party(s) as agreed in writing in order to achieve the objectives outlined in the SOW, Client does so at its own risk and Client shall remain liable for any act and/or omission by such third party(s).

**4.5** Client acknowledges and agrees that the Deliverables including all materials, methods, processes, techniques, formulas, trade secrets, research, reports, technical data, know-how, forecasts, analyses, commentaries and related findings, innovations conceived, developed, used or supplied by IHS in connection with the Services and Deliverables, are the property of IHS and is protected by intellectual property laws. IHS may use all suggestions, feedback, improvements, report formats or the like that Client provides to IHS or otherwise makes with respect to Services without any obligation to Client.

**4.6** Client will not remove any copyright, trademark or other proprietary notices of IHS contained on or in the Deliverables or other materials delivered to Client, and Client will reproduce all such notices on the publication or republication permitted to be made by Client under this Agreement. Client will take any and all actions that may reasonably be required by IHS to protect the proprietary rights as owned by IHS.

**4.7** Except as provided in this Agreement, IHS does not perform work-made-for-hire and Client does not receive any ownership rights in the Deliverables resulting from Services performed by IHS, other than ownership rights in the Client Information incorporated into such Deliverables

**4.8** If, in the course of providing Services, IHS and Client jointly create intellectual property that is first conceived, developed or reduced to practice solely in and for the performance of the Services hereunder, each party will have an undivided right, title and interest in such intellectual property, and each may use, market, sell, license, sublicense, modify, create derivative works from or otherwise fully exploit such intellectual property; save only that neither party will register any ownership rights in the original intellectual property that excludes the other party nor seek to enforce its intellectual property rights in the original intellectual property against the other party.

## **5. CONFIDENTIALITY**

**5.1** Where either party ("Discloser") provides the other ("Recipient") with Confidential Information relating to the other or the others business, it shall be held in strict confidence and shall not be disclosed or used for any purpose other than as specifically authorised by either party or as expressly provided in this Agreement without the prior written consent of the other. The Parties shall exercise the same degree of care they use to protect their own confidential or proprietary information, but no less than a reasonable degree of care.

**5.2** For the purpose of this section, "Confidential Information" means: (a) Client Information (b) IHS methodologies and Deliverables including materials, methods, processes, techniques, formulas, trade secrets, research, reports, technical data, know-how, forecasts, analyses, commentaries and related findings, innovations conceived, developed, used or supplied by IHS in connection with the Services and Deliverables; (c) any Discloser business or technical information, including, without limitation, any information relating to Discloser's products, services, prices, marketing plans, business process management, analytics technologies, business opportunities, customers, or personnel; (d) any other information of Discloser that is specifically designated as confidential or proprietary; or (e) any information that by its nature, Recipient knows or should know is confidential or proprietary. Confidential Information shall not include information: (i) which is or becomes public knowledge other than by a breach of this clause, (ii) that is required to be disclosed by any applicable law or by any recognised stock exchange, (iii) obtained from a third party without breach of an obligation of confidentiality and (iv) information which can be shown to have been independently developed by the parties by means other than through its access to the confidential information or material. Notwithstanding the provisions hereof, Client agrees and acknowledges that IHS may, on behalf of other clients, develop recommendations or conclusions similar to those provided to Client.

## **6. WARRANTIES AND DISCLAIMERS.**

**6.1.** Each party represents and warrants that it is fully authorized to enter into this Agreement.

**6.2** IHS warrants that any Services provided by IHS under this Agreement will be performed with reasonable skill and care by competent and trained personnel. The content of any Deliverables resulting from the Services provided by IHS under this Agreement is provided "AS IS." As Client's sole and exclusive remedy and IHS sole obligation for breach of this warranty, at IHS' sole option, is to use commercially reasonable efforts to correct materially defective Services at no additional charge to Client; provided that Client gives IHS specific written notice of the materially defective Services within 30 days after the Services are performed.

**6.3** Client represents and warrants that (i) it will provide Client Information or and other material, data or information at no cost and on a timely basis, and acknowledges that IHS will not be responsible for any delays caused by Client; and (ii) it owns or has obtained all rights in the materials, data and any other information necessary to allow IHS to use such materials, data and other information in the Services offered hereunder and that such use by IHS will not violate any intellectual property rights or other rights of a third party.

**6.4 Disclaimer of Warranties.** IHS DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES, CONDITIONS AND OTHER TERMS, WHETHER STATUTORY, ARISING FROM COURSE OF DEALING, OR OTHERWISE, INCLUDING WITHOUT LIMITATION TERMS AS TO QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. CLIENT ASSUMES ALL RISK IN USING THE RESULTS OF SERVICES.

## **7. INDEMNIFICATION**

**7.1** IHS will indemnify, defend and hold harmless Client from and against any third party claims alleging that Services or Deliverables furnished under and used in accordance with the terms and conditions of this Agreement (other than jointly created intellectual property) infringe or misappropriate any third party intellectual property rights including any copyright, trademark or trade secret in the country(s) of provision of Services under this Agreement ("Infringement Claim"). IHS will have no liability under this section 7.1 in respect of any Infringement Claim arising from: (i) any modification of the Deliverables not specifically authorized in writing by IHS; (ii) the incorporation of any feature or information provided by or requested by Client into the Deliverables; (iii) the combination of Deliverables with any other information not provided by IHS; (iv) Client's misuse of the Deliverables or failure to protect IHS Confidential Information as required herein or (v) compliance with designs, plans or specifications furnished by or on behalf of the Client. In the event Deliverables are held or are believed by IHS to infringe, IHS may choose, at its sole option and expense, (a) to modify the Deliverables so that they are non-infringing; (b) to replace the Deliverables with non-infringing Deliverables that are functionally equivalent; (c) to obtain a license for Client to continue to use the Deliverables as provided hereunder; or if none of (a), (b), or (c) is commercially reasonable, then (d) to terminate this Agreement for the infringing Deliverables and refund Fees paid, prorated from the date of the Infringement Claim. This section 7.1 states the entire liability of IHS and Client's sole and exclusive remedy for any infringement of third party proprietary rights of any kind.

**7.2** Client will indemnify, defend and hold IHS harmless from and against (i) all third party claims arising from the Clients' decision to share the findings or conclusions or any report contained in the Deliverables with any third party(s); and (ii) any third party claims alleging that Client Information used by IHS in accordance with the terms and conditions of this Agreement infringes or misappropriates any third party intellectual property rights including any copyright, trademark or trade secret in the country(s) of IHS' location(s) of use of Client Information and/or in the country(s) of performance of Services by IHS.

**7.3** Each Party will indemnify, defend and hold the other Party harmless from any claim, demands, liabilities, suits or expenses of any kind for personal injury or damage to tangible property to the extent arising from its negligence or willful misconduct on the other Party's premises.

**7.4 Indemnification Procedure.** The indemnification obligations of each party under this section 7, are contingent upon the indemnified party providing to the party who has the indemnification obligation: (a) prompt written notice of the alleged claim; (b) sole control of the de-

fence or settlement of the alleged claim; and (c) reasonable cooperation and assistance, at the request and expense of party to indemnify, in the defence or settlement of the alleged claim. If the indemnified party chooses to be represented by counsel, it shall be at the indemnified party's sole cost and expense

## **8. LIMITATION OF LIABILITY.**

**8.1 SUBJECT TO THE PROVISIONS OF SECTION 8.4 AND 8.5 HEREOF, IN NO EVENT WILL IHS, ITS THIRD PARTY PROVIDERS OR THE CLIENT BE LIABLE FOR INDIRECT, SPECIAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER, SUFFERED BY THE OTHER PARTY, INCLUDING, WITHOUT LIMITATION, LOST PROFITS, LOST DATA, LOSS OF REPUTATION, LOSS OF GOOD WILL, BUSINESS INTERRUPTIONS OR OTHER ECONOMIC LOSS ARISING OUT OF OR RELATED TO THIS AGREEMENT OR ANY USE OF OR INABILITY TO USE PRODUCTS EVEN IF ADVISED IN ADVANCE OF THE POSSIBILITY OF ANY SUCH LOSSES OR DAMAGES. FOR PURPOSES OF THIS SECTION, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES AWARDED BY A COURT TO A THIRD PARTY AND PAID BY THE PARTY TO BE INDEMNIFIED ARE CONSIDERED DIRECT DAMAGES HEREUNDER.**

**8.1.1 NEITHER IHS NOR ITS THIRD PARTY PROVIDERS SHALL BE LIABLE FOR ANY DAMAGES ARISING OUT OF OR RELATED IN ANY WAY TO: (i) USE OF SERVICES OR DELIVERABLES; OR (ii) CLIENTS' NEGLIGENCE AND WILLFUL ACT; OR (iii) MODIFICATIONS TO DELIVERABLES; WHETHER SUCH DAMAGES ARE SUFFERED BY CLIENT OR ANY THIRD PARTY.**

**8.2** Client's sole and exclusive remedies for breach of warranty by IHS are set forth in this Agreement.

**8.3** Subject to the provisions of Section 8.4 and 8.5 hereof each Party's total aggregate liability in contract, tort, (including negligence) misrepresentation or otherwise, including liability for any damages arising out of or related to this Agreement will not exceed Fees paid by Client for the defective Services that are the subject of the claim. Client acknowledges that the IHS pricing reflects this allocation of risk, and the limitation of liability specified in this section will apply regardless of whether any limited or exclusive remedy specified in this Agreement fails of its essential purpose.

**8.4** The limitations set forth in this section will not apply to (i) damages related to death or personal injury arising out of the negligence or willful act of the other party; and (ii) any damages or liability incurred as a result of fraud or fraudulent misrepresentation of the other Party.

**8.5** In the event Client breaches the license grants and/or restrictions contained in this Agreement, notwithstanding the foregoing Client undertakes that it will indemnify and hold IHS harmless against any claims, losses, damages or liabilities arising from such breach or unauthorised use of Deliverables. IHS reserves the right to suspend the provision of Services immediately in such event of Client' breach of such license grants and/or restrictions or any unauthorised use of the Deliverables.

## **9. TERMINATION.**

**9.1** Either Party may terminate this Agreement if: (a) the other Party commits a breach of any material term or condition of this Agreement and does not cure such breach within thirty (30) days of written notice thereof; or (b) the other Party's assets are transferred to an assignee for the benefit of creditors, to a receiver or to a trustee in bankruptcy, a proceeding is commenced by or against the other Party for relief under bankruptcy or similar laws and such proceeding is not dismissed within sixty (60) days, or the other Party is adjudged bankrupt. Neither party has to right to terminate for cross default.

**9.2** Either Party may terminate or suspend its performance under this Agreement with no less than 5 days written notice if: (a) necessary, as expressed by an opinion of outside counsel to protect its legal liability to third parties; or (b) it has reasonable evidence of the other Party's fraudulent or illegal use of Deliverables; or (c) required by legal or regulatory authority. Any termination under this section 9

does not relieve either Party of any liability incurred prior to such termination, or for Client's payment for unaffected Services.

**9.3** Upon the termination of this Agreement, all Fees and Expenses owed by Client through the date of termination automatically and immediately become due and payable.

**9.4** In the event of termination of this Agreement, for any cause, Client will pay IHS the Fees for any Services performed prior to termination and any Expenses incurred up to and including the date of termination. For the avoidance of doubts, the termination of this Agreement as it applies to a particular SOW does not terminate this Agreement in relation to any other SOW that is in progress at the time of such termination.

**10. ANTI-CORRUPTION.** Both parties represent and affirm that (i) they will comply with all applicable country laws relating to anti-corruption and anti-bribery, including the US Foreign Corrupt Practices Act and the UK Bribery Act; and (ii) they will not perform, offer, give and receive bribes or corrupt actions in relation to the procurement or performance of this Agreement. For the purposes of this section, "bribes or corrupt actions" means any payment, gift, or gratuity, whether in cash or kind, intended to obtain or retain an advantage, or any other action deemed to be corrupt under the applicable country laws.

**11. U.S. GOVERNMENT USE.** This section applies to any data contained in the Deliverables, Client licenses hereunder to use on behalf of a unit or agency of the U.S. Government, its agencies or instrumentalities (U.S. Government") or where Client obtains such licenses directly or indirectly on behalf of a unit or agency of the U.S. Government. The Deliverables provided hereunder: (a) were developed at private expense and are in all respects the proprietary information of IHS; (b) were not developed with government funds; (c) are a trade secret of IHS for all purposes of the Freedom of Information Act; (d) are commercial items and thus, pursuant to Section 12.212 of the Federal Acquisition Regulations (FAR) and DFAR Supplement Section 227.7202, Government's use, duplication or disclosure of the Deliverables is subject to the restrictions set forth by IHS. Any Deliverables used by, for, or on behalf of the U.S. Government is provided with LIMITED RIGHTS and RESTRICTED RIGHTS set forth herein. Use, duplication, or disclosure of data or software by the U.S. Government is subject to restrictions as set forth in the Rights in Technical Data and Computer Software clause at FAR 12.211 and 12.212(a) and/or Commercial Computer Software at DFARS 227.7202-1(a) or subparagraphs (c) (1) and (2) of the Commercial Computer Software-Restricted Rights at 48 CFR 52.227-19, as applicable. Manufacturer is IHS.

**12. EXPORT CONTROL.** Export laws and regulations of the United States and other relevant local export laws apply to the Deliverables provided by IHS under this Agreement. Client agrees to comply with all such export laws and regulations, and agrees that it will not export, re-export, transfer, sell the Deliverables to any destination, or use the Deliverables in any manner, other than permitted herein, without the prior express written permission of IHS.

**13. AUDIT.** Upon reasonable notice by IHS to Client, and not more than once annually (unless prior violations have been discovered), IHS may audit relevant records at Client's location during normal business hours to enable IHS to ensure Client's compliance with this Agreement.

**14. FORCE MAJEURE.** Either Party may be excused from the performance of any obligation under this Agreement, except payment for any Services, due to any act or condition whatsoever beyond the reasonable control of and not occasioned by the fault or negligence of such Party, including, without limitation, acts of God, acts of terrorism, acts of nature or of a public enemy, acts of a federal government or any state or political subdivision thereof, internet outages, fires, floods, explosions, wars, or other catastrophes; labor disturbances; freight embargos; or delays of a supplier or subcontractor due to such causes.

**15. NONSOLICITATION.** During the term of this Agreement and for a period of 1 year thereafter, the parties will not directly or indirectly solicit for hire any person who is or has, in the prior 6 months, been an employee, consultant or subcontractor of the other party and was engaged in the provision of Services under the applicable SOW without the other party's prior written consent. The foregoing notwithstanding, neither party will be deemed to have breached this section 15 by (a) hiring

personnel responding to generally placed help-wanted advertisements or job postings; or (b) hiring personnel of the other party that have been terminated or notified of pending termination by the other party. In the event a party violates this section 15, the breaching party agrees to pay the other party the equivalent of 6 months compensation, to include, without limitation, salary, bonuses, benefits, training, which the parties agree represents liquidated damages, as direct damages would be difficult, if not impossible to ascertain.

## **16. CLIENTS OBLIGATIONS**

**16.1** Client will cooperate with IHS in providing prompt and timely information including Client Information, notices, and feedback as is necessary or desirable hereunder.

**16.2** Client acknowledges that the ability of IHS to perform Services in the timeframe set forth in any SOW is contingent upon Clients providing to IHS of timely Client Information. Time of performance will be increased, day-for-day to match any delay caused by: (a) failure by Client to submit Client Information that reasonably conforms to the prescribed form set forth in the SOW by the dates set forth in the SOW; or (b) a special request by Client or any governmental agency authorized to regulate or supervise Client that impacts IHS normal processing schedule; or (c) Client's failure to provide access to any of its support and facilities as called for by this Agreement and the same is necessary for IHS performance. IHS will notify Client of the estimated impact on its performance, if any, as a result of an event described in sections (a) through (c) above.

**17. CHANGES TO ANY SOW.** If Client desires to change the SOW in any way, Client will put such change request in writing, detailing the nature of the changes and any timeframe it desires for such changes. IHS will respond within 10 days as to whether it can perform the requested changes, noting the additional fees, if any, and additional time to be added to any due dates or milestones to accomplish such changes. IHS, at any time with a minimum of five (5) business day's written notice to the Client, may request changes to the SOW

## **18. MISCELLANEOUS.**

**18.1** The parties are independent contractors and nothing in this Agreement will be construed to create a partnership, joint venture or employment relationship between the parties.

**18.2** This Agreement set forth the entire agreement between the parties and supersede any and all prior proposals, agreements or communications, written or oral, of the parties with respect to the subject matter hereof. Nothing contained in any Client-issued purchase order, purchase order acknowledgement, purchase order terms and conditions or invoice will in any way modify or add any additional terms or conditions to this Agreement. Such Client-issued purchase orders are for Client's internal purposes only and do not affect in any way Client's obligations under this Agreement; provided however that such typically variable terms as price, quantity, tax exempt status, delivery date, shipping instructions and the like, as applicable and only as mutually agreed upon and as may be specified on Client-issued purchase orders.

**18.3** The Parties may not modify, alter or amend this Agreement except by written instrument duly executed by authorized representatives of both Parties.

**18.4** No failure or delay by either Party to exercise any right hereunder at any time operates as a waiver of such right at any future time.

**18.5** Client may assign this Agreement to any third party (whether directly or indirectly, by operation of law or otherwise) only with the prior written consent of IHS, which consent will not be unreasonably conditioned, withheld or delayed. Any requested assignment (i) to a direct competitor of IHS; (ii) that would interfere with performance of obligations under this Agreement; or (iii) that changes the scope of the usage and the intent contemplated by the Parties under this Agreement, is deemed unreasonable. Any assignment or transfer in violation of the above is void.

**18.6** This Agreement is binding on the Parties, their successors and assigns. IHS at its sole discretion reserves the right to subcontract any or all of its obligations under this Agreement to subcontractors of

its choosing. IHS will remain fully responsible for performing all obligations under this Agreement and any SOW. In addition, Client agrees that IHS Affiliates are not deemed subcontractors for purposes of this section.

18.7 This Agreement will be construed under the laws of State of Arkansas, without regard to its conflicts of law principles and each Party hereby submits to the exclusive jurisdiction of Arkansas Courts. The parties hereby disclaim the application of the 1980 U.N. Convention on Contracts for the International Sale of Goods. The English language version of this Agreement will be controlling in the interpretation or application of the terms of this Agreement.

18.8 If any provision of this Agreement is found invalid or unenforceable by an arbitrator or a court of competent jurisdiction, the remaining portions will remain in full force and effect.

18.9 All notices required under this Agreement must be in writing and delivered by commercially established courier service, facsimile with written confirmation of success, personal courier or via certified mail, return receipt requested, to the addresses specified on the first page of this Agreement or at such other address as the parties will designate in writing from time to time. Notices are deemed delivered when received by any of the above means. Any legal notices must also be copied to "Attention: IHS Legal Department, Vice President & Chief Legal Officer."

18.10 IHS may use Client's name and logo in compiling a list of IHS' Clients. Any additional publicity concerning Client will require Client's prior written consent.

18.11 Unless otherwise specified herein, any cause of action arising under this Agreement shall be asserted within two (2) years of the date upon which such cause of action accrued, or the date upon which the complaining party should have reasonably discovered the existence of such cause of action, whichever is later, unless otherwise specified herein.

18.12 The terms and conditions of this Agreement will survive the expiration or other termination to the fullest extent necessary for their enforcement and for the realization of the benefit thereof by the Party in whose favor they operate.

18.13. No term of this Agreement is intended to confer a benefit on, or to be enforceable by, any person who is not a party to this Agreement

18.13 Each person executing this Agreement on behalf of any entity hereby represents and warrants that he or she is duly authorized and has full authority to execute and deliver this Agreement.

18.14 This Agreement may be executed simultaneously in two or more counterparts, each of which will be considered an original, but all of which together will constitute one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the Effective Date above.

IHS Global Inc.

CLIENT

*Richard F Fullenbaum*

*[Signature]*

By

By

Richard F. Fullenbaum  
Printed Name

*Marty Granaty*  
Printed Name

Vice President  
Title

*Director*  
Title

2/27/2013  
Date

*2/26/13*  
Date

## **APPENDIX F – Disclosure Forms**

The following pages provide the complete disclosure forms.

**EXECUTIVE ORDER EO-98-04  
EXECUTIVE ORDER & EMPLOYMENT  
DISCLOSURE FORM**

NAME: IHS Global Inc.

ADDRESS: 15 Inverness Way East, Englewood, CO 80112  
Street City State/Zip County

HNP Program: \_\_\_\_\_ AGREEMENT NO: \_\_\_\_\_ CONTRACT NO: \_\_\_\_\_

FEDERAL NO: \_\_\_\_\_ CONTRACT EFFECTIVE DATE: \_\_\_\_\_

**B. DISCLOSURE REQUIREMENTS**

Arkansas Health and Nutrition Sponsoring Organizations/Agencies shall require, as a condition of obtaining or renewing a contract, lease, purchase agreement, employment, or grant with any State agency or outside entity, that any individual desiring to contract with, be employed by, or receive grant benefits from, any State Agency or outside entity shall disclose whether that employee, or the spouse or immediate family member of any of the persons described in this sentence. Agencies shall require that any non-individual entity desiring to contract with, or receive grant benefits from, any outside entity shall disclose (I) any position of control, or (II) any ownership interests of 10% or greater, that is held by a current or former member of the general assembly, constitutional officer, board or commission member, state employee, or the spouse or immediate family member of any of the persons described in this sentence.

As a condition for obtaining funding through a contract, lease, purchase agreement, or a grant with the Arkansas Department Human Services, the following information must be disclosed:

Individual contractor indicate below if you are:

	Current	Former	Term(s) service
1. A member of the general assembly	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)	
2. A constitutional officer	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)	
3. A state employee	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)	
4. Serving as a commission or board member	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)	
5. Employed by Outside Entity or Business	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)	

Individual contractor indicate below if you are a spouse or immediate family member of an individual that is:

	Current	Former	Term(s) service	Relative's name & relationship
1. A member of the general assembly	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)		
2. A constitutional officer	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)		
3. A state employee	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)		
4. Serving as a commission or board member	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)		
5. Employed by Outside Entity or Business	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)		

Non-individual entity lists any individual who holds a position of control or ownership interest of 10% or greater in the entity if the individual is:

	Current	Former	Relative's name & Term(s) of service	Relationship	Individual
1. A member of the general assembly	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)			
2. A constitutional officer	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)			
3. A state employee	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)			
4. Serving as a commission or board member	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)			
5. Employed by Outside Entity or Business	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)			

Non-individual entity list any individual who holds a position of control or ownership interest of 10% of greater in the entity if the individual is a spouse or immediate family member of:

	Current	Former	Term(s) of service	Relative's name & Relationship	Individual
1. A member of the general assembly	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)			
2. A constitutional officer	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)			
3. A state employee	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)			
4. Serving as a commission or board member	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)			
5. Employed by Outside Entity or Business	Yes <input checked="" type="radio"/> No (circle one)	Yes <input checked="" type="radio"/> No (circle one)			

Failure of any person or entity to disclose under any term of Executive Order 98-04 shall be considered a material breach of the terms of the contract.

Signature  Date August 27, 2021

**Executive Director**  
Title \_\_\_\_\_

THIS FORM MUST BE COMPLETED AND RETURNED PRIOR TO EXECUTION OF ANY ARKANSAS HEALTH AND NUTRITION CONTRACT

NAME: IHS Global Inc.

ADDRESS: 15 Inverness Way East, Englewood CO 80112  
Street City State/Zip County

County PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

CONTRACT: \_\_\_\_\_

CONTRACT EFFECTIVE DATE: \_\_\_\_\_

**DISCLOSURE OF SUBCONTRACTORS**

Agencies shall require, as a condition of obtaining or renewing a contract, lease, purchase agreement, or grant with any outside entity, that any individual or entity desiring to contract with any outside entity shall require that any subcontractor, sub-lessor, or other assignee (hereafter "Third Party"), shall disclose whether such Third Party is current or former; member of the general assembly, constitutional officer, board or commission member, state employee, or described in this sentence hold any position of control or any ownership interest of 10% greater in the Third Party, and shall report any such disclosure by the Third Party to the agency. The disclosure requirements of this paragraph shall apply during the entire term of the contract, lease, purchase agreement, or grant, without regard to whether the subcontract, sublease, or other assignment is entered into prior or subsequent to the contract date.

Third Party shall indicate below if he/she is:

	Current	Former	Term(s) of service	Relative's name & Relationship	Third
1. A member of the general assembly	Yes/No (circle one)	Yes/No (circle one)			
2. A constitutional officer	Yes/No (circle one)	Yes/No (circle one)			
3. A state employee	Yes/No (circle one)	Yes/No (circle one)			
4. Serving as a commission or board member	Yes/No (circle one)	Yes/No (circle one)			
5. Employed by Outside Entity or Business	Yes/No (circle one)	Yes/No (circle one)			

Third Party shall indicate below if he/she is a spouse or immediate family member of an individual that is

	Current	Former	Term(s) of service	Relative's name & Relationship	Third Party
1. A member of the general assembly	Yes/No (circle one)	Yes/No (circle one)			
2. A constitutional officer	Yes/No (circle one)	Yes/No (circle one)			
3. A state employee	Yes/No (circle one)	Yes/No (circle one)			
4. Serving as a commission or board member	Yes/No (circle one)	Yes/No (circle one)			
5. Employed by an outside Entity or Business	Yes/No (circle one)	Yes/No (circle one)			

Agencies shall require, as further condition of obtaining or renewing any contract or agreement with any outside entity, that the individual or entity desiring to contract shall incorporate into any agreement with a Third Party, previously defined, the below stated language, and any other necessary language as provided by rules and regulations promulgated to enforce Executive Order 98-04, which provides that failure of the Third Party to disclose the identity of any person or entity described previously shall be considered a material breach of the agreement.

The failure of any person or entity to disclose as required under any term of Executive Order 98-04, or the violation of any rule, regulation or policy promulgated by the Department of Finance and Administration pursuant to this Order, shall be considered a material breach of the terms of the contract, lease, purchase agreement, or grant and shall subject the party failing to disclose or in violation to all legal remedies available to the Agency under the provisions of existing law.

*Brendan J. O'Neil*      *Executive Director*      *August 27, 2021*  
Signature of Third Party      Title      Date

**THIS FORM MUST BE COMPLETED AND RETURNED PRIOR TO EXECUTION OF THE CONTRACT**

# TSS Illegal Immigrant Contractor Disclosure Certification

## TSS Illegal Immigrant Contractor Disclosure Certification View Submission Details

**Vendor:** IHS Global Inc.  
**Tax ID:** 1160  
**Disclosure Statement:** I certify that I **DO NOT** employ or contract with an illegal immigrant.  
**Contact E-mail:** duyen.phan@ihsmarkit.com  
**Submitted on:** 08-26-21



IHS Markit®

# Equal Employment Opportunity Policy

30 August 2021

## Purpose and Summary

IHS Markit is committed to providing equal employment opportunities in all aspects of employment. The Equal Employment Opportunity Policy is in accordance with international human rights law and the non-discrimination laws and obligations of the countries in which we do business. The objective of this policy is to outline IHS Markit's commitment not just to uphold the laws but also to foster an inclusive and belonging environment in which all are welcomed and recognized for their skills and contributions.

## Scope

This policy applies to all employees and officers of IHS Markit and its subsidiaries and affiliates (the "company"), including applicants for employment. Where applicable and necessary, this policy will be supplemented by the local law of those jurisdictions where we do business.

## Policy

IHS Markit is committed to providing equal employment opportunity and advancement to all qualified persons without regard to, and prohibits discrimination and harassment on the basis of, race, color, age, medical condition, physical appearance, national origin, ancestry, alienage or citizenship status, pregnancy (including reproductive health choices), ethnicity, religion/creed, disability, genetic information, gender (including gender identity, gender expression, or status as a transgender person or person in gender transition), sexual orientation, military or veteran status, marital or familial/parental status, status as a victim of domestic violence, stalking or sex offenses, or any other status protected by applicable law. Our company is dedicated to ensuring the fulfillment of this policy with respect to all aspects of the employer-employee relationship, including but not limited to working conditions, employment, recruitment, hiring, placement, promotion, transfer, training, compensation, benefits, employee activities, application of policies, and general treatment during employment.

Providing workspaces that allow employees to be productive and comfortable is important to IHS Markit and the company will endeavor to make reasonable accommodations to an otherwise qualified disabled applicant or employee, unless doing so would result in an undue hardship. Current colleagues who may require a physical accommodation, can review the [Global Ergonomic Assessment Process](#). IHS Markit will also endeavor to accommodate employees' sincere religious observations; for more information reach out to Human Resources via [HRServices](#).

Any employees with questions or concerns about any type of discrimination in the workplace are encouraged to bring these issues to the attention of their immediate supervisor, or to utilize the complaint procedure outlined in the [Policy Prohibiting Discrimination, Harassment and Retaliation](#) and the [Compliance Hotline and Reporting Misconduct Policy](#). Employees can raise concerns and make reports without fear of reprisal. Anyone found to be engaging in any type of unlawful discrimination will be subject to disciplinary action, up to and including termination of employment.

Vendors, consultants, independent contractors, and any such parties doing business on behalf of the company are subject to the same expectations outlined in the policy as reflected in our [Third Party / Vendor Code of Conduct](#).

## For more information

Information is also available on our [accessibility](#) and [corporate sustainability](#) pages on [ihsmarkit.com](#).



September 29, 2021

Jillian E. Thayer  
Legal Counsel to the Director  
Bureau of Legislative Research  
State Capitol, Rm. 315  
Little Rock, Arkansas 72201

RE: Supplement to Response to RFP No. BLR-210002 State  
Budgeting & Revenue Forecasting Consulting Services

Dear Ms. Thayer:

Pursuant to your request for additional information related to IHS Markit's response to the above-caption Request For Proposal, please note the following supplemental responses to our submission:

- IHS Markit (dba as IHS Global Inc.) is authorized to conduct business with the State of Arkansas through the US-based legal entity IHS Global Inc. IHS Global Inc. is registered with the state AASIS procurement system (Vendor #100007192) as well as the state ARBuy system (Vendor #V000003146).
- In accordance with the provisions outlined in Section 1.3 of the Request For Proposal, IHS Markit (dba as IHS Global Inc.) acknowledges the requirements and terms contained in paragraphs 1.0 to 6.1, inclusive.

Thank you for your consideration and please feel free to reach out to me with any questions.

Regards,

Brendan E. O'Neil  
Executive Director  
IHS Markit Economics & Country Risk

**State Budgeting and Revenue Forecasting Consultant Services**  
**Summary of Response to RFP**

**Evaluation Criteria:**

<p><b>Directly Related Experience:</b></p>	<ul style="list-style-type: none"> <li>• <u>Arkansas Tax Reform and Relief Task Force:</u> (2018) provided dynamic scoring regarding proposed state tax policy changes</li> <li>• <u>Blueprint Nebraska:</u> performed economic and fiscal impact analysis of tax policy changes and incentive programs</li> <li>• <u>Committee to Unleash Prosperity:</u> performed an economic impact analysis of key proposed changes of the Sensible Taxation and Equity Promotion Act</li> <li>• <i>See</i> References at pp. 13-14 of proposal</li> </ul>
<p><b>Price:</b></p>	<p><u>Total Max Bid:</u> \$170,000 (includes \$78,250 fee for 1 year rental of REMI Tax PI Model of Arkansas)</p> <p><i>See</i> attached Official Proposal Price Sheet and Price Comparison Table.</p>
<p><b>Plan/Schedule:</b></p>	<p><u>Plan:</u></p> <ul style="list-style-type: none"> <li>• Task 1: Build New Tax-PI Model of State of Arkansas (2 weeks)</li> <li>• Task 2: Calibrate Budget (1 week)</li> <li>• Task 3: Provide Preliminary Results (1-3 weeks upon receipt of data)</li> <li>• Task 4: Prepare Fiscal Impact Reports (1-2 weeks)</li> <li>• Task 5: Prepare Presentation of Modeling Process and Dynamic Fiscal Impacts (1 week)</li> <li>• Task 6: In-Person Presentation (1-2 days)</li> <li>• Task 7: Access to Deliverables and Technical Support (through end of contract term)</li> <li>• <i>See</i> “Detailed Potential Path of Success” at pp. 7-8 of proposal.</li> </ul>

**REMI (Cont'd)**

<b>Availability:</b>	<ul style="list-style-type: none"><li>• Indicated they will be “available to attend meetings of the committee or other legislative committees, as authorized by the chairs”</li><li>• “will provide unlimited technical support in a timely manner” to members and staff (related to use of the software model)</li><li>• “available to attend periodic education discussions”</li></ul>
<b>Personnel:</b>	<ul style="list-style-type: none"><li>• Peter Evangelakis – Vice President of Economics and Consulting</li><li>• Xiaochu Ma – Economic Analyst</li><li>• Haozheyi Guan – Economic Analyst</li><li>• Jeffrey Dykes – Analyst</li> <li>• <i>See</i> Organizational Structure, at Chart 2 of proposal.</li><li>• <i>See also</i> “Biographies of Project Personnel” at pp. 11-12 of proposal.</li></ul>
<b>Past Performance:</b>	<ul style="list-style-type: none"><li>• Founded in 1980 – 40 years’ experience at development of regional US models and providing public policy consulting services</li> <li>• <i>See</i> Work Samples for Comparable Contracts, at end of proposal.</li> <li>• <i>See also</i> References Table.</li></ul>
<b>Compliance with RFP Requirements:</b>	See Attached Checklist.
<b>Subcontractors:</b>	None listed.

**ATTACHMENT A**  
**OFFICIAL PROPOSAL PRICE SHEET**

**Note: The Official Proposal Price Sheet must be submitted in a separate envelope or e-mail. Any reference to pricing in the technical proposal shall be cause for disqualification from further considerations for award.**

1. Bids should provide at least a 180-day acceptance period.
2. By submission of a proposal, the proposer certifies the following:
  - A. Prices in this proposal have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition;
  - B. No attempt has been made nor will be by the proposer to induce any other person or firm to submit a proposal for the purpose of restricting competition;
  - C. The person signing this proposal is authorized to represent the company and is legally responsible for the decision as to the price and supporting documentation provided as a result of this RFP; and
  - D. Prices in this proposal have not been knowingly disclosed by the proposer and will not be prior to award to any other proposer.

**The Official Price Proposal Sheet must be submitted in substantially the following form, allowing for the inclusion of specific information regarding positions, goods, services, etc., and signed by an official authorized to bind the Vendor to a resultant contract.**

DESCRIPTION	PRICE PER HOUR	NUMBER OF POSITIONS
Supervisor	\$400	1
Other Professional Staff (List by Position)	Analyst: \$250	2
Support Staff	\$150	1
DESCRIPTION	PRICE PER UNIT (IF APPLICABLE)	TOTAL PRICE
Subcontractors (if any)	N/A	\$0
Travel	\$6,400/day + expenses	If no more than 2 days, up to \$15,000
Any Additional Goods & Services (List Individually)	1 year rental of REMI Tax-PI model of Arkansas (1-region, 70-sector): \$78,250	\$78,250
<b>TOTAL MAXIMUM AMOUNT OF BID:</b>		\$170,000

  
 \_\_\_\_\_  
**Signature, Title : Chief Executive Officer**

9/23/2021  
 \_\_\_\_\_  
**Date**



**State of Arkansas**  
**Bureau of**  
**Legislative Research**

Marty Garrity, Director  
 Kevin Anderson, Assistant Director  
 for Fiscal Services  
 Tim Carlock, Assistant Director  
 for Information Technology  
 Matthew Miller, Assistant Director  
 for Legal Services  
 Estella Smith, Assistant Director  
 for Research Services

**REQUEST FOR PROPOSAL**

RFP Number: BLR-210002	
Commodity: <b>State Budgeting and Revenue Forecasting Consulting Services</b>	Proposal Opening Date: <b>August 30, 2021</b>
Date: <b>June 21, 2021</b>	Proposal Opening Time: <b>4:00 P.M. CDT</b>

PROPOSALS SHALL BE SUBMITTED IN HARD COPY AND ELECTRONIC FORMAT AND WILL BE ACCEPTED UNTIL THE TIME AND DATE SPECIFIED ABOVE. THE PROPOSAL ENVELOPE MUST BE SEALED AND SHOULD BE PROPERLY MARKED WITH THE PROPOSAL NUMBER, DATE AND HOUR OF PROPOSAL OPENING, AND VENDOR'S RETURN ADDRESS. THE ELECTRONIC SUBMISSIONS SHOULD BE CLEARLY MARKED AS A PROPOSAL IN RESPONSE TO RFP NO. BLR-210002. IT IS NOT NECESSARY TO RETURN "NO BIDS" TO THE BUREAU OF LEGISLATIVE RESEARCH.

**Vendors are responsible for delivery of their proposal documents to the Bureau of Legislative Research prior to the scheduled time for opening of the particular proposal. When appropriate, Vendors should consult with delivery providers to determine whether the proposal documents will be delivered to the Bureau of Legislative Research office street address prior to the scheduled time for proposal opening. Delivery providers, USPS, UPS, FedEx, and DHL, deliver mail to our street address, 500 Woodlane Street, State Capitol Building, Room 315, Little Rock, Arkansas 72201, on a schedule determined by each individual provider. These providers will deliver to our offices based solely on our street address.**

MAILING ADDRESS: 500 Woodlane Street State Capitol Building, Room 315 Little Rock, Arkansas 72201	PROPOSAL OPENING LOCATION: Bureau of Legislative Research Director's Office State Capitol Building, Room 315
E-MAIL: thayerj@blr.arkansas.gov	
TELEPHONE: (501) 682-1937	

Company Name: Regional Economic Models, Inc.

Name (type or print): Elizabeth Colegrove

Title: Contract Administrator

Address: 433 West Street, Amherst, MA 01002

Telephone Number: 413-549-1169

Fax Number:

E-Mail Address: billing@remi.com

Identification:

Federal Employer ID Number

042699678

Social Security Number

**FAILURE TO PROVIDE TAXPAYER IDENTIFICATION NUMBER MAY  
RESULT IN PROPOSAL REJECTION**

Business Designation (check one):	Individual [ ]	Sole Proprietorship [ ]	Public Service Corp [ ]
	Partnership [ ]	Corporation [X]	Government/ Nonprofit [ ]

GENERAL DESCRIPTION:	State Budgeting and Revenue Forecasting Consulting Services
TYPE OF CONTRACT:	Term

**MINORITY BUSINESS POLICY**

Participation by minority businesses is encouraged in procurements by state agencies, and although it is not required, the Bureau of Legislative Research ("BLR") supports that policy. "Minority" is defined at Arkansas Code Annotated § 15-4-303 as "a lawful permanent resident of this state who is: (A) African American; (B) Hispanic American; (C) American Indian; (D) Asian American; (E) Pacific Islander American; or (F) A service-disabled veteran as designated by the United States Department of Veteran Affairs". "Minority business enterprise" is defined at Arkansas Code Annotated § 15-4-303 as "a business that is at least fifty-one percent (51%) owned by one (1) or more minority persons". The Arkansas Economic Development Commission conducts a certification process for minority businesses. Vendors unable to include minority-owned businesses as subcontractors may explain the circumstances preventing minority inclusion.

**EQUAL EMPLOYMENT OPPORTUNITY POLICY**

The Vendor shall submit a copy of the Vendor's Equal Opportunity Policy. EO Policies shall be submitted in hard copy and electronic format to the Bureau of Legislative Research accompanying the solicitation response. The Bureau of Legislative Research will maintain a file of all Vendor EO policies submitted in response to this solicitation. The submission is a one-time requirement, but Vendors are responsible for providing updates or changes to their respective policies.

**EMPLOYMENT OF ILLEGAL IMMIGRANTS**

The Vendor shall certify prior to award of the contract that it does not employ or contract with any illegal immigrants in its contract with the Bureau of Legislative Research. Vendors shall certify on the Proposal Signature Page and online at <https://www.ark.org/dfa/immigrant/index.php/disclosure/submit/new> . Any subcontractors used by the Vendor at the time of the Vendor's certification shall also certify that they do not employ or contract with any illegal immigrant. Certification by the subcontractors shall be submitted within thirty (30) days after contract execution.

**RESTRICTION OF BOYCOTT OF ISRAEL**

Pursuant to Arkansas Code § 25-1-503, a public entity shall not enter into a contract with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of Israel. This prohibition does not apply to a company which offers to provide the goods or services for at least twenty percent (20%) less than the lowest certifying business.

By checking the designated box on the Proposal Signature Page, the Vendor agrees and certifies that they do not, and will not for the duration of the contract boycott Israel.

**EXECUTIVE ORDER E0-98-04**  
**EXECUTIVE ORDER DISCLOSURE FORM**

NAME: Regional Economic Models, Inc.

ADDRESS: 433 West St., Amherst, MA 01002  
Street City State/Zip County

CONTRACT NO: BLR-210002 FEDERAL NO: \_\_\_\_\_

CONTRACT EFFECTIVE DATE: 1/1/2022

**B. DISCLOSURE REQUIREMENTS**

Agencies shall require, as a condition of obtaining or renewing a contract, lease, purchase agreement, employment, or grant with any state agency, that any individual desiring to contract with, be employed by, or receive grant benefits from, any state agency shall disclose whether that person is a current or former; member of the general assembly, constitutional officer, board or commission member, state employee, or the spouse or immediate family member of any of the persons described in this sentence. Agencies shall require that any non-individual entity desiring to contract with, or receive grant benefits from, any state agency shall disclose (1.) any position of control, or (2.) any ownership interests of 10% or greater, that is held by a current or former member of the general assembly, constitutional officer, board or commission member, state employee, or the spouse or immediate family member of any of the persons described in this sentence.

As a condition for obtaining funding through a contract, lease, purchase agreement, or a grant with the Department of Health and Human Services, the following information must be disclosed:

Individual contractor indicate below if you are:

	Current	Former	Term(s) of service
1. A member of the general assembly	Yes/No (circle one)	Yes/No (circle one)	
2. A constitutional officer	Yes/No (circle one)	Yes/No (circle one)	
3. A state employee	Yes/No (circle one)	Yes/No (circle one)	
4. Serving as a commission or board member	Yes/No (circle one)	Yes/No (circle one)	

Individual contractor indicate below if you are a spouse or immediate family member of an individual that is;

	Current	Former	Term(s) of service	Relative's name and relationship
1. A member of the general assembly	Yes/No (circle one)	Yes/No (circle one)		
2. A constitutional officer	Yes/No (circle one)	Yes/No (circle one)		
3. A state employee	Yes/No (circle one)	Yes/No (circle one)		
4. Serving as a commission or board member	Yes/No (circle one)	Yes/No (circle one)		

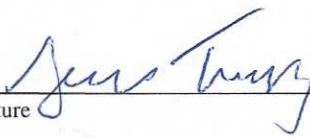
Non-individual entity list any individual who holds a position of control or ownership interest of 10% or greater in the entity if the individual is:

	Current	Former	Relative's name & Term(s) of Service	Relationship	Individual
1. A member of the general assembly	Yes/No (circle one)	Yes/No (circle one)			
2. A constitutional officer	Yes/No (circle one)	Yes/No (circle one)			
3. A state employee	Yes/No (circle one)	Yes/No (circle one)			
4. Serving as a commission or board member	Yes/No (circle one)	Yes/No (circle one)			

Non-individual entity list any individual who holds a position of control or ownership interest of 10% of greater in the entity if the individual is a spouse or immediate family member of:

	Current	Former	Term(s) of service	Relative's name & Relationship	Individual
1. A member of the general assembly	Yes/No (circle one)	Yes/No (circle one)			
2. A constitutional officer	Yes/No (circle one)	Yes/No (circle one)			
3. A state employee	Yes/No (circle one)	Yes/No (circle one)			
4. Serving as a commission or board member	Yes/No (circle one)	Yes/No (circle one)			

Failure of any person or entity to disclose under any term of Executive Order 98-04 shall be considered a material breach of the terms of the contract.

  
 \_\_\_\_\_  
 Signature

9/23/2021  
 \_\_\_\_\_  
 Date

\_\_\_\_\_  
 Chief Executive Officer  
 Title

**THIS FORM MUST BE COMPLETED AND RETURNED PRIOR TO EXECUTION OF THE CONTRACT**



## REMI Proposal: State Budgeting and Revenue Forecasting Consulting Services

### Section 3:

In this section, REMI responds to each element of the requested scope of work. REMI is highly qualified to provide all of the following services.

- **Prepare fiscal impact reports for proposed legislation, including dynamic scoring**
  - **REMI experience:** Dr. Peter Evangelakis was the Principal Investigator for REMI in 2018 who authored a series of dynamic fiscal impact reports on behalf of the Arkansas Bureau of Legislative Research (BLR) regarding proposed state tax policy changes. One example is included in this proposal. Also included is a report analyzing the impacts of a tax reform proposal for the State of Nebraska.
  - **Understanding:** REMI will prepare reports to demonstrate the fiscal impacts generated by proposed legislation. Those reports will include introduction of the proposed legislation, the methodology that REMI will employ, results (fiscal results, economic results, and demographic results) from REMI's proprietary Tax-PI model and associated discussion, and a conclusion regarding the impacts of the proposed legislation. REMI's models are dynamic economic models, which means all the revenue results will include dynamic scoring that will take the direct, indirect and induced economic effects into consideration.
  - **Path of success:** Please refer to Tasks 3 and 4 from the *Detailed Path of Success Section* below.
- **Provide revenue forecasting and analysis**
  - **REMI experience:** REMI produced the 2018 fiscal impact reports using the Tax-PI model, which created revenue forecasts with and without the proposed state tax policy changes based on a detailed specification of Arkansas's tax revenue structure.
  - **Understanding:** REMI will generate revenue forecasts by revenue category over the entire analysis period and utilize those as the basis to calculate the budgetary impacts of proposed changes to state tax policy. REMI's Tax-PI model has a Budget module, which allows users to link each revenue item to applicable economic indicators and model policy levers, and generates projected revenue.
  - **Path of success:** Please refer to Tasks 2, 3, and 4 from the *Detailed Potential Path of Success Section* below.
- **Provide consultation and advisory services regarding proposed legislation**
  - **REMI experience:** Based on the 2018 fiscal impact reports, REMI provided detailed information to the Arkansas BLR about the economic and revenue implications of proposed state tax policy changes.
  - **Understanding:** REMI will provide consultation and advisory services regarding proposed tax policy changes along this project. REMI's Tax-PI model will generate dynamic scoring that accounts for the behavior of businesses and consumers in response to policy changes. These

reactions can have ripple effect with total output and employment. These dynamic fiscal impacts analysis make REMI capable of providing policy implications.

- **Path of success:** Please refer to Tasks 2, 3, 4, 6, and 7 from the *Detailed Potential Path of Success Section* below.
- **Provide budgeting and forecasting research and analysis, as requested, including reports regarding updates to state and federal laws, and best practices in state budgeting**
  - **REMI experience:** Both with the Arkansas BLR and with many other clients, REMI has significant experience in such analysis of state and federal tax policy. A report regarding the impacts of proposed changes to the federal capital gains tax on the State of Georgia is included in this proposal.
  - **Understanding:** REMI will provide forecasts and analysis of state budgets in response to state and federal law updates. REMI will generate recommendations for state budgeting practices based on REMI Tax-PI model results.
  - **Path of success:** Please refer to Tasks 2, 3, and 4 from the *Detailed Potential Path of Success Section* below.
- **Attend meetings of the Committee, as requested, or of other legislative committees as authorized by the Committee co-chairs**
  - **REMI experience:** Dr. Peter Evangelakis testified as to the findings of the REMI analysis in front of the Tax Reform and Relief Legislative Task Force in 2018.
  - **Understanding:** REMI will be available to attend meetings of the Committee or of other legislative committees as authorized by the Committee co-chairs, provide support, participate in discussions, and answer questions.
  - **Path of success:** Please refer to Tasks 6 and 7 from the *Detailed Potential Path of Success Section* below.
- **Be readily accessible to Committee members and BLR staff**
  - **REMI experience:** Both with the Arkansas BLR and with many other clients, Dr. Peter Evangelakis and his team have made themselves available to provide any necessary assistance or answers.
  - **Understanding:** REMI will provide unlimited technical support in a timely manner to all Committee members and BLR staff and ensure high quality assistance and prompt responses to any questions or requests to the best of our ability. CLIENT will be able to easily access to all deliverables that REMI provides.
  - **Path of success:** Please refer to Tasks 6 and 7 from the *Detailed Potential Path of Success Section* below.
- **Be available for periodic education discussions with Committee members and staff**
  - **REMI experience:** Both with the Arkansas BLR and with many other clients, Dr. Peter Evangelakis and his team have made themselves available to provide any necessary training, assistance, or answers.
  - **Understanding:** REMI will be available to attend periodic education discussions as requested, and prepare presentations for further discussions.
  - **Path of success:** Please refer to Tasks 6 and 7 from the *Detailed Potential Path of Success Section* below.

## Detailed Potential Path of Success

Below is a detailed breakdown of the tasks necessary to meet the project requirements. The total time needed to deliver final report and presentation is around eight to ten weeks.

### Task 1: Build New Tax-PI Model of State of Arkansas – Two Weeks

- REMI will build a new 1-region, 70-sector Tax-PI model of the State of Arkansas. The REMI model consists of thousands of simultaneous equations, from which the regional economic and fiscal forecasts are computed. Publicly available model equations documentation can be found at, [Model-Equations.pdf \(remi.com\)](#). Additional documentation can be provided upon request.

### Task 2: Calibrate Budget – One Week

- The Tax-PI model will be calibrated to reflect the current Arkansas state budget and integrated with economic and demographic drivers to produce comprehensive fiscal impact estimates. Integration includes Arkansas budget and tax legislation research, revenues and expenditures data collection and analysis, model inputs that linking budget items to applicable economic indicators and model policy levers, calibrating budget items, revenue and expenditure forecasting, and etc.
- Quality assurance will commence to ensure budget reflects the correct linkages to the Arkansas economy.

### Task 3: Provide Preliminary Results – One to Three Weeks upon Receipt of Data

- REMI will conduct in-depth analysis on key economic and fiscal impacts generated by applicable legislation using Tax-PI. The analysis includes but not limited to budget forecasting, cost/benefit analysis, multiple tables and visualizations, detailed write-ups, one-pager and etc.

### Task 4: Prepare Fiscal Impact Reports – One to Two Weeks

- REMI will provide dynamic fiscal impact reports on applicable legislation having a direct change in state revenues or expenditures of one million dollars or greater, which includes dynamic scoring. The report can also provide insights on best practices in state budgeting. Direct change in revenues or expenditures and brief description of legislation should be provided by CLIENT.
- Based on model outcomes and discussion with CLIENT, REMI could report annual results for the following set of result variables (more result variables available upon request), over the entire analysis period. Tax-PI is a powerful tool that can display impacts by different budget items, detailed industry level, demographic group (ethnicity, gender, and age), regional, regional aggregation or sub-regional level, and etc. REMI could also break down the fiscal impacts into direct, indirect and induced impacts.

**Table 1: REMI Selected Model Result Variables**

Employment	State Government Fiscal Impacts
Gross State Product	Population
Economic Output	Disposable Personal Income

### Task 5: Prepare Presentation of Modeling Process & Dynamic Fiscal Impacts – One Week

- REMI will provide CLIENT a PowerPoint Presentation including the following contents:

- o Brief overview of model built
  - o Example of budget integration with economy
  - o Explanation of budgeting forecasting and analysis
  - o Overview of dynamic fiscal impacts evaluated
- CLIENT will have chance to review and give feedback. REMI may adjust presentation if necessary.

**Task 6: In-Person Presentation – One or Two Days**

- REMI will attend meetings as requested and provide presentation to audience(s) arranged by CLIENT. That includes education discussions, internal and supplementary meetings within this same one or two-day period.
- If CLIENT requests additional in-person presentations or on-site support, travel expenditure reimbursements and daily rates for staff services would apply.

**Task 7: Access to Deliverables and Technical Support – Until End of Contract Term**

- After completion of Task 4, REMI will provide unlimited technical support and remote trainings. Specifically, REMI will support CLIENT to get access to all deliverables of this project, respond technical questions in a timely manner, attend virtual or in-person meetings, be readily accessible to Committee members and BLR staff, and hold training sessions or education discussions upon request.

## **Section 5.1: Vendor Profile**

Business Name: Regional Economic Models, Inc.

Business Address: 433 West Street, Amherst, MA 01002

Alternate Business Address: 1717 K Street, Suite 900, Washington, DC 20006

Primary Contact Name, Title, Telephone, Fax and E-mail: Elizabeth Colegrove, Contract Administrator, 413-549-1169, NA, [billing@remi.com](mailto:billing@remi.com)

Years in Business: 41

### ***Proof of Business Qualifications:***

REMI is currently in the process of acquiring a registered agent in the State of Arkansas, and will provide a Certificate of Authority issued by the Arkansas Secretary of State prior to the commencement of the services if granted the award.

### ***Disclosure of Corporate Ownership:***

57.1%: Frederick Treyz, PhD; 3 Swallow Farms Rd., Amherst, MA 01002

14.9%: The George Treyz Trust; 306 Lincoln Ave., Amherst, MA 01002

28%: G. Victor Treyz; 1964 8<sup>th</sup> Ave., San Francisco, CA 94116

### ***Business Disclosures:***

Regional Economic Models, Inc. (REMI) is in the business of providing software licenses for REMI economic impact models (PI+, TranSight, E3+, Tax PI) throughout the United States. REMI also provides economic impact consulting services.

REMI is currently not under contract by another state entity to provide similar consulting services.

REMI has not pleaded or been convicted or adjudicated of guilt in a state or federal court for any felony or any other criminal offense other than a traffic violation committed by the persons identified as management, supervisory, or key personnel.

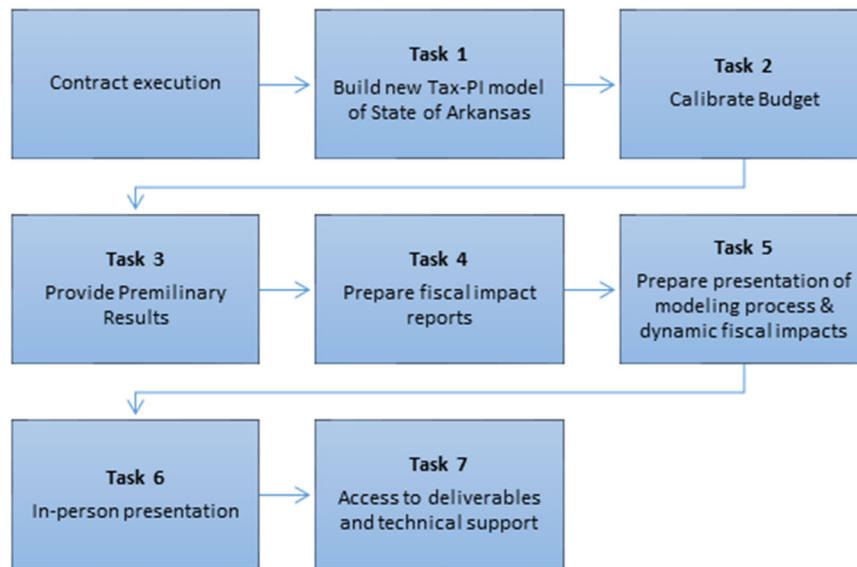
REMI is not under any finding of bankruptcy, insolvency, reorganization, or corporate or individual purchase or takeover of another corporation, including without limitation bonded indebtedness, and any pending litigation.

REMI does not have any conflicts of interest in regards to work to be performed on this project.

## Section 5.4: Executive Summary

Bureau of Legislative Research (BLR), is interested in inviting responses from Vendors to provide State Budgeting and Revenue Forecasting for the Joint Committee on Economic and Tax Policy of the Arkansas General Assembly. To that end, Regional Economic Models, Inc. (REMI) will use a customized economic and fiscal model (Tax-PI model) of Arkansas to quantify the fiscal impacts in response to proposed legislation changes, and produce reports and presentations detailing our findings, which include budget forecasting, dynamic scoring, and cost/benefit analysis of proposed policy. A flow chart is shown below to indicate the duration of this project.

**Chart 1: Overview of Project Timeline**



## Section 5.5: Vendor's Qualifications

- **Brief history of REMI and Qualification**

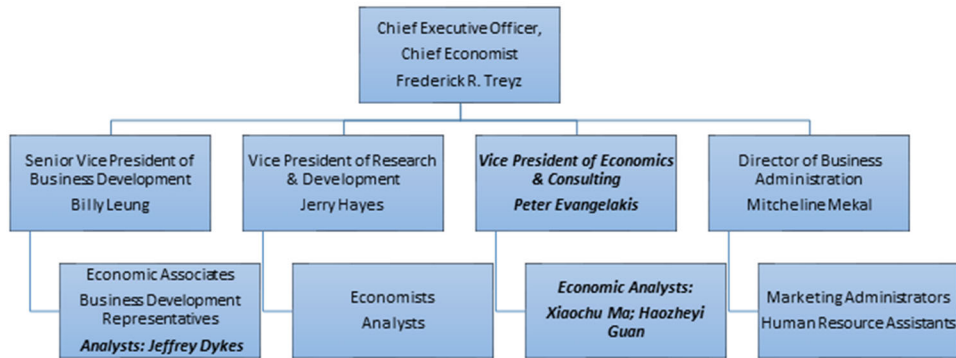
Regional Economic Models, Inc. (REMI) is the nation's leader in dynamic local, state and national policy modeling. Founded in 1980, REMI has over 40 years of experience in the development of regional U.S. models and providing public policy consulting services. As an independent company with offices in Amherst, MA and Washington, DC, REMI provides non-partisan economic analysis and models to clients globally. Clients include federal and state government agencies, non-profit organizations, and private companies. REMI models have been applied to wide range of policy areas, including taxation, revenue and budget, economic development, energy and environment, and transportation.

Consulting experts at REMI employ peer reviewed methodology to perform dynamic analyses and evaluate the effects of policy changes. REMI's consulting clients value our ability to apply and communicate state-of-the-art approaches clearly and effectively, and our commitment to deliver nonpartisan forecasts. REMI consultative services and Tax-PI has been utilized by the Arkansas Bureau of Legislative Research on at least two previous occasions to provide a dynamic fiscal and macroeconomic impact analysis report on the Big River Steel project in the spring of 2013 and to provide dynamic fiscal notes regarding proposed state tax policy changes in 2018.

REMI proposes to develop and license an integrated Tax-PI model, and produce dynamic fiscal impact report for the Arkansas Bureau of Legislative Research within a timeframe of eight to ten weeks. The purpose of this tool is to primarily evaluate the dynamic fiscal, economic and demographic impacts of proposed legislation that will directly change state revenue or expenditures. The dynamic fiscal impact report will include a cost/benefit analysis of the proposed policy. Please refer to the Section 3 response for detailed information.

Tax-PI helps better understand the economic relationships that exist between policy and the economy over time. The REMI Tax-PI model is a combined economic, demographic, and fiscal model within a Windows-based software package. It performs economic impacts, demographic analysis, and the dynamic scoring of state budgets at the regional level. Perhaps the most significant characteristic of Tax-PI is its tying of these analytical factors together in a consistent framework. Tax policy influences the economy, which, in turn, influences tax revenues and state expenditures in the medium- and long-term. Policy can also guide location decisions of households, labor, businesses and investors.

**Chart 2: REMI’s Organizational Structure**



*Note: The names/positions that will be involved in the contract have been listed and in bold.*

- **Biographies of Project Personnel**

**Peter Evangelakis, Ph.D.**

Peter Evangelakis, Ph.D. is Vice President of Economics and Consulting at REMI. Since joining REMI in September 2017, he has managed REMI’s team of economists, assisted clients in planning and conducting economic analysis using the REMI model, contributed to the firm’s business development efforts, run REMI’s consulting practice and served as Principal Investigator on numerous projects , managed the development of several new pieces of modeling software, and prepared and presented at in-person and online REMI seminars and professional conferences, and in front of legislative committees. Counted among these projects and presentations include the 2018 dynamic fiscal notes regarding proposed Arkansas state tax policy changes on behalf of the Bureau of Legislative and testimony in front of the Tax Reform and Relief Legislative Task Force. Dr. Evangelakis is based at REMI’s Washington, D.C. office. He holds a Ph.D. and Master’s degree in Economics from the University of Chicago, and a BA in Economics and Mathematics from Swarthmore College.

### **Haozheyi Guan**

Haozheyi Guan is an Economic Analyst at REMI. She has provided extensive research, data analysis and model forecasting to several consulting projects with regional economic and fiscal impact analysis in tax policy and transportation. In particular, she was a lead analyst on a project analyzing the national and state-level impacts of changes to the national capital gains tax. She also contributes to the development of REMI model's methodology, conducts econometric analysis to estimate model equations, updates regional economic forecasting data, and provides advisory services and technical support to REMI model users.

Haozheyi holds a Bachelor's degree in Economics from Beijing Normal University and a Master's degree in International Economic and Finance from Johns Hopkins University.

### **Xiaochu Ma**

Xiaochu Ma is an Economic Analyst at Regional Economic Models, Inc. (REMI). Since joining REMI in June 2020, she has conducted several consulting projects, worked on data analysis and model parameter estimation projects, and contributed to model development and quality assurance. She has experience in providing tax policy related consulting services by using REMI's Tax-PI models. In particular, she was a lead analyst on a project analyzing the impacts of a tax reform proposal for the State of Nebraska.

Ms. Ma holds a Master's degree in Economics from Columbia University and a Bachelor's degree in Economics from Nankai University. Before joining REMI, Ms. Ma served as a research assistant at Columbia University and an intern at the United Nations.

### **Jeffrey Dykes**

Jeffrey Dykes is an Economic/Research & Development Analyst, with over 6 years of economic modeling experience for REMI at the Massachusetts headquarters. He has contributed to model development, policy research, and consulting with regional economic impact analysis in transportation and infrastructure, resilience, incentive analysis, and the development of linkages to external models. Mr. Dykes conducts research and evaluates data for consulting projects. He also evaluates new model versions for errors and discrepancies in economic forecasting simulations.

Mr. Dykes holds a B.B.A. in Finance and a B.A. in Economics from the Isenberg School of Management at the University of Massachusetts Amherst.

- **Most Recent Comparable Contracts**

For all three comparable contracts listed below, an associated report is provided in the proposal. Please also consider this a list of businesses for which REMI has performed services substantially similar to those sought with this solicitation during the past three years.

#### **Recent comparable contract 1 (Arkansas BLR):**

On behalf of the Arkansas BLR, REMI performed an economic and fiscal impact analysis of proposed state tax policy changes over the period 2019-2023 using a 1-region, 70-sector Tax-PI v2.1 model of the State of Arkansas. Specifically, REMI considered how the tax policy changes in individual income tax, corporate income tax, and other taxes would affect employment, economic output, Gross State Product (GSP), population, disposable personal income, and state government revenue and expenditures.

### **Recent comparable contract 2 (Blueprint Nebraska):**

On behalf of Blueprint Nebraska, REMI performed an economic and fiscal impact analysis of the tax policy changes and incentive programs over the period 2022-2031 using a 10-region, 70-sector Tax-PI v2.4 model of nine Nebraska Economic Development Regions and one region for the rest of the nation. Specifically, REMI considered how the tax policy changes in individual income tax, corporate income tax, sales taxes, and inheritance tax, R&D tax credit program and workforce incentive programs would affect employment, economic output, Gross State Product (GSP), investment activity, personal income, state government revenue and tax burden for Nebraska.

Blueprint Nebraska is an organization of diverse business, industry, and civic leaders who have come together from across Nebraska state with the common goal of making sure that the Nebraska of tomorrow is even better than the already wonderful Nebraska of today. Since April 2018, they have been developing a statewide economic development blueprint for the next decade. They held more than 60 events with over 2,000 participants in more than 30 regions of the state.<sup>1</sup>

### **Recent comparable contract 3 (Committee to Unleash Prosperity):**

REMI was retained by the Committee to Unleash Prosperity (CTUP) to perform an economic impact analysis of the key proposed changes of the Sensible Taxation and Equity Promotion (STEP) Act on both United States and selected states<sup>2</sup> during 2021 – 2030 under a top combined capital gains tax rate of 43.4%, which adds the Administration’s proposed 39.6% top capital gains tax rate and the existing 3.8% net investment income tax (NIIT). Specifically, REMI built a customized 16-Region, 160-sector PI+ model to evaluate the direct economic impacts of the proposed changes to the capital gains tax that repeal the step-up in basis, make death a realization event, and increase the tax liability of trusts commonly utilized by small businesses, family businesses, and farms. The final report included impacts on employment, Gross State Product (GSP), investment, R&D spending, output, and personal income.

Committee to Unleash Prosperity is a Maryland-based nonprofit co-founded by American Legislative Exchange Council (ALEC) economists. They support supply-side economics, and their mission is to identify policies best suited to unleashing prosperity and to educate policy makers on the best practices to achieve equitable prosperity.

- **References**

#### **Blueprint Nebraska:**

Jim Smith

[jim.smith@blueprint-nebraska.org](mailto:jim.smith@blueprint-nebraska.org)

#### **Committee to Unleash Prosperity:**

Stephen Moore

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<sup>1</sup> Reference to [BlueprintNE\\_Public.pdf \(blueprint-nebraska.org\)](#)

<sup>2</sup> States include Arizona, California, Colorado, Connecticut, Georgia, Montana, Nevada, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, and West Virginia.

[steve.moore@heritage.org](mailto:steve.moore@heritage.org)

**New York State Division of the Budget:**

Aysegul Jezewski

[Aysegul.Jezewski@budget.ny.gov](mailto:Aysegul.Jezewski@budget.ny.gov)

**Additional Required Information:**

- REMI does not have a parent company/subsidiary affiliation with other entities.
- REMI maintains membership and annually sponsors the National Association of Business Economics (NABE), and annually sponsors the Federal Transit Administration (FTA) conference
- REMI has maintained the following bank accounts for the past twenty years: Bank of America (expense checking), Bank of America (main checking), Bank of America (electronic fund transfer), Greenfield/Northampton Cooperative Savings Bank (checking)
- REMI does not have any failed projects, suspensions, debarments, or significant litigation made against it.
- REMI does not have any conflict of interest with the objectives and goals of the Committee resulting from any other current projects.
- REMI has not lost any clients due to any contractual disputes from June 2018 to the present. REMI has also not been involved in a contractual dispute involving a subcontractor.

## PROPOSAL SIGNATURE PAGE

Type or Print the following information:

### Prospective Contractor Contact Information

Contact Person: Peter Evangelakis, PhD Title: Vice President, Economics and Consulting

Phone: 202-469-7861 Alternate Phone: 202-717-0501

Email: peter.evangelakis@remi.com

### Confirmation of Redacted Copy

YES, a redacted copy of proposal documents is enclosed.

NO, a redacted copy of submission documents is not enclosed. I understand a full copy of non-redacted submission documents will be released if requested.

*Note: If a redacted copy of the proposal documents is not provided with the Vendor's proposal, and neither box is checked a copy of the unredacted documents will be released in response to any request made under the Arkansas Freedom of Information Act (FOIA).*

### Illegal Immigrant Confirmation

By signing and submitting a response to this RFP and by certifying online at <https://www.ark.org/dfa/immigrant/index.php/disclosure/submit/new>, the Vendor agrees and certifies that they do not employ or contract with illegal immigrants. If selected, the Vendor certifies that they will not employ or contract with illegal immigrants during the aggregate term of the contract.

### Israel Boycott Restriction Confirmation

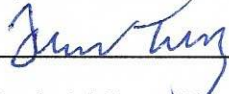
By checking the box below, the Vendor agrees and certifies that they do not boycott Israel, and if selected, will not boycott Israel during the aggregate term of the contract.

Vendor does not and will not boycott Israel.

---

***An official authorized to bind the Vendor to a resultant contract shall sign below.***

The Signature below signifies agreement that any exception that conflicts with the requirements of this RFP will cause the Vendor's proposal to be disqualified.

Authorized Signature:  Title: Chief Executive Officer

Printed/Typed Name: Frederick Treyz, PhD Date: 9/23/2021

## Arkansas Tax Reform and Relief Legislative Task Force

### Legislative Impact Statement

#### Proposals Under Consideration: Corporate Income Tax Proposal

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##### Executive Summary:

The proposal under consideration reduces the top marginal corporate income tax rate for individuals from six and five-tenths percent (6.5%) to six percent (6%). The total static fiscal impact of the proposal is a reduction in Arkansas state corporate income tax revenue of \$32,000,000.

This impact statement includes fiscal, economic, and demographic estimates from a dynamic economic model. A dynamic model captures the macroeconomic feedback from behavioral changes among consumers and businesses and allows this to have feedback effects on state revenues and expenditures.

The results show annual economic output growing on average over 5 years by \$46.3 million and an average annual increase of 356 jobs, with more than 93 percent of the growth occurring in private non-farm employment. It also shows a net loss of \$30.8 million in revenue.

##### Methodology:

The economic and fiscal analysis of the proposals is conducted by Regional Economic Models, Inc. (REMI) using their Tax-PI v2.1 software, which is a dynamic regional macroeconomic, demographic, and fiscal model. Specifically, they use a 1-region custom model of Arkansas that is calibrated to revenues and expenditures from the FY 2017 Arkansas state budget.

Each budget category is assigned both an “economic driver” that allows it to respond to changes in a specific economic variable (e.g., Value Added for Corporate Income Tax Revenue) and a “policy variable” that allows it to directly impact a specific economic variable (e.g., Production Cost for Corporate Income Tax Revenue).

The static corporate income tax revenue impact and the resulting direct economic shock are input into the model for each year during the 5-year period 2019-2023. The economic shock is a decrease in production costs for all applicable industries. Then, the model produces estimates for each proposal of economic impacts on the state of Arkansas such as employment, GDP, output, and disposable personal income, demographic impacts on the state such as changes in population, and fiscal impacts on the state budget including both revenues and expenditures.

The results are reported in the next section with accompanying discussion.

##### Economic & Fiscal Impacts:

The annual **increase** in Arkansas’ population rises from **101** in 2019 to **436** in 2023, with a 5-year average annual **increase** of **279**. This is largely driven by higher employment opportunities, which raises the level of economic in-migration.

Total employment **rises** by an average of **356**, of which **93.5%** comes from private non-farm sectors and **6.5%** comes from the government sector. Additionally, Gross State Product (GSP) and total output (which accounts for both GSP as well as the value of intermediate inputs) **increase** by an average of **\$26.5 million** and **\$46.3 million**, respectively. This increase in economic activity is driven mainly by two key factors: (1) the influx of new population; and (2) the decrease in business costs which makes Arkansas industries more competitive with imports. Disposable personal income **increases** by an average of **\$16.9 million**.

# Arkansas Tax Reform and Relief Legislative Task Force

## Legislative Impact Statement

### Proposals Under Consideration: Corporate Income Tax Proposal

The static impact of the tax cut is a **\$32.0 million loss** in state revenue per year, but the increase in economic activity partially offsets the loss. Thus, the total revenue **loss** averages **\$30.8 million**. This means that **3.8%** of the static revenue loss is recovered.

Largely as a result of the increase in population and GDP, state government expenditures **rise** by an average of approximately **\$600,000**.

The results shown below are differences from the baseline REMI forecast.

#### Corporate Income Tax Change: Revenue and Production Costs Decrease by \$32M

Results	Units	2019	2020	2021	2022	2023	Average
<b>Population</b>	Individuals	101	198	289	368	436	279
<b>Total Employment</b>	Individuals	233	324	382	413	429	356
<b>Government Employment</b>	Individuals	10	19	25	30	34	24
<b>Private Non-Farm Employment</b>	Individuals	223	305	357	383	396	333
<b>Gross State Product (Value-Added)</b>	Nominal Millions	\$15.6	\$22.8	\$28.0	\$31.7	\$34.3	\$26.5
<b>Output (Industry Sales)</b>	Nominal Millions	\$27.1	\$39.8	\$49.0	\$55.4	\$60.0	\$46.3
<b>Disposable Personal Income</b>	Nominal Millions	\$8.9	\$13.8	\$17.7	\$20.8	\$23.3	\$16.9
<b>Government Revenue</b>	Nominal Millions	-\$31.3	-\$31.0	-\$30.8	-\$30.6	-\$30.4	-\$30.8
<b>Government Expenditure</b>	Nominal Millions	\$0.2	\$0.4	\$0.6	\$0.8	\$1.0	\$0.6
<b>NET REVENUE (Gov Rev, less Gov Exp)</b>	Nominal Millions	-\$31.5	-\$31.4	-\$31.4	-\$31.4	-\$31.4	-\$31.4

### Conclusion:

The proposal under consideration reduces the top marginal corporate income tax rate for individuals from six and five-tenths percent (6.5%) to six percent (6%). This impact statement provides the possible effects on the state economy and budget that would result from adopting the proposal. By factoring in the total economic effects, dynamic scoring can indicate where the state may recover revenue reduced by cuts in tax rates.

The results show annual economic output growing on average over 5 years by \$46.3 million and an average annual increase of 356 jobs, with more than 93 percent of the growth occurring in private non-farm employment. It also shows a net loss of \$30.8 million in revenue.

Comparable Contract 2:



Regional Economic Models, Inc.



## The State Economic Impacts of Current Legislative Proposals to Change the Capital Gains Tax: Georgia

August 2021



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# Table of Contents

Table of Contents	2
Executive Summary	3
REMI Background & Experience	4
Glossary	5
Introduction	6
Methodology	7
Households & Trusts	7
Small Businesses	9
Farms	10
Federal Government Spending	11
Results	13
Employment	13
Economic Output, Gross Domestic Product, Private Investment, and R&D Spending	13
Personal Income	14
Discussion	15
Conclusion	17
Appendix I: REMI Model Framework	18
Appendix II: Model Inputs State List	23

# Executive Summary

Legislative proposals, like the Sensible Taxation and Equity Promotion (STEP) Act and others like it, present a variety of changes to the long-term capital gains tax, including the repeal of the step-up in basis at death, making death a tax realization event, and increasing the tax liability of trusts commonly utilized by small businesses, family- and privately-owned enterprises, farm and ranch operations, and others. These new and additional tax liabilities would materialize in the form of capital gains taxes being applied retroactively on the accumulated value of assets such as businesses, farms, and other assets when transferred via trusts or upon an owner's death to family members or other beneficiaries of a trust. The STEP Act also treats non-grantor trust assets as being sold and therefore taxed every 21 years for living owners, and H.R. 2286 proposes a similar rule with a period of 30 years.

Regional Economic Models, Inc. (REMI) was retained by the Committee to Unleash Prosperity (CTUP) to perform an economic impact analysis of the key proposed changes of the STEP Act on Georgia during 2021 – 2030 under a top combined capital gains tax rate of 43.4%, which adds the Administration's proposed 39.6% top capital gains tax rate and the existing 3.8% net investment income tax (NIIT). This analysis does not include applicable state capital gains, estate, or inheritance taxes which vary by state.

REMI found the following key results for Georgia:

- Sustained annual job losses ranging from 10,000 to almost 30,000
- 10-year losses in economic output and GDP of about \$40 billion and \$20 billion, respectively, with
  - \$20 billion loss in private investment, and a
  - \$30 million loss in R&D spending
- 10-year loss in personal income of about \$35 billion, which translates to
  - \$6,000 – 9,000 per household

These significant negative economic impacts are driven by several key factors:

- Increased financing and tax liability costs to businesses, especially small and family-owned businesses and farms
  - Prospective businesses may choose not to open
  - Existing businesses may be forced to downsize or close
  - Costs are passed on into higher consumer prices
- Increased financing costs also specifically discourage private investment
  - R&D spending is closely tied in with private investment, so it declines as well
  - Decrease in labor productivity driven by lower private investment and R&D spending
    - May be worsened by shift away from investment in high risk, high potential start-ups
    - Raises business costs by requiring more labor to produce the same economic output
- Increased federal non-military spending of revenue generated does provide a direct boost to the economy, but the negative impacts dominate

In summary, the net economic impact of the key proposed legislative changes to the capital gains tax in the STEP Act is significantly negative.

# REMI Background & Experience

Regional Economic Models, Inc. (REMI) is an independent company with offices in Amherst, MA and Washington, D.C. that provides non-partisan economic analysis and modeling software to its clients, who include federal, state, and local government agencies, non-profit organizations, universities, and private companies. With over 40 years of experience, REMI is a worldwide leader in providing dynamic regional U.S. macroeconomic and demographic models and consultative services used to evaluate tax policy as well as many other policy issues such as trade, economic development, health care, transportation, and energy.

# Glossary

**Economic Output:** The amount of production, including all intermediate goods purchased as well as value added (compensation and profit). This can also be thought of as sales or supply.

**Employment:** Employment comprises estimates of the number of jobs, full-time plus part-time, by place of work for all industries.

**Federal Non-Military Spending:** A component of GDP. The value of services produced by the non-military portion of the federal government, measured as the purchases made by government on inputs of labor, intermediate goods and services, and investment expenditures. It is the sum of government consumption expenditures and government gross investment.

**GDP:** Gross Domestic Product. The market value of goods and services produced by labor and property. Also, the sum of value-added across all industries.

**Personal Income:** Income received by persons from all sources. It is the sum of compensation of employees, supplements to wages and salaries, proprietors' income, rental income, personal income receipts on assets, and personal current transfer receipts, less contributions for government social insurance.

**Private Investment:** A component of GDP. Purchases of residential and nonresidential structures and of equipment and software by private businesses and by nonprofit institutions in the United States.

**R&D Spending:** Value added in the scientific research and development services sector.

**Value Added:** The gross economic output of an industry or a sector less its intermediate inputs; the contribution of an industry or sector to gross domestic product (GDP).

# Introduction

Senator Chris Van Hollen, joined by Senators Cory Booker, Bernie Sanders, Sheldon Whitehouse, and Elizabeth Warren, has proposed the Sensible Taxation and Equity Promotion (STEP) Act.<sup>1</sup> The legislative proposal would make a variety of changes to the federal long-term capital gains tax system, including the repeal of the step-up in basis at death, making death a tax realization event, and increasing the tax liability of trusts. Additionally, the Biden Administration has proposed raising the top capital gains tax rate to 39.6%, which would increase the top combined capital gains tax rate to 43.4% when added to the 3.8% net investment income tax (NIIT). Regional Economic Models, Inc. (REMI) was retained by the Committee to Unleash Prosperity (CTUP) to perform an economic impact analysis of these key proposed changes on Georgia.

Relying on a wealth of detailed government data and key insights from the literature, we examined the direct effects on financing costs, labor productivity, costs to small and family-owned businesses and farms, and federal non-military spending of new revenue. Then, using our detailed national PI+ economic model broken out for the state-level analysis, we evaluated how those factors would impact employment, economic output, Gross Domestic Product (GDP), private investment, R&D spending, and personal income over the 2021 – 2030 period.

We found that the proposed changes would generate almost 30,000 sustained job losses. They would also induce 10-year losses to economic output and GDP of about \$40 billion and \$20 billion respectively, as well as \$20 billion and \$30 million respectively in private investment and R&D spending declines. Finally, the 10-year loss in personal income of about \$35 billion, translating into up to \$9,000 in foregone income per household.

These large negative economic impacts are driven by several key factors. Increased costs, especially for small and family-owned businesses and farms, increase the risk of downsizing or closure, reduce new entry into the marketplace, and raise prices for consumers. Increased financing costs in particular discourage private investment, and with it, lower R&D spending and labor productivity. The decline in labor productivity, which raises costs for firms as they face a less efficient workforce, may also be exacerbated by a shift away from investment in high risk but potentially high productivity start-ups. Increased federal non-military spending of the revenue generated does provide a direct boost to the economy, but the negative impacts dominate. The key proposed legislative changes to the capital gains tax in the STEP Act have a significantly negative impact on the national economy.

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<sup>1</sup> In the House of Representatives, Rep. Bill Pascrell, Jr. has introduced H.R. 2286, which makes a very similar proposal.

# Methodology

In order to assess the economic impacts of the key proposed changes to the long-term capital gains tax in the STEP Act, REMI uses a national, 160-industry PI+ v2.5 model of the United States broken out specifically for state-level analysis. PI+ is a sophisticated dynamic regional macroeconomic and demographic policy model that simulates the year-by-year effects of public policy initiatives, and is widely used by national, state, and local entities, legislatures, universities, and many other organizations and experts across the country. More detailed information is available about the model in Appendix I.

This analysis of Georgia covers the 10-year period from 2021 – 2030. REMI considers the direct impacts of repealing the step-up in basis at death, making death a tax realization event, and increasing the tax liability of trusts on households, small businesses, and farms. The analysis also incorporates the direct impact of the federal government spending additional revenue generated by the tax changes. We examine these impacts under a top combined capital gains tax rate (hereafter, “top tax rate”) of 43.4%, which adds together the Administration’s proposed 39.6% top capital gains tax rate and the existing 3.8% NIIT.

## *Households & Trusts*

This section describes how we analyze the impacts on households and trusts. Since the proposed changes in policy are unprecedented, there is no literature that addresses their empirical macroeconomic effects. However, there is a more robust literature on the impact of changes in the capital gains tax rate, so we construct our analysis in order to take advantage of it. Specifically, we calculate the total increase in capital gains tax liability across all proposed changes and convert that into a change in what we call an “effective capital gains tax rate” by comparing it to the original level of taxable income. We then utilize this “effective rate” change to estimate the implied increase in capital (or financing) costs and the implied decrease in labor productivity based on evidence from a pair of academic papers.

Depending on filing status, households with total taxable income above \$441,450 – 496,600 face the top tax rate. Given the income brackets available in Internal Revenue Service (IRS) Statistics of Income (SOI) data<sup>2</sup>, we apply the 43.4% top tax rate to taxable capital gains income for households with total taxable income above \$500,000, calculating the increase in tax liability relative to the current 23.8% top tax rate (i.e., a 20% top capital gains tax rate). Using SOI data<sup>3</sup>, we also apply the 43.4% top tax rate to taxable capital gains income in trusts above the \$13,250 threshold, calculating the increase in tax liability relative to the current 23.8% top tax rate.

Using Survey of Consumer Finances (SCF) data from the Federal Reserve Board of Governors<sup>4</sup>, we estimate the total amount of annual unrealized capital gains that become taxable at death with no step-up in basis, accounting for the \$1,000,000 exemption on any unrealized gains and \$250,000 exemption

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<sup>2</sup> <https://www.irs.gov/statistics/soi-tax-stats-individual-statistical-tables-by-size-of-adjusted-gross-income>. Returns with Income or Loss from Sales of Capital Assets. Table 1.4A. 2018.

<sup>3</sup> <https://www.irs.gov/statistics/soi-tax-stats-fiduciary-returns-sources-of-income-deductions-and-tax-liability-tax-status-and-size-of-gross-income> and <https://www.irs.gov/statistics/soi-tax-stats-fiduciary-returns-sources-of-income-deductions-and-tax-liability-by-type-of-entity>. Fiduciary Income Tax Returns. Tables 1-2. 2014.

<sup>4</sup> <https://www.federalreserve.gov/econres/scfindex.htm>.

on unrealized gains on primary houses. As the SCF excludes the Forbes 400, we generate separate estimates for this group using relationships between net worth and relevant variables for billionaires and add them to the total. Since we treat the impact on businesses separately, we exclude any unrealized capital gains from business-related assets. This data is paired with mortality statistics from the Center for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) to calculate the expected increase in taxable capital gains income based on households' death probability<sup>5</sup> in a given year. Finally, we apply the 43.4% top tax rate to calculate the total increase in tax liability.

A 15-year fixed-rate payment plan is allowed for the tax on appreciated illiquid assets transferred at death. As such, we categorize the tax liability into liquid and illiquid asset categories. The liquid assets, including stocks and mutual funds, are estimated to account for 19% of the total, and illiquid assets such as real estate account for 54% of the total, with the excluded business assets accounting for the remaining 27% (we assume that the Forbes 400 also follow this breakout). We assume that all households take advantage of the payment plan. Specifically, starting in each year, we spread the newly generated tax liability associated with the 54% of illiquid assets evenly over the following 15 years. This means that in 2021, only 1/15 of this part of the tax liability is paid; in 2022, 2/15 is paid (i.e., 2 cohorts each paying 1/15 of their tax liability); and so on up to 2030, in which 2/3 (i.e., 10/15) of this part of the tax liability is paid.

We estimate total trust assets in the economy using SCF data<sup>6</sup>. To calculate the total potential tax base, we assume that the top tax rate is applied for trust assets over \$13,250. In the STEP Act, non-grantor trust assets, which make up about 80% of total trust assets<sup>7</sup>, are treated as sold every 21 years for living owners, starting with those established before 2006. We assume a trust life span of 42 years. Thus, in 2026, we assume that half of trust assets (i.e., those established during 1985 – 2005) are taxed, while during 2027 – 2030, exactly 1/42 of trust assets are taxed (corresponding to the single establishment years of 2006 – 2009, respectively). Finally, we apply the 43.4% top tax rate to calculate the total increase in tax liability.

After summing the increases in tax liability and calculating the “effective rate” change, we draw upon two academic papers to estimate the impacts on capital costs and labor productivity. Specifically, Harry Huizinga, et al. (2018)<sup>8</sup> find that a top capital gains tax rate of 22.43% raises the cost of equity capital by 7.01%. We use the ratio of total debt to equity (90.41%)<sup>9</sup> in the 4th quarter of 2020 to convert this relationship of the top capital gains tax rate with the cost of equity capital into one with overall capital costs. Also, we utilize the Joseph E. McPhail, et al. (2012)<sup>10</sup> estimate that a 1% increase in the top capital gains tax rate will result in a 0.03% loss in labor productivity.

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<sup>5</sup> [https://www.cdc.gov/nchs/data/databriefs/db355\\_tables-508.pdf#page=3](https://www.cdc.gov/nchs/data/databriefs/db355_tables-508.pdf#page=3). CDC NCHS. Data Brief 355. “Mortality in the United States, 2018”. Page 3. 2018. For married households, the mortality rate is adjusted to account for the likelihood that both people die. Age of reference person in SCF is used for matching mortality rates.

<sup>6</sup> <https://www.federalreserve.gov/econres/scfindex.htm>. Again, we also add estimates for the Forbes 400 to this data.

<sup>7</sup> <https://www.irs.gov/statistics/soi-tax-stats-individual-income-tax-returns-line-item-estimates> and <https://www.irs.gov/statistics/soi-tax-stats-fiduciary-returns-sources-of-income-deductions-and-tax-liability-by-type-of-entity>. Link 1: Grantor (Form 1040 Schedule E Part III Amount). Link 2: Non-grantor (Form 1041).

<sup>8</sup> Huizinga, Harry, et al. “Capital Gains Taxation and the Cost of Capital: Evidence from Unanticipated Cross-Border Transfers of Tax Base.” *Journal of Financial Economics*, 129. 2018. 306–328.

<sup>9</sup> <https://fred.stlouisfed.org/graph/?id=TOTDTEUSQ163N>. Total Debt to Equity for United States.

<sup>10</sup> McPhail, Joseph E., et al. “The poverty of states: do state tax policies affect state labor productivity?” *Economics Working Papers*, 115. 2012. [http://lib.dr.iastate.edu/econ\\_las\\_workingpapers/11](http://lib.dr.iastate.edu/econ_las_workingpapers/11).

Finally, using SOI data<sup>11</sup>, we scale the implied changes in capital costs and labor productivity by the share of capital gains income tax filers (7.9%) with a total taxable income above \$500,000 (i.e., those that face the top tax rate). These changes in capital costs and labor productivity are applied evenly across all states, including Georgia, since they propagate through national instead of state-level market dynamics. Table 1.1 displays the increase in capital costs and decrease in labor productivity in each year, whose values we enter into our corresponding variables.

**Table 1.1: Changes in Capital Costs & Labor Productivity**

Category	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Average
Capital Costs	0.403	0.407	0.412	0.416	0.420	1.076	0.453	0.455	0.458	0.462	0.496
Labor Productivity	-0.063	-0.063	-0.064	-0.065	-0.065	-0.147	-0.070	-0.070	-0.071	-0.071	-0.075

Note: Units in Percent. Components may not sum to totals due to rounding.

## Small Businesses

Based on the proportion found in SOI data<sup>12</sup>, we assume that 75% of active corporations are pass-through entities, whose owners are subject to capital gains taxation. Also, according to the United States Small Business Administration (SBA)<sup>13</sup>, small businesses comprise 99.9% of all U.S. businesses, so we exclude the 0.1% of pass-through entities with the largest size of total assets. We use these factors to discount the aggregate taxable capital gains income found in the SOI data,<sup>14</sup> which we then convert into a per-return basis.

Further, drawing upon a United States Treasury Department and National Bureau of Economic Research (NBER) paper by Michael Cooper, et al. (2016)<sup>15</sup>, we additionally assume that 66.9% of the pass-through corporate income accrues to the top 1% of individuals who earn such income (i.e., business owners). We restrict our focus to those owners by discounting the per-return taxable capital gains income by that percentage. Since their individual and not the per-return taxable capital gains income determines the tax rate they face<sup>16</sup>, we estimate the number of owners associated with each return in order to make the conversion. We do so by assuming that owners comprise 1% of all employees and approximating the number of employees by dividing the wages and salaries reported per return by the economy-wide average annual wages and salaries. Across all corporate asset brackets whose owners face the top tax rate, we apply the 43.4% rate to their combined total taxable capital gains income in order to calculate their total increase in tax liability relative to the current top tax rate of 23.8%.

<sup>11</sup> <https://www.irs.gov/statistics/soi-tax-stats-individual-statistical-tables-by-size-of-adjusted-gross-income>. Returns with Income or Loss from Sales of Capital Assets. Table 1.4A. 2018.

<sup>12</sup> <https://www.irs.gov/pub/irs-pdf/p16.pdf> and <https://www.irs.gov/statistics/soi-tax-stats-integrated-business-data>. Link 1: Corporation Income Tax Returns Complete Report 2017. Link 2: Table 1: Selected financial data on businesses.

<sup>13</sup> <https://cdn.advocacy.sba.gov/wp-content/uploads/2019/04/23142719/2019-Small-Business-Profiles-US.pdf>. 2019 Small Business Profile.

<sup>14</sup> <https://www.irs.gov/pub/irs-pdf/p16.pdf>.

<sup>15</sup> Cooper, Michael, et al. "Business in the United States: Who Owns It, and How Much Tax Do They Pay?". NBER, 2016. <https://eml.berkeley.edu/~yagan/BusinessOwnersTaxes.pdf>.

<sup>16</sup> Precisely, their total taxable income determines the capital gains tax rate they face. As such, these calculations are conservative in assuming that the pass-through income is their only source of income.

Also, using SCF data<sup>17</sup>, we estimate the total amount of annual business-related unrealized capital gains that become taxable at death to be the 27% excluded from the Households analysis. This data is paired with mortality statistics to calculate the expected increase in taxable capital gains income based on business owners' death probability<sup>18</sup> in a given year. Finally, we apply the 43.4% top tax rate to calculate the total increase in tax liability.

We assume that all small businesses will take advantage of the 15-year fixed-rate payment plan allowed for the tax on appreciated illiquid assets transferred at death. Specifically, starting in each year, we spread the full tax liability for the expected newly liable businesses evenly over the following 15 years. This means that in 2021, 1/15 of a given cohort's aggregate tax liability is paid; in 2022, 2/15 is paid (i.e., 2 cohorts each paying 1/15 of their aggregate tax liability); and so on up to 2030, in which 2/3 (i.e., 10/15) of a given cohort's aggregate tax liability is paid. Table 1.2 displays the combined increase in tax liability costs to small businesses in each year nationally, as well as in the state of Georgia. The weighting of the national small business costs down to the state level is determined based on the IRS data on Adjusted Gross Income Percentile Data by State.<sup>19</sup> The inputs for Small Business Costs for all the states studied can be found in Appendix II. We model their impacts using our Production Cost variable.

**Table 1.2: Increase in Small Business Costs**

Region	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Georgia	113	126	138	151	163	176	188	200	213	225	1,694
National	5,156	5,722	6,288	6,854	7,420	7,986	8,552	9,118	9,684	10,250	77,028

Note: Units in Millions of 2020 Dollars. Components may not sum to totals due to rounding.

## Farms

Based on a recent analysis<sup>20</sup> by the Agricultural and Food Policy Center (AFPC) at Texas A&M University, we assume that 98% of the full-time, commercial-scale family farms are impacted by the repeal of the step-up in basis at death and making death a tax realization event, and that the additional tax liability incurred averages \$726,104 per farm under the current top capital gains tax rate of 20% plus the 3.8% NIIT. We scale up the liability to match a top tax rate of 43.4%.

Based on United States Department of Agriculture (USDA) data<sup>21</sup>, we estimate the number of potentially impacted farms by adding the number of farming-occupation farms in small family farms to the number of

<sup>17</sup> <https://www.federalreserve.gov/econres/scfindex.htm>.

<sup>18</sup> [https://www.cdc.gov/nchs/data/databriefs/db355\\_tables-508.pdf#page=3](https://www.cdc.gov/nchs/data/databriefs/db355_tables-508.pdf#page=3). CDC NCHS. Data Brief 355. "Mortality in the United States, 2018". Page 3. 2018. For married households, the mortality rate is adjusted to account for the likelihood that both people die. Age of reference person in SCF is used for matching mortality rates.

<sup>19</sup> <https://www.irs.gov/soi/irs-soi/18instateshares.csv> IRS. SOI Tax Stats - Adjusted Gross Income (AGI) Percentile Data by State. 2018.

<sup>20</sup> Outlaw, Joe L., et al. "Economic Impacts of the *Sensible Taxation and Equity Promotion Act* and the *For the 99.5 Percent Act* on AFPC's Representative Farms and Ranches". June 15, 2021. <https://afpc.tamu.edu/research/publications/files/708/RR-21-01.pdf>. We utilize Scenario 3 from the report, which only depends on the provisions of the STEP Act and not on any provisions of the For the 99.5 Percent Act, the latter of which we do not consider in this report.

<sup>21</sup> <https://www.ers.usda.gov/webdocs/publications/95547/eib-214.pdf?v=2766.6>. Economic Research Service, USDA. Economic Information Bulletin 214. "America's Diverse Family Farms: 2019 Edition". December 2019.

midsize and large-scale family farms. We then calculate the expected number of farms facing additional tax liability in a given year by multiplying the number of potentially impacted farms by the death probability<sup>22</sup> (0.85%) at the average age of a farm owner (59.8)<sup>23</sup> and by the probability of being impacted conditional upon the death of the farm owner (98%).

We assume that all farms will take advantage of the 15-year fixed-rate payment plan allowed for the tax on appreciated illiquid assets transferred at death. Specifically, starting in each year, we spread the full tax liability for the expected newly liable farms evenly over the following 15 years. This means that in 2021, 1/15 of a given cohort’s aggregate tax liability is paid; in 2022, 2/15 is paid (i.e., 2 cohorts each paying 1/15 of their aggregate tax liability); and so on up to 2030, in which 2/3 (i.e., 10/15) of a given cohort’s aggregate tax liability is paid. Table 1.3 displays the increase in tax liability costs to farms in each year nationally, as well as in the state of Georgia. The state-level weighting of the national increase in farm costs is determined by USDA data on the value of agriculture sector production in each state.<sup>24</sup> The inputs for Farm Costs for all the states studied can be found in Appendix II. We model their impacts by lowering our Farm Output variable commensurately.

**Table 1.3: Increase in Farm Costs**

Regions	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Georgia	16	33	49	66	82	99	115	132	148	165	905
National	686	1,372	2,058	2,743	3,429	4,115	4,801	5,487	6,173	6,858	37,721

Note: Units in Millions of 2020 Dollars. Components may not sum to totals due to rounding.

## Federal Government Spending

REMI assumes that the federal government spends the revenue generated by the tax changes described above. To determine this revenue, we first calculate the combined increase in static tax liability across all the above entities, to which we then apply a discount factor of 39% from Harry Huizinga, et al. (2018)<sup>25</sup> that captures the “effective tax on capital gains”<sup>26</sup> after accounting for tax avoidance strategies that leverage “allowed exemptions, deductions ... and the fact that taxed investors pay taxes only when they realize their capital gains”.<sup>27</sup>

We remain agnostic regarding the specific uses of the revenue, modeling the increase using our default Federal Civilian Government Spending variable, which captures the historical pattern of federal non-military spending across industries. Given the uncertainty about how the revenue will be allocated, we generate a range of estimates by varying the intensity of the public sector employment response. We report the results for the cases in which the direct public sector employment response is: (1) equal to the

<sup>22</sup> [https://www.cdc.gov/nchs/data/databriefs/db355\\_tables-508.pdf#page=3](https://www.cdc.gov/nchs/data/databriefs/db355_tables-508.pdf#page=3).

<sup>23</sup> Economic Research Service and National Agricultural Statistics Service, USDA. 2016 Agricultural Resource Management Survey. Data as of November 2019.

<sup>24</sup> [Farm finance indicators State ranking \(usda.gov\)](https://www.usda.gov/economic-research-service/farm-finance-indicators-state-ranking). Economic Research Service, USDA. Farm finance indicators State ranking. 2019.

<sup>25</sup> Huizinga, Harry, et al. “Capital Gains Taxation and the Cost of Capital: Evidence from Unanticipated Cross-Border Transfers of Tax Base.” *Journal of Financial Economics*, 129. 2018. 306–328.

<sup>26</sup> This is a separate concept from the “effective capital gains tax rate” that we introduced in the Households & Trusts analysis.

<sup>27</sup> We only apply the discount factor when entities would be reasonably able to lawfully avoid the tax liability.

historical response (i.e., using our default variable); (2) zero (i.e., shutting off the historical response); and (3) the midpoint of the first two cases. Table 1.4 displays the increase in federal non-military spending in each year nationally, as well as in the state of Georgia. The national increase in federal non-military spending is weighted at the state-level by Government Consumption and Investment shares already incorporated in the PI+ model baseline. The inputs for Federal Non-Military Spending for all the states studied can be found in Appendix II.

**Table 1.4: Increase in Federal Non-Military Spending**

Regions	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Georgia	1.9	2.0	2.1	2.2	2.3	7.8	2.7	2.7	2.8	2.9	29.3
National	53.3	55.6	58.0	60.4	62.8	217.8	74.1	75.9	77.9	80.1	815.8

Note: Units in Billions of 2020 Dollars. Components may not sum to totals due to rounding.

# Results

This section reports economic impacts on the state of Georgia of the key proposed changes to the long-term capital gains tax in the STEP Act over the period 2021 – 2030, specifically on employment, economic output, GDP, private investment, R&D spending, and personal income. The results are followed by a discussion section.

The case with direct public sector employment response equal to the historical response is labeled as the low case, as it generates the smallest negative impacts. On the other hand, the case with zero direct public sector employment response is labeled as the high case, as it generates the largest negative impacts. Finally, the case with the midpoint of the direct public sector employment responses is labeled as the midpoint case.

## Employment

Table 2.1 displays the annual employment impacts for each of the three cases, as well as the average impacts, which may be interpreted as the level of sustained employment loss relative to a business as usual scenario in which the capital gains tax system remains unchanged. The average employment impact ranges from a loss of 10,000 – 28,000 jobs, with a midpoint estimate of 19,000 jobs lost.

**Table 2.1: Employment Impacts**

Case	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Average
Low	-8	-13	-15	-15	-13	11	-18	-10	-8	-6	-10
Midpoint	-15	-21	-23	-22	-21	-15	-25	-18	-15	-12	-19
High	-22	-28	-30	-30	-28	-42	-32	-25	-21	-19	-28

Note: Units in Thousands of Jobs. Components may not sum to totals due to rounding.

## Economic Output, Gross Domestic Product, Private Investment, and R&D Spending

Table 2.2 displays the annual economic output and GDP impacts, as well as the impacts on the private investment and R&D spending components of GDP. The 10-year total impacts<sup>28</sup> are also reported. The total economic output and GDP impacts range from a loss of \$34,047 – 43,639 million and \$16,125 – 22,052 million respectively, with midpoint estimates of \$38,994 million and \$19,176 million lost. The total private investment and R&D spending impacts range from a loss of \$15,005 – 18,331 million and \$28 – 31 million respectively, with midpoint estimates of \$16,702 million and \$30 million lost.

<sup>28</sup> These are the undiscounted sums of the annual impacts.

**Table 2.2: Economic Output, Gross Domestic Product, Private Investment, and R&D Spending Impacts**

Result	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
<i>Low Case</i>											
Economic Output	-2,284	-3,463	-3,946	-4,015	-3,916	-196	-5,365	-3,964	-3,589	-3,309	-34,047
GDP	-1,091	-1,723	-1,983	-2,017	-1,954	614	-2,729	-1,937	-1,733	-1,572	-16,125
Private Investment	-864	-1,324	-1,514	-1,551	-1,505	-2,038	-1,900	-1,587	-1,412	-1,310	-15,005
R&D Spending	-1	-1	-2	-2	-2	-3	-4	-4	-4	-5	-28
<i>Midpoint Case</i>											
Economic Output	-2,782	-4,018	-4,511	-4,538	-4,362	-2,034	-5,575	-4,184	-3,659	-3,331	-38,994
GDP	-1,382	-2,049	-2,317	-2,330	-2,227	-491	-2,873	-2,091	-1,802	-1,614	-19,176
Private Investment	-990	-1,498	-1,700	-1,729	-1,662	-2,512	-2,111	-1,702	-1,465	-1,333	-16,702
R&D Spending	-1	-1	-2	-2	-3	-3	-4	-4	-5	-5	-30
<i>High Case</i>											
Economic Output	-3,253	-4,542	-5,044	-5,028	-4,778	-3,829	-5,754	-4,378	-3,704	-3,329	-43,639
GDP	-1,658	-2,357	-2,633	-2,625	-2,481	-1,571	-2,999	-2,230	-1,856	-1,642	-22,052
Private Investment	-1,110	-1,664	-1,879	-1,900	-1,812	-2,977	-2,315	-1,811	-1,512	-1,351	-18,331
R&D Spending	-1	-1	-2	-2	-3	-4	-4	-4	-5	-5	-31

Note: Units for Economic Output, GDP, Private Investment, and R&D Spending in Millions of 2021 Dollars.

Components may not sum to totals due to rounding.

## Personal Income

Table 2.3 displays the annual aggregate and per household personal income impacts. The 10-year total impacts<sup>29</sup> are also reported. The total aggregate personal income impact ranges from a loss of \$21,937 – 36,644 million, with a midpoint estimate of \$29,359 million lost. The total per household personal income impact ranges from a loss of \$6,042 – 8,910, with a midpoint estimate of \$7,490 lost.

<sup>29</sup> These are the undiscounted sums of the annual impacts.

**Table 2.3: Personal Income Impacts**

Result	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
<i>Low Case</i>											
Aggregate	-2,036	-2,107	-2,157	-2,139	-2,111	-2,475	-2,719	-2,071	-2,067	-2,055	-21,937
Per Household	-524	-548	-567	-567	-567	-707	-759	-605	-599	-599	-6,042
<i>Midpoint Case</i>											
Aggregate	-2,598	-2,659	-2,729	-2,720	-2,692	-4,683	-3,189	-2,713	-2,686	-2,690	-29,359
Per Household	-656	-672	-689	-686	-680	-1,185	-821	-707	-697	-697	-7,490
<i>High Case</i>											
Aggregate	-3,147	-3,197	-3,288	-3,287	-3,260	-6,870	-3,647	-3,342	-3,293	-3,313	-36,644
Per Household	-786	-791	-807	-802	-791	-1,658	-883	-807	-791	-794	-8,910

Note: Units for Aggregate in Millions of 2021 Dollars. Units for Per Household in 2021 Dollars. Components may not sum to totals due to rounding.

## Discussion

The significant negative economic impacts described above are driven by several factors. First, capital and tax liability costs faced by businesses and farms rise. These cost increases translate into higher prices for consumer goods and services and makes the domestic private sector less hospitable for new and existing businesses, especially small and family-owned businesses and farms that are often less resilient to economic shocks.

Higher prices mean that consumers are able to make fewer purchases, slowing demand throughout the economy from retailers to manufacturers to service providers. A less hospitable private sector means that prospective businesses may choose not to open, existing businesses may be forced to downsize or close altogether, and export-focused businesses lose market share to international competitors.

Both of these forces reduce the level of economic output and GDP, and consequently also decrease the need for businesses to hire employees. In turn, the decline in employment demand lowers personal income, both directly and through a decrease in annual wages and salaries.

Second, the increase in capital costs also specifically discourages private investment by making financing more expensive, which further lowers GDP directly. Additionally, since intellectual property (IP; mostly software) makes up over a quarter of total private investment nationally and about one-sixth of IP investments go to R&D spending, the decline in private investment also translates into notable decreases in R&D spending.

We also capture the decrease in labor productivity. This is driven in large part by the lower level of private investment and R&D spending, which are major contributors to innovation and technological progress. This effect may also be exaggerated by the incentive to shift portfolios towards safer returns over financing high risk but high upside start-ups as a result of repealing the step-up in basis at death and making death a tax realization event, which limit the upside and therefore accentuate the downside of such investments.

In turn, less productive workers add costs for businesses, who need to hire more labor in order to produce the same level of economic output. As described above, this raises prices and negatively impacts the business environment.

Finally, the increase in federal non-military spending does provide a direct boost to GDP, and the increase in government demand grows economic output and employment in the private sector, which is paired with public sector government employment growth in the low and midpoint cases. In turn, this raises aggregate personal income as well. The federal government also contributes significantly to R&D spending, so the declines there are partially offset by federal investment. However, these positive impacts are swamped by the negative impacts described above, so the net economic impact of the key proposed legislative changes to the capital gains tax is significantly negative.

# Conclusion

On behalf of CTUP, REMI analyzed the economic impacts during 2021 – 2030 on the state of Georgia of the legislative proposals to repeal the step-up in basis at death, make death a tax realization event, and increase the tax liability of trusts laid out in the STEP Act under the Administration’s proposed 39.6% top capital gains tax rate and the existing 3.8% NIIT. Driven by an increased burden on small and family-owned businesses and farms, higher financing costs, and lower labor productivity, we found that they generated significant negative effects on a variety of key economic indicators, including almost 30,000 sustained job losses, decreases in economic output and GDP of about \$40 billion and \$20 billion respectively, declines of \$20 billion and \$30 million respectively in private investment and R&D spending, and about \$35 billion in foregone personal income, or up to \$9,000 in foregone income per household in the state.

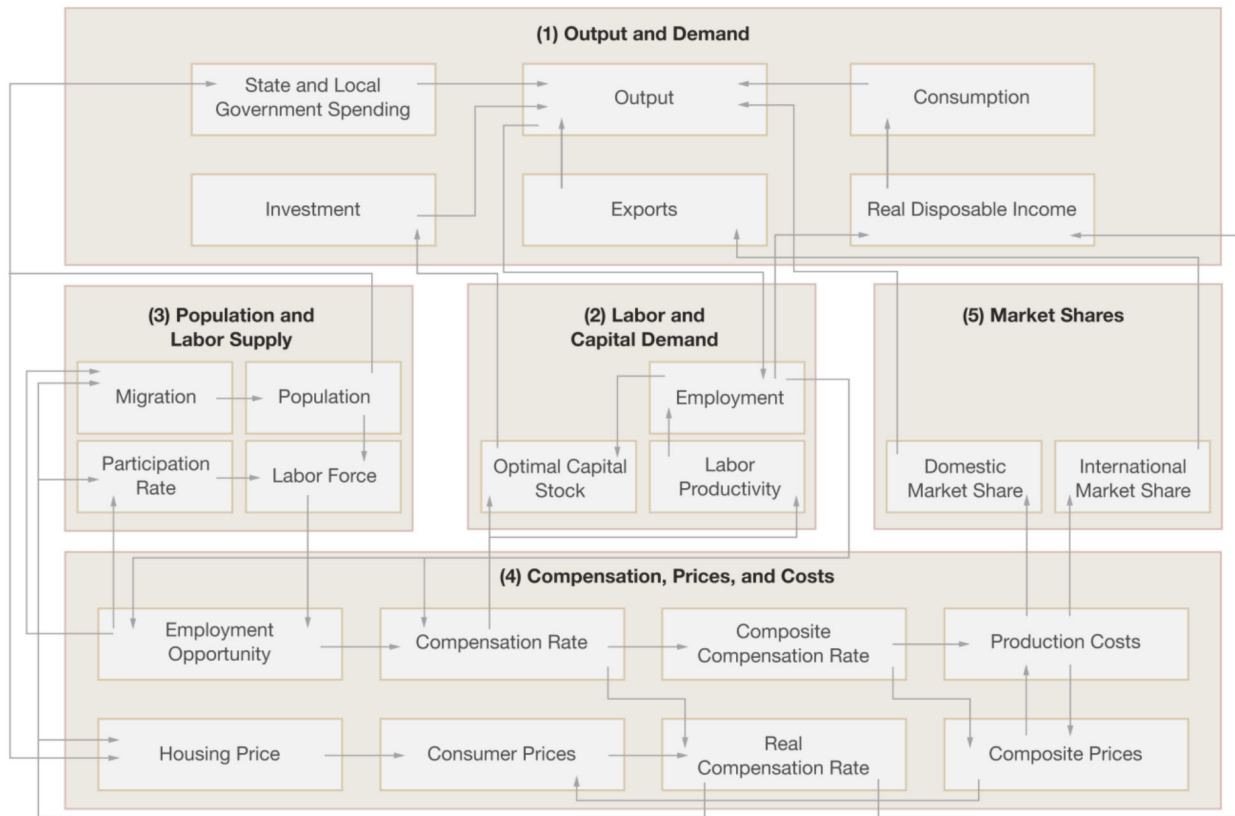
# Appendix I: REMI Model Framework

PI+ is a structural economic, demographic, and policy analysis model. The following core framework applies to all REMI model builds. The model integrates input-output, computable general equilibrium, econometric and economic geography methodologies. The model is dynamic, with forecasts and simulations generated on an annual basis and behavioral responses to compensation, price, and other economic factors.

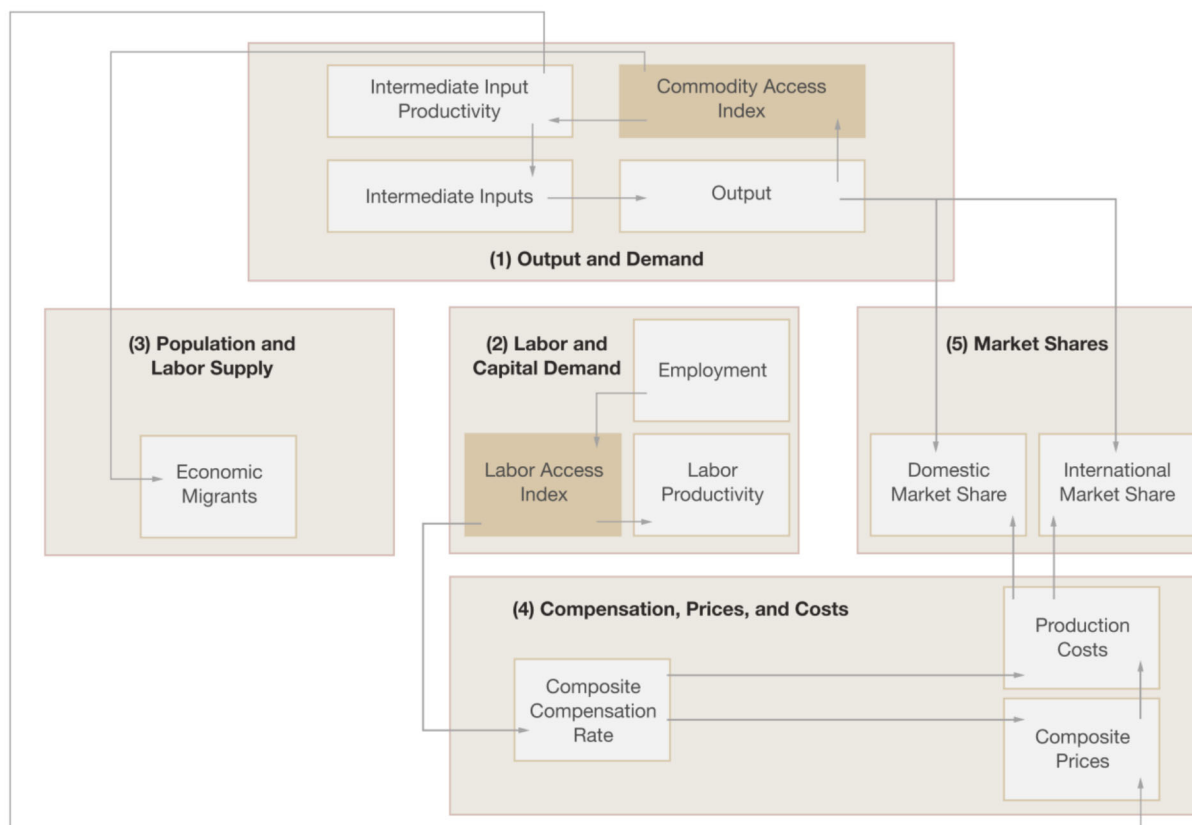
The model consists of thousands of simultaneous equations with a structure that is relatively straightforward. The exact number of equations used varies depending on the extent of industry, demographic, demand, and other detail in the specific model being used. The overall structure of the model can be summarized in five major blocks: (1) Output and Demand, (2) Labor and Capital Demand, (3) Population and Labor Supply, (4) Compensation, Prices, and Costs, and (5) Market Shares. The blocks and their key interactions are shown in Figures 1 and 2.

**Figure A1.1: REMI Model Linkages**

REMI Model Linkages (Excluding Economic Geography Linkages)



**Figure A1.2: Economic Geography Linkages**



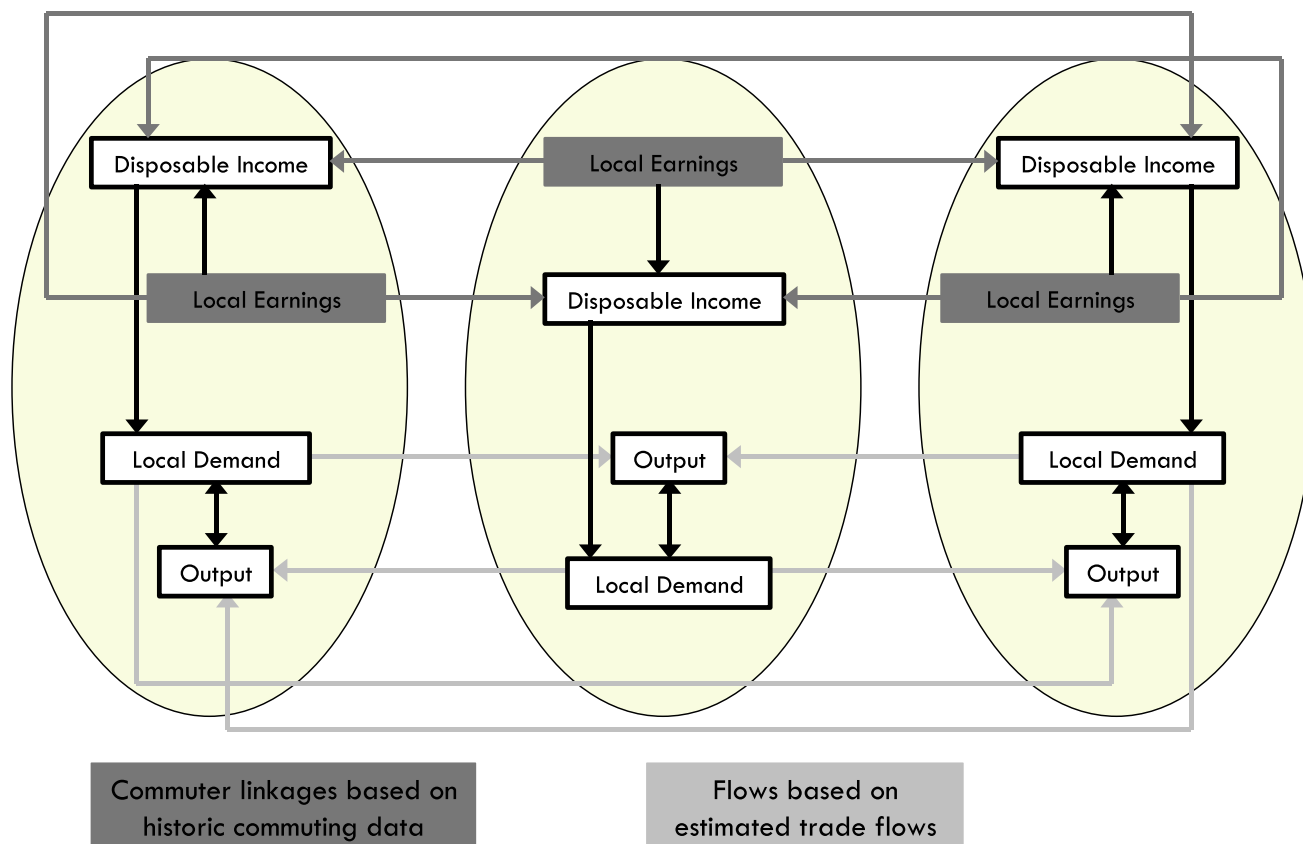
The Output and Demand block consists of output, demand, consumption, investment, government spending, exports, and imports, as well as feedback from output change due to the change in the productivity of intermediate inputs. The Labor and Capital Demand block includes labor intensity and productivity as well as demand for labor and capital. Labor force participation rate and migration equations are in the Population and Labor Supply block. The Compensation, Prices, and Costs block includes composite prices, determinants of production costs, the consumption price deflator, housing prices, and the compensation equations. The proportion of local, inter-regional, and export markets captured by each region is included in the Market Shares block.

Models can be built as single region, multi-region, or multi-region national models. A region is defined broadly as a sub-national area, and could consist of a state, province, county, or city, or any combination of sub-national areas.

Single-region models consist of an individual region, called the home region. The rest of the nation is also represented in the model. However, since the home region is only a small part of the total nation, the changes in the region do not have an endogenous effect on the variables in the rest of the nation. Multi-regional models have interactions among regions, such as trade and commuting flows. These interactions include trade flows from each region to each of the other regions. These flows are illustrated for a three-region model in Figure 3.

Figure A1.3: Trade and Commuter Flow Linkages

## Trade and Commuter Flow Linkages



Multiregional national models also include a central bank monetary response that constrains labor markets. Models that only encompass a relatively small portion of a nation are not endogenously constrained by changes in exchange rates or monetary responses.

### *Block 1. Output and Demand*

This block includes output, demand, consumption, investment, government spending, import, commodity access, and export concepts. Output for each industry in the home region is determined by industry demand in all regions in the nation, the home region's share of each market, and international exports from the region.

For each industry, demand is determined by the amount of output, consumption, investment, and capital demand on that industry. Consumption depends on real disposable income per capita, relative prices, differential income elasticities, and population. Input productivity depends on access to inputs because a larger choice set of inputs means it is more likely that the input with the specific characteristics required for the job will be found. In the capital stock adjustment process, investment occurs to fill the difference between optimal and actual capital stock for residential, non-residential, and equipment investment. Government spending changes are determined by changes in the population.

### *Block 2. Labor and Capital Demand*

The Labor and Capital Demand block includes the determination of labor productivity, labor intensity, and the optimal capital stocks. Industry-specific labor productivity depends on the availability of workers with differentiated skills for the occupations used in each industry. The occupational labor supply and commuting costs determine firms' access to a specialized labor force.

Labor intensity is determined by the cost of labor relative to the other factor inputs, capital and fuel. Demand for capital is driven by the optimal capital stock equation for both non-residential capital and equipment. Optimal capital stock for each industry depends on the relative cost of labor and capital, and the employment weighted by capital use for each industry. Employment in private industries is determined by the value added and employment per unit of value added in each industry.

### *Block 3. Population and Labor Supply*

The Population and Labor Supply block includes detailed demographic information about the region. Population data is given for age, gender, and race, with birth and survival rates for each group. The size and labor force participation rate of each group determines the labor supply. These participation rates respond to changes in employment relative to the potential labor force and to changes in the real after-tax compensation rate. Migration includes retirement, military, international, and economic migration. Economic migration is determined by the relative real after-tax compensation rate, relative employment opportunity, and consumer access to variety.

### *Block 4. Compensation, Prices and Costs*

This block includes delivered prices, production costs, equipment cost, the consumption deflator, consumer prices, the price of housing, and the compensation equation. Economic geography concepts account for the productivity and price effects of access to specialized labor, goods, and services.

These prices measure the price of the industry output, taking into account the access to production locations. This access is important due to the specialization of production that takes place within each industry, and because transportation and transaction costs of distance are significant. Composite prices for each industry are then calculated based on the production costs of supplying regions, the effective distance to these regions, and the index of access to the variety of outputs in the industry relative to the access by other uses of the product.

The cost of production for each industry is determined by the cost of labor, capital, fuel, and intermediate inputs. Labor costs reflect a productivity adjustment to account for access to specialized labor, as well as underlying compensation rates. Capital costs include costs of non-residential structures and equipment, while fuel costs incorporate electricity, natural gas, and residual fuels.

The consumption deflator converts industry prices to prices for consumption commodities. For potential migrants, the consumer price is additionally calculated to include housing prices. Housing prices change from their initial level depending on changes in income and population density.

Compensation changes are due to changes in labor demand and supply conditions and changes in the national compensation rate. Changes in employment opportunities relative to the labor force and occupational demand change determine compensation rates by industry.

#### *Block 5. Market Shares*

The market shares equations measure the proportion of local and export markets that are captured by each industry. These depend on relative production costs, the estimated price elasticity of demand, and the effective distance between the home region and each of the other regions. The change in share of a specific area in any region depends on changes in its delivered price and the quantity it produces compared with the same factors for competitors in that market. The share of local and external markets then drives the exports from and imports to the home economy.

# Appendix II: Model Inputs State List

**Table A2.1: Increase in Small Business Costs by State**

Region	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
<b>All Regions</b>	<b>5,156</b>	<b>5,722</b>	<b>6,288</b>	<b>6,854</b>	<b>7,420</b>	<b>7,986</b>	<b>8,552</b>	<b>9,118</b>	<b>9,684</b>	<b>10,250</b>	<b>77,028</b>
Arizona	83	93	102	111	120	129	138	148	157	166	1,246
California	726	805	885	964	1,044	1,124	1,203	1,283	1,363	1,442	10,839
Colorado	71	79	86	94	102	110	118	125	133	141	1,059
Connecticut	94	104	115	125	135	145	156	166	176	187	1,403
Georgia	113	126	138	151	163	176	188	200	213	225	1,694
Montana	18	20	22	23	25	27	29	31	33	35	263
Nevada	39	43	48	52	56	60	65	69	73	78	584
New Hampshire	40	44	48	53	57	61	66	70	74	79	590
New Jersey	195	217	238	260	281	303	324	345	367	388	2,918
New York	532	590	649	707	766	824	882	941	999	1,058	7,947
Ohio	146	162	178	194	210	226	242	258	274	290	2,182
Pennsylvania	191	212	233	254	275	296	317	338	359	380	2,858
West Virginia	26	29	32	35	38	40	43	46	49	52	389
Rest of US	2,882	3,198	3,515	3,831	4,147	4,464	4,780	5,096	5,413	5,729	43,054

Note: Units in Millions of 2020 Dollars. Components may not sum to totals due to rounding.

**Table A2.2: Increase in Farm Costs by State**

Region	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
All Regions	686	1,372	2,058	2,743	3,429	4,115	4,801	5,487	6,173	6,858	37,721
Arizona	9	18	27	36	45	53	62	71	80	89	490
California	89	178	267	357	446	535	624	713	802	892	4,904
Colorado	14	27	41	55	69	82	96	110	123	137	754
Connecticut	1	3	4	5	7	8	10	11	12	14	75
Georgia	16	33	49	66	82	99	115	132	148	165	905
Montana	8	15	23	30	38	45	53	60	68	75	415
Nevada	1	3	4	5	7	8	10	11	12	14	75
New Hampshire	1	1	2	3	3	4	5	5	6	7	38
New Jersey	3	5	8	11	14	16	19	22	25	27	151
New York	10	21	31	41	51	62	72	82	93	103	566
Ohio	16	32	47	63	79	95	110	126	142	158	868
Pennsylvania	14	27	41	55	69	82	96	110	123	137	754
West Virginia	1	3	4	5	7	8	10	11	12	14	75
Rest of US	503	1,005	1,508	2,011	2,514	3,016	3,519	4,022	4,524	5,027	27,649

Note: Units in Millions of 2020 Dollars. Components may not sum to totals due to rounding.

**Table A2.3: Increase in Federal Non-Military Spending by State**

Region	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
<b>All Regions</b>	<b>53,261</b>	<b>55,645</b>	<b>58,029</b>	<b>60,413</b>	<b>62,796</b>	<b>217,759</b>	<b>74,134</b>	<b>75,865</b>	<b>77,888</b>	<b>80,089</b>	<b>815,878</b>
Arizona	1,046	1,093	1,140	1,187	1,234	4,278	1,456	1,490	1,530	1,573	16,027
California	4,601	4,807	5,013	5,218	5,424	18,810	6,404	6,553	6,728	6,918	70,476
Colorado	983	1,027	1,071	1,115	1,159	4,018	1,368	1,400	1,437	1,478	15,055
Connecticut	338	353	368	383	398	1,380	470	481	494	508	5,172
Georgia	1,913	1,998	2,084	2,170	2,255	7,821	2,662	2,725	2,797	2,876	29,302
Montana	247	258	269	281	292	1,011	344	352	362	372	3,788
Nevada	366	382	399	415	431	1,496	509	521	535	550	5,605
New Hampshire	147	154	160	167	173	602	205	210	215	221	2,254
New Jersey	898	939	979	1,019	1,059	3,673	1,251	1,280	1,314	1,351	13,763
New York	2,132	2,227	2,323	2,418	2,514	8,716	2,967	3,037	3,118	3,206	32,657
Ohio	1,476	1,542	1,608	1,674	1,740	6,035	2,055	2,103	2,159	2,220	22,612
Pennsylvania	1,818	1,899	1,981	2,062	2,144	7,433	2,531	2,590	2,659	2,734	27,850
West Virginia	446	466	486	506	526	1,824	621	635	652	671	6,834
Rest of US	36,850	38,499	40,148	41,798	43,447	150,662	51,291	52,489	53,888	55,411	564,484

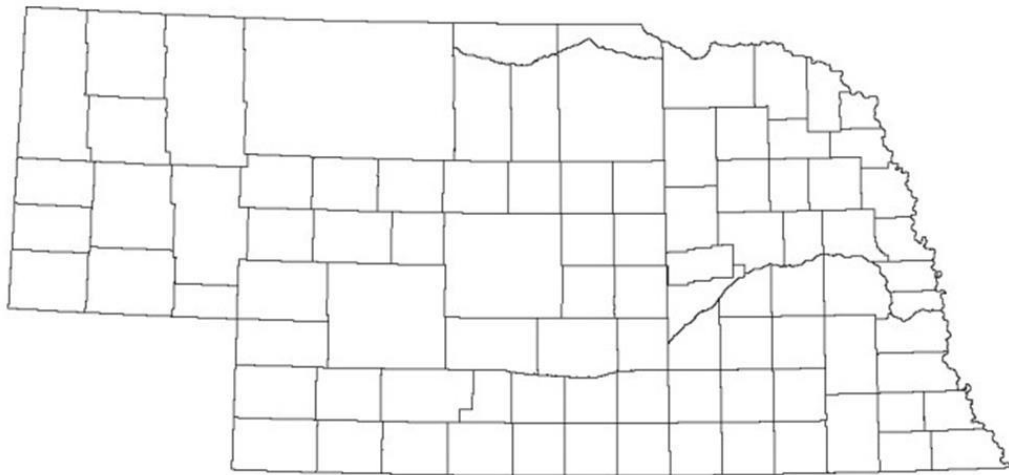
Note: Units in Millions of 2020 Dollars. Components may not sum to totals due to rounding.



## **Economic and Fiscal Impacts of Modernizing Nebraska Tax Codes & Supporting Innovation to Advance the Prosperity of Nebraska**

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**August 2021**



Sponsor  
Blueprint Nebraska



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# Table of Contents

Table of Contents.....	2
Executive Summary .....	3
REMI Background & Experience .....	4
Glossary.....	5
Introduction .....	6
Methodology .....	7
Revenue Data Source .....	7
Individual Income Tax Changes.....	7
Corporate Income Tax Changes.....	8
General Sales and Gross Receipts Taxes Changes .....	8
Incentive Programs.....	9
Inheritance Tax Changes.....	9
Property Tax Changes.....	9
Results.....	11
Economic Impact Summary .....	11
Fiscal Impact Summary .....	11
Detailed Employment Impacts .....	12
Detailed Population Impacts .....	13
Detailed Output, GSP and Investment Impacts.....	13
Detailed Personal Income Impacts .....	15
Detailed Individual Income Taxes Impacts.....	16
Detailed Local Option Sales Taxes Impacts .....	16
Detailed Tax Burden Impacts .....	17
Conclusion .....	20
Appendix I: REMI Model Framework & Fiscal Calibration .....	21
Model Framework.....	21
Fiscal Calibration.....	25
Appendix II: Scenario B Methodology and Results .....	26
Methodology.....	26
Results .....	26
Appendix III: Scenario C Methodology and Results.....	31
Methodology.....	31
Results .....	31

# Executive Summary

Blueprint Nebraska is interested in quantifying the economic and fiscal impacts of various tax policy changes, as well as labor force attraction and research and development (R&D) programs. Regional Economic Models, Inc. (REMI) was retained by Blueprint Nebraska to perform an economic and fiscal impact analysis of these policy changes.

REMI considered the following policy changes and incentive programs during 2022-2031:

- Individual income tax
  - Consolidates to two brackets with lower tax rates: 0% for \$50k or less; 5.6% in 2022-2024, 5.3% in 2025-2027, 4.99% in 2028-2031 for \$50,001+
  - Eliminates Nebraska itemized deductions
- Corporate income tax
  - Decreases tax rates: 4% for \$100,000 or less; 5.6% in 2022-2024, 5.3% in 2025-2027, 4.99% in 2028-2031 for \$100,001+
  - Eliminates both refundable and non-refundable tax credits
- Sales tax
  - Broadens the tax base while maintaining the exemption for unprepared food, and largely maintaining the exemptions for medical services & equipment, and medicine
  - Adopts equivalent tax base expansion for local option sales taxes (LOST)
- Incentive programs
  - Doubles current R&D tax credits
  - Conducts two workforce programs by forgiving student loans to attract high-skilled workers and backbone-of-local-economy manufacturing workers
- Eliminates inheritance tax
- Provides funds available for strategic property tax relief

REMI analyzed the economic and fiscal impacts with the following key results:

- Over 65,000 new jobs created by 2031
- Over 70,000 in additional population attracted or retained by 2031
- Increase of over \$65B in GSP and over \$130B in economic output over 10 years
- Increase of over \$17B in investment activity over 10 years
- Addition of over \$40B in personal income over 10 years (\$4,800 per household)
- Over \$2B for strategic property tax relief over 10 years (including LOST revenue)
- Almost \$470M increase in total state government revenues over 10 years

Two alternative scenarios are provided in Appendix II and III.

# REMI Background & Experience

Regional Economic Models, Inc. (REMI) is an independent company with offices in Amherst, MA and Washington, D.C. that provides non-partisan economic analysis and modeling software to its clients, who include federal, state, and local government agencies, non-profit organizations, universities, and private companies. With over 40 years of experience, REMI is a worldwide leader in providing dynamic regional U.S. macroeconomic and demographic models and consultative services used to evaluate tax policy as well as many other policy issues such as trade, economic development, health care, transportation, and energy.

# Glossary

**Total Employment:** Total employment comprises estimates of the number of jobs, full-time plus part-time, by place of work for all industries.

**Population:** Population reflects mid-year estimates of people, including survivors from the previous year, births, special populations, and three types of migrants (economic, international, and retired).

**Gross State Product:** The market value of goods and services produced by labor and property. Also, the sum of value-added across all industries.

**Output:** The amount of production, including all intermediate goods purchased as well as value added (compensation and profit). This can also be thought of as sales or supply.

**Investment Activity:** Consists of purchases of residential and nonresidential structures and of equipment and software by private businesses and by nonprofit institutions. (Owner-occupied housing is treated as a business in the NIPAs.) It is measured without a deduction for consumption of fixed capital (CFC), includes replacements and additions to the capital stock, and excludes investment by U.S. residents in other countries.

**Personal Income:** Income received by persons from all sources. It includes income received from participation in production as well as from government and business transfer payments.

# Introduction

According to Tax Foundation<sup>1</sup>, Nebraska ranks 28<sup>th</sup> in the 2021 *State Business Tax Climate Index* which measures the state overall tax structure and burden as well as major tax categories. With the relatively high tax burden compared to neighboring states, Nebraska has seen a net outflow of population and less than desirable economic growth. Thus, tax policy modernization and incentive programs are needed to attract more population and incent economic activities.

On behalf of Blueprint Nebraska, REMI performed an economic and fiscal impact analysis of the tax policy changes and incentive programs over the period 2022-2031 using a 10-region, 70-sector Tax-PI v2.4 model of nine Nebraska Economic Development Regions<sup>2</sup> and one region for the rest of the nation. Specifically, REMI considered how the tax policy changes in individual income tax, corporate income tax, sales taxes, and inheritance tax, R&D tax credit program and workforce incentive programs would affect employment, economic output, Gross State Product (GSP), investment activity, personal income, state government revenue and tax burden for Nebraska.

REMI found strong positive economic and fiscal impacts, driven mostly by the modernization of tax structure and incentive programs. By the end of 2031, Nebraska will see over 65,000 new jobs created and more than 70,000 additional population attracted or retained. From 2022-2031, Nebraska will experience a total increase of over \$65 billion in GSP, a total rise of over \$130 billion in economic output, a total addition of more than \$17 billion in investment, and over \$40 billion total increase in personal income, which translates to \$4,800 income gain per household. An almost \$470 million increase in state government revenue will be generated over 2022-2031, which is net of the costs of R&D and workforce incentive programs. Over 2022-2031, an estimation of \$770 million inheritance tax relief and an over \$2 billion funds available for strategic property tax relief will be achieved by applying the local option sales taxes revenue gain and state government revenue surplus.

REMI further conducted two alternative scenarios in Appendix II and III with adjustments for tax policy changes and incentive programs, which show robust positive economic and fiscal impacts.

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<sup>1</sup> [Nebraska Tax Modernization: 13 Priorities | Tax Foundation.](#)

<sup>2</sup> <http://h3.ne.gov/pdf/NebraskaEconomicDevelopmentRegions.pdf>

# Methodology

To quantify the economic and fiscal impacts of various tax policy changes, as well as labor force attraction and research and development (R&D) programs, REMI uses a customized 10-region, 70-sector Tax-PI v2.4 model of nine Nebraska Economic Development Regions and one region for the rest of the nation. Tax-PI is a sophisticated dynamic regional macroeconomic, demographic, and fiscal policy model that simulates the year-by-year effects of public policy initiatives, and is widely used by state and local agencies, legislatures, universities, and other organizations and experts across the U.S. More detailed information is available about the model and the fiscal calibration in Appendix I.

The analysis covers a 10-year period from 2022-2031. REMI considers six categories of tax policy changes and incentive programs: (1) individual income tax changes; (2) corporate income tax changes; (3) general sales and gross receipts taxes changes; (4) R&D and workforce incentive programs; (5) inheritance tax changes; and (6) property tax changes. In the main body of the report, Scenario A, which is the baseline scenario, will be introduced. REMI provides two alternative scenarios in Appendix II and III.

## *Revenue Data Source*

REMI uses the “2019 State Government Tax Tables” data from Census<sup>3</sup> to calibrate the Nebraska state government revenue budget and utilizes Tax-PI to forecast the state government revenues over the study period.

## *Individual Income Tax Changes*

There are two main components of individual income tax changes: broadening the tax base and decreasing the tax rates. For individual income tax rates, REMI consolidates the four current individual income tax brackets<sup>4</sup> into two brackets: \$50,000 or less and \$50,001+. In the Scenario A, income bracket \$50,000 or less will see a 0% tax rate, while income bracket \$50,001+ will see a gradual decrease in the tax rate: 5.6% from 2022-2024, 5.3% from 2025-2027, and 4.99% from 2028-2031. To broaden the tax base, REMI eliminates the Nebraska itemized deductions for individual income tax.

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<sup>3</sup> [2019 State Government Tax Tables \(census.gov\)](https://www.census.gov/data/tables/2019/states/govt/govt-tax-tables.html)

<sup>4</sup> [Chronological History of Nebraska Tax Rates | Nebraska Department of Revenue](https://revenue.nebraska.gov/chronological-history-of-nebraska-tax-rates)

**Corporate Income Tax Changes**

Corporate income tax changes are composed of eliminating both refundable and non-refundable tax credits and decreasing tax rates. Current corporate income tax has two brackets: bracket \$100,000 or less with 5.58% tax rate and bracket \$100,001+ with 7.81% tax rate. In Scenario A, the tax rate for the bracket \$100,000 or less will decrease to 4%, while the tax rate for the bracket \$100,000+ will drop over the study period with 5.6% from 2022-2024, 5.3% from 2025-2027, and 4.99% from 2028-2031. REMI keeps the top individual income tax rates and top corporate income tax rates the same.

**General Sales and Gross Receipts Taxes Changes**

REMI broadens the general sales and gross receipts taxes based on the Sales Tax Base-Broadening Option D from Tax Foundation<sup>5</sup>, but uses a conservative approach for unprepared food and food ingredients, healthcare services, prescription medicine, and medical equipment. Tables 1 shows the Sales Tax Base-Broadening Option D. In Scenario A, REMI adjusts the Option D by retaining “unprepared food and food ingredients” exemption, removing only 20% of the exemption for “physicians, dentists, optometrists, chiropractors, etc.” and “prescription medicine”, and removing only 40% of the exemption for “medical equipment”. REMI adopts an equivalent tax base expansion for local option sales tax (LOST).

**Table 1: Sales Tax Base-Broadening Option D<sup>6</sup>**

Good or Service	Option D
Motor vehicle repair services	✓
Maintenance, painting, and repair services to real property (painting, glass, roofing, flooring, plumbing)	✓
Personal care services (hair care, nail care, massage, tattoo)	✓
Storage and moving services	✓
Travel agencies and tour operators	✓
Dry cleaning and laundry services	✓
Cleaning of tangible personal property	✓
Membership or admission to zoos and aquariums	✓
Motor fuels	✓
Veterinary services (including medical and grooming)	✓
Investment counseling services	✓
Taxi, limousine, and other transportation services	✓
Other personal services (weight loss, burial-related services)	✓
Admission to sporting and related events (not including schools)	✓
Newspapers	✓
Accounting services	✓
Admission to school events	✓
School-supporting fundraisers	✓
Unprepared food and food ingredients	✓
Physicians, dentists, optometrists, chiropractors, etc.	✓
Medical equipment and prescription medicine	✓
Real estate agent and appraisal services	✓
Legal services	✓

<sup>5</sup> [Nebraska Tax Modernization: 13 Priorities | Tax Foundation.](#)

<sup>6</sup> Ibid.

## *Incentive Programs*

REMI implements two incentive programs: R&D program and workforce program. For the R&D program, REMI doubles the current Nebraska R&D tax credits under the Nebraska Advantage Research and Development Act<sup>7</sup>. According to Andrew R. Finley, et al. (2015)<sup>8</sup>, every dollar of forgone tax revenue will increase \$2.26 of R&D spending. REMI uses the multiplier of 2.26 to calculate the additional R&D spending generated. Based on Robert D. Atkinson (2019)<sup>9</sup>, REMI further assumes that 1% additional R&D spending will increase labor productivity by 0.25% and the full effect will be realized in five years.

Workforce programs are divided into two subprograms: high-skilled workers program and backbone-of-local-economy workers program. High-skilled workers program will attract a net of 6,000 high-skilled workers to Nebraska to work in high-wage industries by granting annual student loan relief of \$12,000 for up to five years. Backbone-of-local-economy workers program will attract a net of 6,000 manufacturing workers to Nebraska by granting annual student loan relief of \$1,200 for up to five years. During the study period, REMI assumes there will be two rounds of workforce programs: the first is from 2022-2026, and the second is from 2027-2031. For each round of the programs, there is a 3-year ramp-up period, which means a net of 4,000 workers for each program will be attracted to Nebraska in the first year, a net of 1,000 workers will be attracted to Nebraska in the second year, and another 1,000 workers will move to Nebraska in the third year. Also, a 50% retention rate is assumed for each round of the programs.

## *Inheritance Tax Changes*

REMI uses the historical data of inheritance tax from Platte Institute<sup>10</sup> to estimate a 5-year average growth rate of inheritance tax and thus estimate the average inheritance tax during the study period. Nebraska is one of the six states that have inheritance tax, with the highest top tax rate. Thus, REMI interprets the elimination of inheritance tax as the retention of the retired population by 10%. In Nebraska, inheritance tax is collected and used by each county. REMI assumes that inheritance tax elimination will be mainly covered by the increase in the local option sales tax.

## *Property Tax Changes*

In Nebraska, property tax is mainly collected at the county level and the tax rate varies from county to county. Similar to inheritance tax, REMI assumes that the relief of property

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<sup>7</sup> [2019 Incentives Annual Report.pdf \(nebraska.gov\)](#)

<sup>8</sup> Finley, A. R., Lusch, S. J., & Cook, K. A. (2015). The effectiveness of the R&D tax credit: Evidence from the alternative simplified credit. *The Journal of the American Taxation Association*, 37(1), 157-181.

<sup>9</sup> Atkinson, R. D. (2019). Why federal R&D policy needs to prioritize productivity to drive growth and reduce the debt-to-GDP ratio. Information Technology and Innovation Foundation.

<sup>10</sup> [Death and Taxes: Nebraska's Inheritance Tax \(platteinstitute.org\)](#)

tax will be mainly provided by the local option sales tax increase. In the result section, “Funds available for strategic property tax relief” will provide specific numbers for property tax relief.

# Results

This section reports the economic and fiscal impacts of tax policy changes and incentive programs on Nebraska over the period 2022-2031 under Scenario A. The results are in the following subsections, including impacts on employment, economic output, gross state products (GSP), investment activity, personal income, population, tax burden, and state government revenue. Results for Scenario B and C can be found in Appendix II and III.

## Economic Impact Summary

Table 2 shows a summary of economic impacts of tax policy changes and incentive programs in Nebraska. During the period 2022-2031, the average employment increase in Nebraska is 49,914 jobs and new jobs created in Nebraska by 2031 reaches 65,812. The average population impact in Nebraska is an increase of 40,686 individuals, with 73,052 additional population attracted or retained by 2031. The total impacts of GSP and output in Nebraska from 2022-2031 are increases of \$66.0 billion and \$136.5 billion respectively. The total additional investment activity encouraged over 2022-2031 is \$17.3 billion. Personal income will increase by \$43.5 billion in total during the period 2022-2031. The corresponding tables for Scenario B and C are Table A2.1 in Appendix II and Table A3.1 in Appendix III respectively.

**Table 2: Economic Impact Summary**

Economic Impacts		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average	Total	Baseline Growth Rate	Simulation Growth Rate
Results Variable	Unit														
Total Employment	Jobs	22,526	31,858	40,906	43,105	43,716	57,056	61,903	66,125	66,133	65,812	49,914		0.23%	0.57%
Population	Individuals	6,324	13,773	22,229	29,482	35,349	44,396	53,097	61,324	67,839	73,052	40,686		0.72%	1.07%
Gross State Product	Millions of Fixed (2022) Dollars	3,055.8	4,139.4	5,235.5	5,496.3	5,632.7	7,480.1	8,158.8	8,806.9	8,933.1	9,036.8		65,975.4	1.65%	2.00%
Output	Millions of Fixed (2022) Dollars	6,547.6	8,747.6	10,962.6	11,420.0	11,657.5	15,477.1	16,799.2	18,079.7	18,309.3	18,508.3		136,509.0	1.44%	1.83%
Investment Activity	Millions of Fixed (2022) Dollars	558.3	997.6	1,388.0	1,580.2	1,642.1	1,965.3	2,179.6	2,337.0	2,360.2	2,329.6		17,337.9	2.43%	3.04%
Personal Income	Millions of Fixed (2022) Dollars	1,664.4	2,419.4	3,194.3	3,514.3	3,728.2	4,889.9	5,470.3	5,997.6	6,231.8	6,404.7		43,514.9	2.18%	2.53%

## Fiscal Impact Summary

Table 3 displays the fiscal impact summary in Nebraska. Total state government revenue, net of incentive programs cost, will see a total increase of \$469.7 million during 2022-2031. The net increase in state government revenue is mainly driven by the increase in general sales tax and the expansion of economic activities. An estimation of \$772.8 million inheritance tax will be removed from 2022-2031, which is mainly covered by a \$2.4 billion increase in local option sales taxes. Funds available for strategic property tax relief consists of the increases in local option sales taxes and state government revenue, subtracting the inheritance tax elimination. The corresponding tables for Scenario B and C are Table A2.2 in Appendix II and Table A3.2 in Appendix III respectively.

**Table 3: Fiscal Impact Summary**

Fiscal Impacts												
Results Variable	Unit	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Total
Funds Available for Strategic Property Tax Relief	Millions of Fixed (2022) Dollars	93.7	206.2	243.7	229.3	192.1	232.2	231.3	204.5	216.4	218.0	2,067.4
Local Option Sales Taxes	Millions of Fixed (2022) Dollars	115.1	235.4	239.4	242.9	245.9	250.3	255.0	258.9	262.3	265.4	2,370.4
Inheritance Tax Elimination	Millions of Fixed (2022) Dollars	-44.6	-87.3	-85.6	-84.0	-82.4	-80.8	-79.3	-77.7	-76.3	-74.8	-772.8
Total State Government Revenues	Millions of Fixed (2022) Dollars	23.2	58.2	89.9	70.4	28.6	62.7	55.6	23.4	30.3	27.4	469.7
General Sales and Gross Receipts Taxes	Millions of Fixed (2022) Dollars	501.9	1,031.4	1,061.7	1,086.0	1,103.1	1,134.5	1,171.1	1,198.0	1,219.4	1,235.7	10,742.8
Individual Income Taxes	Millions of Fixed (2022) Dollars	-453.2	-914.9	-911.1	-954.6	-1,009.7	-1,016.1	-1,062.4	-1,119.8	-1,138.7	-1,160.4	-9,741.0
Corporations Income Taxes	Millions of Fixed (2022) Dollars	9.0	20.1	24.6	19.6	12.3	16.2	12.7	6.3	7.2	7.0	135.2
Others (net of cost of incentive programs)	Millions of Fixed (2022) Dollars	-34.4	-78.4	-85.4	-80.5	-77.2	-71.9	-65.8	-61.2	-57.6	-54.9	-667.3

### Detailed Employment Impacts

Table 4 displays the employment by region results. Omaha Consortium will benefit the most with an average of 23,382 jobs increase each year, while Sandhills will be impacted the least with an average of 522 jobs increase annually. The corresponding tables for Scenario B and C are Table A2.3 in Appendix II and Table A3.3 in Appendix III respectively.

**Table 4: Employment by Region**

Employment by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average
Panhandle	Jobs	936	1,291	1,634	1,709	1,737	2,270	2,463	2,633	2,650	2,652	1,998
Sandhills	Jobs	236	329	420	445	457	595	648	694	700	701	522
Northeast	Jobs	3,478	4,785	6,041	6,306	6,396	8,338	9,011	9,611	9,644	9,625	7,323
Omaha Consortium	Jobs	10,689	15,109	19,374	20,368	20,557	26,759	28,944	30,856	30,712	30,456	23,382
Lincoln MSA	Jobs	2,241	3,432	4,611	4,974	5,083	6,723	7,395	7,946	7,953	7,907	5,827
Southeast	Jobs	1,382	1,909	2,422	2,540	2,592	3,392	3,684	3,947	3,983	3,997	2,985
Grand Island MSA	Jobs	1,119	1,549	1,970	2,063	2,089	2,728	2,950	3,147	3,148	3,132	2,390
Central	Jobs	1,206	1,725	2,235	2,390	2,451	3,195	3,495	3,751	3,778	3,777	2,800
Mid Plains	Jobs	1,238	1,729	2,198	2,310	2,352	3,056	3,313	3,540	3,564	3,565	2,687

Table 5 shows the top 10 most impacted industries' employment results. The employment increases in the top 10 industries are mainly driven by R&D and workforce incentive programs, such as professional, scientific, and technical services industry, construction industry, and food manufacturing industry, and by the general economic activity expansion and population growth, such as retail trade industry, agriculture industry and real estate industry. The corresponding tables for Scenario B and C are Table A2.4 in Appendix II and Table A3.4 in Appendix III respectively.

**Table 5: Employment by Industry (Top 10)**

Employment by Industry (Top 10)												
Industries	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average
Construction	Jobs	2,702	4,514	6,048	6,593	6,533	7,720	8,271	8,540	8,159	7,560	6,664
Food manufacturing	Jobs	3,461	4,321	5,174	5,177	5,174	6,889	7,331	7,778	7,788	7,797	6,089
Retail trade	Jobs	1,631	2,383	3,137	3,385	3,466	4,514	4,944	5,329	5,352	5,380	3,952
Food services and drinking places	Jobs	1,137	1,509	1,919	2,115	2,239	2,820	3,125	3,404	3,510	3,600	2,538
Agriculture	Jobs	1,393	1,740	2,084	2,087	2,087	2,775	2,956	3,136	3,141	3,146	2,455
Monetary authorities - central bank; Credit intermediation and related activities	Jobs	1,350	1,684	2,015	2,008	2,001	2,670	2,836	2,999	2,989	2,980	2,353
Management of companies and enterprises	Jobs	1,204	1,506	1,807	1,806	1,805	2,414	2,568	2,722	2,722	2,722	2,128
Professional, scientific, and technical services	Jobs	921	1,289	1,653	1,764	1,821	2,368	2,596	2,806	2,860	2,903	2,098
Administrative and support services	Jobs	918	1,265	1,611	1,675	1,694	2,264	2,453	2,623	2,621	2,616	1,974
Real estate	Jobs	816	1,100	1,399	1,503	1,543	1,946	2,117	2,274	2,293	2,299	1,729

## Detailed Population Impacts

Table 6 displays the population change by region. Similarly to employment, Omaha Consortium will experience the most significant increase in population with an annual average of 18,040 individuals, while Sandhills will see the lowest increase in population with an annual average of 359 individuals. The corresponding tables for Scenario B and C are Table A2.5 in Appendix II and Table A3.5 in Appendix III respectively.

**Table 6: Population by Region**

Population by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average
Panhandle	Individuals	273	593	949	1,247	1,483	1,852	2,206	2,538	2,800	3,006	1,695
Sandhills	Individuals	50	113	188	254	309	391	472	548	607	654	359
Northeast	Individuals	1,119	2,388	3,784	4,953	5,894	7,343	8,716	10,010	11,043	11,874	6,713
Omaha Consortium	Individuals	2,853	6,144	9,881	13,097	15,698	19,692	23,522	27,159	30,026	32,327	18,040
Lincoln MSA	Individuals	532	1,271	2,172	2,968	3,608	4,622	5,628	6,576	7,321	7,909	4,261
Southeast	Individuals	414	896	1,438	1,901	2,283	2,876	3,448	3,994	4,439	4,807	2,650
Grand Island MSA	Individuals	336	724	1,157	1,521	1,816	2,277	2,713	3,121	3,440	3,689	2,079
Central	Individuals	333	747	1,229	1,658	2,009	2,540	3,060	3,549	3,939	4,250	2,331
Mid Plains	Individuals	415	896	1,432	1,884	2,249	2,804	3,332	3,828	4,222	4,535	2,560

Table 7 shows the population change by age group. REMI divides the whole population into four age groups: ages 0-17, ages 18-34, ages 35-64 and ages 65+. Population grows the most in the age group 18-34, which is in line with the workforce incentive programs' target. The corresponding tables for Scenario B and C are Table A2.6 in Appendix II and Table A3.6 in Appendix III respectively.

**Table 7: Population by Age**

Population by Age												
Ages	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average
Ages 0-17	Individuals	1,726	3,802	6,221	8,388	10,234	13,000	15,723	18,369	20,590	22,470	12,052
Ages 18-34	Individuals	2,756	5,898	9,335	12,062	14,025	17,258	20,154	22,646	24,196	25,025	15,335
Ages 35-64	Individuals	1,780	3,926	6,415	8,627	10,505	13,344	16,182	18,992	21,431	23,606	12,481
Ages 65+	Individuals	62	147	258	405	585	794	1,038	1,316	1,622	1,952	818

## Detailed Output, GSP and Investment Impacts

Table 8-10 provide the top 10 most impacted industries by output, GSP, and investment. Some of these top 10 industries, such as food manufacturing, rail transportation, chemical manufacturing, computer and electronic product manufacturing, and professional, scientific, and technical services, are target industries by R&D and workforce incentive programs. Others of these top 10 industries, such as real estate, wholesale trade, agriculture and retail trade, are encouraged by the economic activity expansion and population growth. The corresponding tables for Scenario B and C are Table A2.7-A2.9 in Appendix II and Table A3.7-A3.9 in Appendix III respectively.

**Table 8: Output by Industry (Top 10)**

Output by Industry (Top 10)												
Industries	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Food manufacturing	Millions of Fixed (2022) Dollars	1,584.8	2,016.2	2,456.8	2,500.0	2,539.8	3,430.4	3,700.4	3,982.8	4,048.0	4,116.2	30,375.4
Agriculture	Millions of Fixed (2022) Dollars	483.6	615.2	749.6	763.1	775.5	1,047.1	1,130.5	1,216.9	1,237.1	1,258.2	9,276.7
Real estate	Millions of Fixed (2022) Dollars	356.7	485.3	623.2	674.4	697.3	887.9	970.8	1,048.9	1,063.2	1,072.5	7,880.2
Utilities	Millions of Fixed (2022) Dollars	392.3	494.8	599.2	606.2	611.9	819.3	879.2	941.0	949.9	958.8	7,252.8
Rail transportation	Millions of Fixed (2022) Dollars	385.2	479.7	572.6	569.0	565.1	752.7	795.0	837.5	832.6	828.5	6,617.8
Construction	Millions of Fixed (2022) Dollars	253.4	428.8	581.3	640.7	641.8	764.2	824.2	857.3	826.5	773.5	6,591.7
Chemical manufacturing	Millions of Fixed (2022) Dollars	318.4	401.8	486.1	490.9	495.6	667.9	719.0	772.1	782.7	793.7	5,928.2
Monetary authorities - central bank; Credit intermediation and related activities	Millions of Fixed (2022) Dollars	280.5	359.2	440.7	450.1	459.1	626.8	679.8	735.1	749.0	764.0	5,544.3
Management of companies and enterprises	Millions of Fixed (2022) Dollars	287.4	364.9	444.0	449.6	454.9	614.5	659.8	706.5	714.3	722.4	5,418.2
Wholesale trade	Millions of Fixed (2022) Dollars	236.2	316.4	397.9	418.8	429.7	568.5	620.6	669.5	678.3	688.0	5,023.9

**Table 9: GSP by Industry (Top 10)**

GSP by Industry (Top 10)												
Industries	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Food manufacturing	Millions of Fixed (2022) Dollars	337.4	430.8	527.1	538.7	549.8	746.4	809.6	871.3	885.2	899.2	6,595.6
Real estate	Millions of Fixed (2022) Dollars	250.4	340.8	437.8	474.1	490.7	625.8	685.5	742.3	753.7	761.4	5,562.6
Utilities	Millions of Fixed (2022) Dollars	239.2	301.6	365.3	369.6	373.4	500.4	537.7	576.8	583.3	589.5	4,436.8
Monetary authorities - central bank; Credit intermediation and related activities	Millions of Fixed (2022) Dollars	189.6	243.2	299.0	306.1	313.0	428.5	466.4	505.4	515.9	526.9	3,793.9
Management of companies and enterprises	Millions of Fixed (2022) Dollars	189.2	240.1	292.2	295.9	299.6	405.0	435.5	467.3	473.3	479.3	3,577.3
Construction	Millions of Fixed (2022) Dollars	134.3	228.1	310.7	344.0	346.3	414.6	449.7	468.7	452.6	424.0	3,573.0
Agriculture	Millions of Fixed (2022) Dollars	173.7	222.0	271.8	278.1	284.2	386.0	419.2	451.9	459.9	468.0	3,414.9
Data processing, hosting, and related services; Other information services	Millions of Fixed (2022) Dollars	148.4	194.2	242.5	251.2	259.1	355.8	389.3	425.1	437.3	449.9	3,152.6
Wholesale trade	Millions of Fixed (2022) Dollars	144.0	193.4	244.0	257.6	265.3	352.4	386.4	417.7	423.9	430.5	3,115.1
Rail transportation	Millions of Fixed (2022) Dollars	181.4	224.6	266.6	263.5	260.4	345.3	363.2	383.2	381.5	379.9	3,049.9

**Table 10: Investment Activity by Industry (Top 10)**

Investment Activity by Industry (Top 10)												
Industries	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Construction	Millions of Fixed (2022) Dollars	305.7	534.6	730.1	807.3	805.5	948.3	1,020.8	1,056.8	1,010.9	934.4	8,154.6
Real estate	Millions of Fixed (2022) Dollars	70.6	125.1	171.5	189.4	187.1	218.1	233.0	239.5	225.9	204.7	1,864.9
Computer and electronic product manufacturing	Millions of Fixed (2022) Dollars	26.9	51.5	75.7	93.0	106.1	132.4	156.6	176.5	191.4	203.6	1,213.7
Professional, scientific, and technical services	Millions of Fixed (2022) Dollars	21.3	43.3	66.2	84.3	98.5	122.5	145.9	168.9	188.3	205.8	1,144.9
Motor vehicles, bodies and trailers, and parts manufacturing	Millions of Fixed (2022) Dollars	22.4	41.7	59.6	71.2	78.9	95.7	110.3	124.1	134.4	142.7	881.0
Support activities for mining	Millions of Fixed (2022) Dollars	26.4	43.9	58.9	65.1	67.1	81.7	90.0	94.7	94.0	91.2	713.1
Machinery manufacturing	Millions of Fixed (2022) Dollars	17.6	32.3	45.2	52.7	57.1	67.5	75.9	85.4	92.5	98.2	624.4
Wholesale trade	Millions of Fixed (2022) Dollars	7.1	13.6	20.1	24.9	28.7	35.9	42.5	48.5	53.4	57.7	332.4
Retail trade	Millions of Fixed (2022) Dollars	7.2	13.7	19.8	23.8	26.4	32.2	37.1	41.5	44.5	46.7	292.9
Oil and gas extraction	Millions of Fixed (2022) Dollars	12.2	19.6	25.3	27.1	26.9	31.6	33.6	35.4	35.1	34.1	280.9

Table 11-13 show the output, GSP and investment activity by region. Omaha Consortium will see the largest increase in output, GSP and investment activity, while Sandhills will see the slightest changes, which aligns with the baseline level of output, GSP and investment activity by region. The corresponding tables for Scenario B and C are Table A2.10-A2.12 in Appendix II and Table A3.10-A3.12 in Appendix III respectively.

**Table 11: Output by Region**

Output by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Panhandle	Millions of Fixed (2022) Dollars	248.8	329.8	410.3	424.6	432.4	573.8	621.1	666.7	675.1	681.9	5,064.5
Sandhills	Millions of Fixed (2022) Dollars	69.5	92.6	115.8	121.0	124.4	165.1	179.7	193.8	197.2	200.0	1,459.0
Northeast	Millions of Fixed (2022) Dollars	1,127.2	1,483.4	1,840.2	1,901.4	1,938.4	2,584.1	2,797.3	3,007.9	3,051.0	3,089.6	22,820.5
Omaha Consortium	Millions of Fixed (2022) Dollars	2,879.8	3,849.0	4,825.7	5,026.6	5,120.6	6,787.6	7,358.2	7,914.5	7,994.1	8,069.2	59,825.4
Lincoln MSA	Millions of Fixed (2022) Dollars	607.9	850.1	1,095.8	1,166.4	1,199.5	1,586.0	1,739.2	1,878.0	1,903.5	1,921.1	13,947.6
Southeast	Millions of Fixed (2022) Dollars	625.0	814.9	1,006.5	1,035.6	1,054.7	1,411.1	1,526.1	1,641.5	1,666.4	1,689.5	12,471.3
Grand Island MSA	Millions of Fixed (2022) Dollars	304.3	408.7	514.4	537.8	550.4	730.8	794.5	856.4	869.4	879.6	6,446.2
Central	Millions of Fixed (2022) Dollars	346.4	466.5	588.0	617.7	634.7	842.1	918.8	991.6	1,008.6	1,022.1	7,436.4
Mid Plains	Millions of Fixed (2022) Dollars	338.7	452.7	565.8	589.0	602.2	796.6	864.3	929.5	944.0	955.3	7,038.1

**Table 12: GSP by Region**

GSP by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Panhandle	Millions of Fixed (2022) Dollars	118.5	158.7	198.8	206.9	211.3	280.4	304.9	328.3	333.2	336.9	2,477.9
Sandhills	Millions of Fixed (2022) Dollars	34.5	46.5	58.5	61.5	63.5	84.5	92.4	99.9	102.0	103.6	746.9
Northeast	Millions of Fixed (2022) Dollars	411.6	553.4	695.5	727.0	745.5	991.1	1,079.7	1,164.1	1,182.7	1,197.7	8,748.0
Omaha Consortium	Millions of Fixed (2022) Dollars	1,536.6	2,067.0	2,604.9	2,724.8	2,783.8	3,699.3	4,025.6	4,343.3	4,396.2	4,444.4	32,625.9
Lincoln MSA	Millions of Fixed (2022) Dollars	298.3	425.2	554.7	595.6	614.9	813.6	896.5	971.0	985.7	995.4	7,150.9
Southeast	Millions of Fixed (2022) Dollars	239.1	316.7	395.1	410.3	420.1	561.1	610.0	657.6	668.5	677.8	4,956.4
Grand Island MSA	Millions of Fixed (2022) Dollars	117.4	162.2	207.8	220.5	227.2	300.5	329.0	355.6	361.3	365.1	2,646.6
Central	Millions of Fixed (2022) Dollars	158.9	217.5	277.2	293.9	303.6	403.3	442.8	479.6	488.9	496.0	3,562.0
Mid Plains	Millions of Fixed (2022) Dollars	140.9	192.2	243.1	255.7	262.8	346.3	377.8	407.5	414.7	419.9	3,060.8

**Table 13: Investment Activity by Region**

Investment Activity by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Panhandle	Millions of Fixed (2022) Dollars	28.7	50.9	70.9	81.3	85.9	103.7	116.2	126.1	130.0	131.2	924.7
Sandhills	Millions of Fixed (2022) Dollars	3.4	6.5	9.4	11.1	11.9	14.4	16.2	17.5	17.8	17.6	125.9
Northeast	Millions of Fixed (2022) Dollars	60.2	108.2	150.8	171.4	177.5	211.8	233.8	249.5	250.7	245.9	1,859.9
Omaha Consortium	Millions of Fixed (2022) Dollars	294.1	517.5	710.8	800.1	822.5	978.7	1,078.1	1,149.5	1,152.3	1,129.6	8,633.0
Lincoln MSA	Millions of Fixed (2022) Dollars	59.3	110.6	158.7	184.8	194.5	235.3	264.2	285.2	289.1	285.8	2,067.6
Southeast	Millions of Fixed (2022) Dollars	22.8	41.4	58.9	68.0	71.6	86.6	96.7	104.3	105.8	104.8	760.9
Grand Island MSA	Millions of Fixed (2022) Dollars	18.2	33.2	47.0	54.1	56.7	68.0	75.5	81.0	81.8	80.6	596.1
Central	Millions of Fixed (2022) Dollars	26.1	48.1	68.6	80.1	84.8	102.4	114.9	124.2	126.4	125.5	901.1
Mid Plains	Millions of Fixed (2022) Dollars	45.5	81.2	112.8	129.3	136.8	164.4	184.0	199.7	206.2	208.7	1,468.6

### Detailed Personal Income Impacts

Table 14 illustrates the personal income change by income group. For income group <50k, the total increase in personal income during 2022-2031 is almost \$3.6 billion; for income group 50k-200k, a total addition of \$10.5 billion personal income will be realized during 2022-2031; for income group >200k, a total of \$29.5 billion personal income will be earned additionally. The corresponding tables for Scenario B and C are Table A2.13 in Appendix II and Table A3.13 in Appendix III respectively.

**Table 14: Personal Income Increase by Income Group**

Personal Income Increase by Income Group												
Category	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Income Group <50k	Millions of Fixed (2022) Dollars	136.4	198.3	261.8	288.1	305.6	400.8	448.4	491.6	510.8	525.0	3,566.7
Income Group 50k-200k	Millions of Fixed (2022) Dollars	401.4	583.4	770.3	847.5	899.1	1,179.2	1,319.2	1,446.3	1,502.8	1,544.5	10,493.7
Income Group >200k	Millions of Fixed (2022) Dollars	1,126.6	1,637.6	2,162.2	2,378.8	2,523.5	3,309.9	3,702.8	4,059.7	4,218.2	4,335.2	29,454.5

Table 15 demonstrates personal income per capita change by region. Personal income per capita change is driven by both total personal income change and population change. The most considerable personal income per capita increase will be observed in Omaha Consortium with a 10-year total of \$12,632.6 per capita from 2022-2031. The personal income per capita increases in the other eight regions are more even, from a 10-year total increase of \$4,450.5 per capita in Panhandle, to a total increase of \$6,195.6 per capita in Lincoln MSA. The corresponding tables for Scenario B and C are Table A2.14 in Appendix II and Table A3.14 in Appendix III respectively.

**Table 15: Personal Income Per Capita by Region**

Personal Income Per Capita by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Panhandle	Fixed (2022) Dollars	399.7	480.9	538.8	468.5	394.3	542.0	503.7	471.2	368.0	283.5	4,450.5
Sandhills	Fixed (2022) Dollars	329.7	419.0	489.0	456.4	414.0	544.8	532.6	523.9	459.3	408.3	4,577.1
Northeast	Fixed (2022) Dollars	594.0	695.7	767.0	652.1	534.1	744.6	678.4	620.4	465.4	336.6	6,088.3
Omaha Consortium	Fixed (2022) Dollars	912.2	1,124.8	1,306.7	1,217.8	1,109.9	1,490.4	1,483.9	1,475.2	1,321.0	1,190.8	12,632.6
Lincoln MSA	Fixed (2022) Dollars	400.9	532.8	639.0	613.4	566.6	735.2	737.4	731.6	654.2	584.5	6,195.6
Southeast	Fixed (2022) Dollars	511.7	613.4	690.9	604.4	513.4	707.8	659.6	619.1	487.9	379.1	5,787.5
Grand Island MSA	Fixed (2022) Dollars	481.9	592.8	678.2	604.7	513.8	682.6	633.3	584.6	451.0	334.3	5,557.0
Central	Fixed (2022) Dollars	425.6	536.4	624.9	577.6	516.0	689.8	674.1	657.9	567.5	490.2	5,759.9
Mid Plains	Fixed (2022) Dollars	490.3	584.2	648.7	557.4	461.8	628.2	573.2	527.8	401.3	296.3	5,169.3

### Detailed Individual Income Taxes Impacts

Table 16 shows the percentage of total individual income taxes relief by region. The percentages of nine regions sum up to one. Omaha Consortium benefits the most from the individual income taxes relief in terms of total taxes relief amount, because its total individual income is the largest. The corresponding tables for Scenario B and C are Table A2.15 in Appendix II and Table A3.15 in Appendix III respectively.

**Table 16: Percentage of Total Individual Income Relief by Region**

Percentage of Total Individual Income Taxes Relief by Region												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percentage	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
Sandhills	Percentage	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Northeast	Percentage	11.3%	11.2%	11.2%	11.2%	11.2%	11.2%	11.2%	11.2%	11.3%	11.3%	11.2%
Omaha Consortium	Percentage	51.2%	51.2%	51.1%	51.1%	51.1%	51.0%	50.8%	50.7%	50.7%	50.6%	51.0%
Lincoln MSA	Percentage	15.6%	15.7%	15.8%	15.9%	15.9%	16.0%	16.0%	16.0%	16.1%	16.0%	15.9%
Southeast	Percentage	3.4%	3.3%	3.3%	3.3%	3.3%	3.3%	3.4%	3.4%	3.4%	3.4%	3.3%
Grand Island MSA	Percentage	3.4%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Central	Percentage	6.5%	6.5%	6.5%	6.5%	6.5%	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%
Mid Plains	Percentage	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%

### Detailed Local Option Sales Taxes Impacts

Table 17 displays the local option sales tax (LOST) change by region. Local option sales tax changes are due to the tax base-broadening and the change in personal consumption expenditures. All nine regions will expect a net increase in local option sales tax. Omaha Consortium will see the largest LOST increase of \$1.1 billion over 2022-2031, considering its personal consumption expenditures level, while Sandhills' local option sales taxes will only increase by \$34.1 million over 2022-2031. The corresponding tables for Scenario B and C are Table A2.16 in Appendix II and Table A3.16 in Appendix III respectively.

**Table 17: Local Option Sales Taxes Revenue by Region**

Local Option Sales Taxes Revenue by Region												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Total
Panhandle	Millions of Fixed (2022) Dollars	4.6	9.4	9.6	9.7	9.8	10.0	10.2	10.3	10.4	10.6	94.7
Sandhills	Millions of Fixed (2022) Dollars	1.6	3.4	3.4	3.5	3.5	3.6	3.7	3.7	3.8	3.8	34.1
Northeast	Millions of Fixed (2022) Dollars	13.2	26.8	27.3	27.7	28.0	28.5	29.1	29.6	30.0	30.4	270.5
Omaha Consortium	Millions of Fixed (2022) Dollars	52.8	108.0	109.8	111.3	112.6	114.5	116.6	118.3	119.7	120.9	1,084.4
Lincoln MSA	Millions of Fixed (2022) Dollars	18.4	37.7	38.5	39.1	39.6	40.4	41.2	41.9	42.5	43.1	382.4
Southeast	Millions of Fixed (2022) Dollars	6.1	12.5	12.7	12.9	13.0	13.2	13.5	13.7	13.8	14.0	125.6
Grand Island MSA	Millions of Fixed (2022) Dollars	4.5	9.2	9.3	9.4	9.5	9.7	9.9	10.0	10.1	10.3	91.9
Central	Millions of Fixed (2022) Dollars	8.1	16.6	16.9	17.2	17.5	17.8	18.2	18.4	18.7	19.0	168.4
Mid Plains	Millions of Fixed (2022) Dollars	5.7	11.7	11.9	12.1	12.3	12.5	12.8	13.0	13.2	13.3	118.5

**Detailed Tax Burden Impacts**

REMI focuses on the impacts of general sales taxes and individual income tax on similarly situated taxpayers in the tax burden analysis. The tax burden is defined as:

$$\frac{(State\ Level\ General\ Sales\ Tax + Local\ Option\ Sales\ Tax + Individual\ Income\ Tax)}{Personal\ Income}$$

REMI divides the total population into six income groups by annual income: with income <\$50k, \$50k-\$200k, \$200k-\$500k, \$500k-\$1m, and >\$1m. Table 18-22 display the tax burden changes for each income group by region.

Table 18 shows that the tax burden for income group <\$50k will decrease the most. The individual income tax for this group will be entirely wiped out. Although they will see an increase in the sales taxes, their total tax burden will still go down. Table 19 illustrates that income group \$50k-\$200k will see a slight tax burden decrease or increase. For this group, the decrease in individual income tax rate is much smaller than the group below \$50k, however, the propensity to consume is still very high. Thus, the increase in sales tax and the decrease in individual income tax are about even. In some regions, such as Omaha Consortium, the decrease in individual income tax overweighs the increase in sales tax, and a net decrease in tax burden will be reached. In other regions, such as Sandhills, the sales tax increase dominates the individual income tax decrease, which results in a net increase in tax burden. Table 20 shows a net decrease in tax burden for income group \$200k-\$500k. The propensity to consume for this group further drops, and the decrease in individual income tax overweighs the sales tax increase.

Income group \$500k-1m in Table 21 faces either a slight increase or a slight decrease in tax burden. The main reason is that the group pays notably less than the statutory individual income tax. The decrease in the individual income tax rate will not result in a large drop in the individual income tax the group pays. However, the increase in sales taxes is much harder to avoid. The increase in sales taxes will overweigh the decrease in individual income tax. Similarly, for income group >1m in Table 22, the effective tax rate is significantly lower than the statutory tax rate, which does not leave much room for them to benefit from the individual income tax reduction. On the other hand, although they have the lowest propensity to consume, their significant income keeps their consumption and

sales taxes paid large. Thus, the increase in sales taxes will dominate the individual income tax reduction, and the tax burden will increase the most.

The corresponding tables for Scenario B and C are Table A2.17-A2.21 in Appendix II and Table A3.17-A3.21 in Appendix III respectively.

**Table 18: Tax Burden Change for Income Group <50K**

Tax Burden Change for Income Group <50K												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	-10.5%	-19.6%	-19.7%	-19.6%	-19.8%	-20.2%	-20.1%	-20.4%	-20.4%	-20.5%	-19.1%
Sandhills	Percent	-11.0%	-20.9%	-21.0%	-20.9%	-21.0%	-21.4%	-21.2%	-21.5%	-21.4%	-21.6%	-20.2%
Northeast	Percent	-12.6%	-23.7%	-23.7%	-23.6%	-23.8%	-24.1%	-24.1%	-24.3%	-24.3%	-24.3%	-22.8%
Omaha Consortium	Percent	-15.0%	-28.6%	-28.8%	-28.8%	-29.0%	-29.4%	-29.4%	-29.5%	-29.6%	-29.7%	-27.8%
Lincoln MSA	Percent	-14.1%	-27.0%	-27.1%	-27.2%	-27.3%	-27.7%	-27.7%	-27.6%	-27.7%	-27.7%	-26.1%
Southeast	Percent	-11.9%	-22.5%	-22.6%	-22.5%	-22.6%	-23.0%	-22.9%	-23.2%	-23.1%	-23.2%	-21.8%
Grand Island MSA	Percent	-12.3%	-23.3%	-23.5%	-23.4%	-23.6%	-24.0%	-23.9%	-24.2%	-24.2%	-24.3%	-22.7%
Central	Percent	-12.3%	-23.3%	-23.3%	-23.2%	-23.4%	-23.7%	-23.6%	-23.8%	-23.8%	-23.8%	-22.4%
Mid Plains	Percent	-10.8%	-20.2%	-20.2%	-20.1%	-20.2%	-20.6%	-20.4%	-20.7%	-20.6%	-20.6%	-19.4%

**Table 19: Tax Burden Change for Income Group 50K-200K**

Tax Burden Change for Income Group 50K-200K												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	0.7%	2.6%	2.8%	2.0%	1.0%	0.6%	0.0%	-1.1%	-1.1%	-1.3%	0.6%
Sandhills	Percent	0.7%	2.6%	2.7%	2.0%	0.9%	0.6%	-0.1%	-1.1%	-1.1%	-1.3%	0.6%
Northeast	Percent	0.2%	1.7%	1.9%	1.1%	0.0%	-0.3%	-1.0%	-2.1%	-2.1%	-2.3%	-0.3%
Omaha Consortium	Percent	-0.4%	0.4%	0.5%	-0.3%	-1.4%	-1.7%	-2.4%	-3.5%	-3.5%	-3.7%	-1.6%
Lincoln MSA	Percent	-0.3%	0.6%	0.8%	-0.1%	-1.2%	-1.4%	-2.1%	-3.2%	-3.2%	-3.3%	-1.4%
Southeast	Percent	0.1%	1.5%	1.7%	0.9%	-0.2%	-0.5%	-1.2%	-2.3%	-2.3%	-2.4%	-0.4%
Grand Island MSA	Percent	0.3%	1.7%	1.9%	1.1%	0.0%	-0.3%	-1.0%	-2.0%	-2.1%	-2.2%	-0.2%
Central	Percent	0.3%	1.9%	2.1%	1.3%	0.3%	0.0%	-0.7%	-1.8%	-1.8%	-1.9%	0.0%
Mid Plains	Percent	0.6%	2.5%	2.7%	2.0%	0.9%	0.6%	-0.1%	-1.1%	-1.2%	-1.3%	0.6%

**Table 20: Tax Burden Change for Income Group 200K-500K**

Tax Burden Change for Income Group 200K-500K												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	-1.3%	-1.4%	-1.2%	-2.0%	-3.1%	-3.4%	-4.1%	-5.2%	-5.2%	-5.4%	-3.2%
Sandhills	Percent	-1.3%	-1.4%	-1.2%	-2.0%	-3.1%	-3.4%	-4.1%	-5.2%	-5.2%	-5.4%	-3.2%
Northeast	Percent	-1.7%	-2.2%	-2.0%	-2.9%	-4.0%	-4.3%	-5.0%	-6.2%	-6.2%	-6.3%	-4.1%
Omaha Consortium	Percent	-2.4%	-3.5%	-3.3%	-4.2%	-5.4%	-5.6%	-6.4%	-7.5%	-7.5%	-7.7%	-5.4%
Lincoln MSA	Percent	-2.3%	-3.3%	-3.1%	-4.0%	-5.2%	-5.4%	-6.1%	-7.2%	-7.2%	-7.4%	-5.1%
Southeast	Percent	-1.8%	-2.4%	-2.2%	-3.0%	-4.2%	-4.5%	-5.2%	-6.3%	-6.3%	-6.5%	-4.2%
Grand Island MSA	Percent	-1.7%	-2.2%	-2.0%	-2.8%	-4.0%	-4.3%	-5.0%	-6.1%	-6.1%	-6.3%	-4.1%
Central	Percent	-1.7%	-2.0%	-1.8%	-2.6%	-3.8%	-4.0%	-4.8%	-5.9%	-5.9%	-6.0%	-3.8%
Mid Plains	Percent	-1.4%	-1.4%	-1.2%	-2.0%	-3.2%	-3.4%	-4.2%	-5.3%	-5.3%	-5.4%	-3.3%

**Table 21: Tax Burden Change for Income Group 500K-1M**

Tax Burden Change for Income Group 500K-1M												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	0.9%	3.1%	3.2%	2.5%	1.4%	1.1%	0.4%	-0.6%	-0.7%	-0.8%	1.1%
Sandhills	Percent	0.9%	3.1%	3.2%	2.5%	1.4%	1.0%	0.4%	-0.6%	-0.7%	-0.8%	1.0%
Northeast	Percent	0.5%	2.2%	2.3%	1.5%	0.5%	0.1%	-0.5%	-1.6%	-1.6%	-1.8%	0.2%
Omaha Consortium	Percent	-0.2%	0.8%	0.9%	0.1%	-0.9%	-1.3%	-2.0%	-3.0%	-3.1%	-3.2%	-1.2%
Lincoln MSA	Percent	-0.1%	1.1%	1.2%	0.4%	-0.7%	-1.0%	-1.7%	-2.7%	-2.7%	-2.9%	-0.9%
Southeast	Percent	0.4%	2.0%	2.1%	1.4%	0.3%	0.0%	-0.7%	-1.8%	-1.8%	-2.0%	0.0%
Grand Island MSA	Percent	0.5%	2.2%	2.3%	1.6%	0.5%	0.2%	-0.5%	-1.6%	-1.6%	-1.8%	0.2%
Central	Percent	0.5%	2.4%	2.5%	1.8%	0.7%	0.4%	-0.2%	-1.3%	-1.3%	-1.5%	0.4%
Mid Plains	Percent	0.9%	3.0%	3.1%	2.4%	1.4%	1.0%	0.4%	-0.7%	-0.7%	-0.8%	1.0%

**Table 22: Tax Burden Change for Income Group >1M**

Tax Burden Change for Income Group >1M												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	15.4%	31.9%	31.7%	31.5%	30.9%	30.1%	29.9%	29.2%	29.0%	28.6%	28.8%
Sandhills	Percent	15.5%	32.0%	31.9%	31.6%	31.0%	30.3%	30.0%	29.3%	29.1%	28.7%	28.9%
Northeast	Percent	15.2%	31.3%	31.2%	30.9%	30.3%	29.5%	29.2%	28.6%	28.3%	28.0%	28.3%
Omaha Consortium	Percent	14.8%	30.5%	30.3%	30.0%	29.3%	28.6%	28.3%	27.5%	27.3%	26.9%	27.4%
Lincoln MSA	Percent	14.9%	30.7%	30.6%	30.2%	29.6%	28.9%	28.6%	27.9%	27.7%	27.4%	27.7%
Southeast	Percent	15.1%	31.2%	31.1%	30.8%	30.2%	29.4%	29.1%	28.4%	28.2%	27.8%	28.1%
Grand Island MSA	Percent	15.2%	31.3%	31.2%	30.9%	30.3%	29.5%	29.2%	28.5%	28.3%	28.0%	28.2%
Central	Percent	15.3%	31.5%	31.4%	31.1%	30.5%	29.8%	29.5%	28.9%	28.6%	28.3%	28.5%
Mid Plains	Percent	15.4%	31.8%	31.7%	31.4%	30.8%	30.1%	29.8%	29.1%	28.9%	28.5%	28.8%

## Conclusion

REMI conducted this analysis on behalf of Blueprint Nebraska to evaluate how tax policy changes, R&D tax credits, and workforce incentive programs would impact the Nebraska economy and state government revenues. The findings show that a net employment increase by the end of 2031 is 65,812 new jobs, with an additional population of 73,052. Over 2022-2031, the 10-year total impact on the size of the state economy is \$66.0 billion in economic output, \$136.5 billion in GSP, and \$17.3 billion in investment. The total impact on personal income over the 10-year period reaches \$43.5 billion. These policy changes and incentive programs also generate \$469.7 million in additional state government revenue, which with the revenue gain from local option sales taxes, provides over \$2.0 billion funds available for strategic property tax relief. Two alternative scenarios REMI conducted in Appendix II and III support the tax policy changes and incentive programs by robust positive results. These results demonstrate positive economic and fiscal impacts of the tax policy modernization and incentive programs on the Nebraska economy and government revenues.

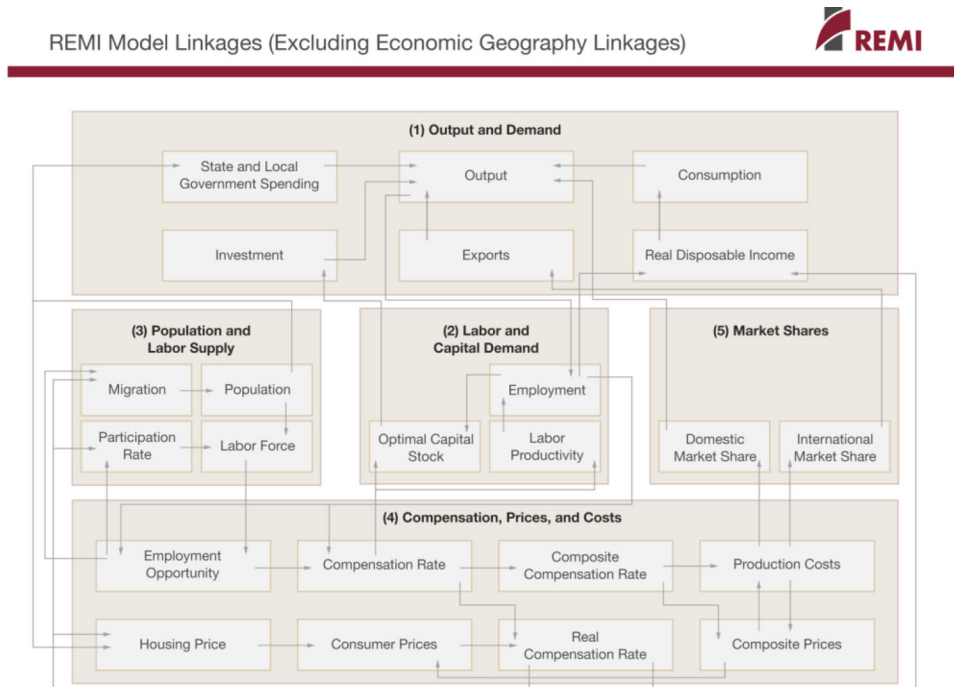
# Appendix I: REMI Model Framework & Fiscal Calibration

## Model Framework

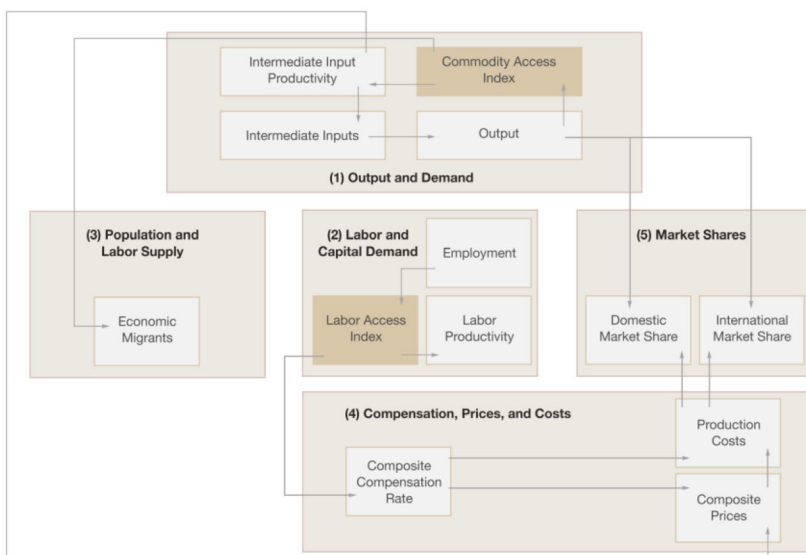
Tax-PI is a structural economic, demographic, and fiscal forecasting and policy analysis model. The following core framework applies to all REMI model builds. The model integrates input-output, computable general equilibrium, econometric and economic geography methodologies. The model is dynamic, with forecasts and simulations generated on an annual basis and behavioral responses to compensation, price, and other economic factors.

The model consists of thousands of simultaneous equations with a structure that is relatively straightforward. The exact number of equations used varies depending on the extent of industry, demographic, demand, and other detail in the specific model being used. The overall structure of the model can be summarized in five major blocks: (1) Output and Demand, (2) Labor and Capital Demand, (3) Population and Labor Supply, (4) Compensation, Prices, and Costs, and (5) Market Shares. The blocks and their key interactions are shown in Figures A1.1 and A1.2.

Figure A1.1: REMI Model Linkages



**Figure A1.2: Economic Geography Linkages**



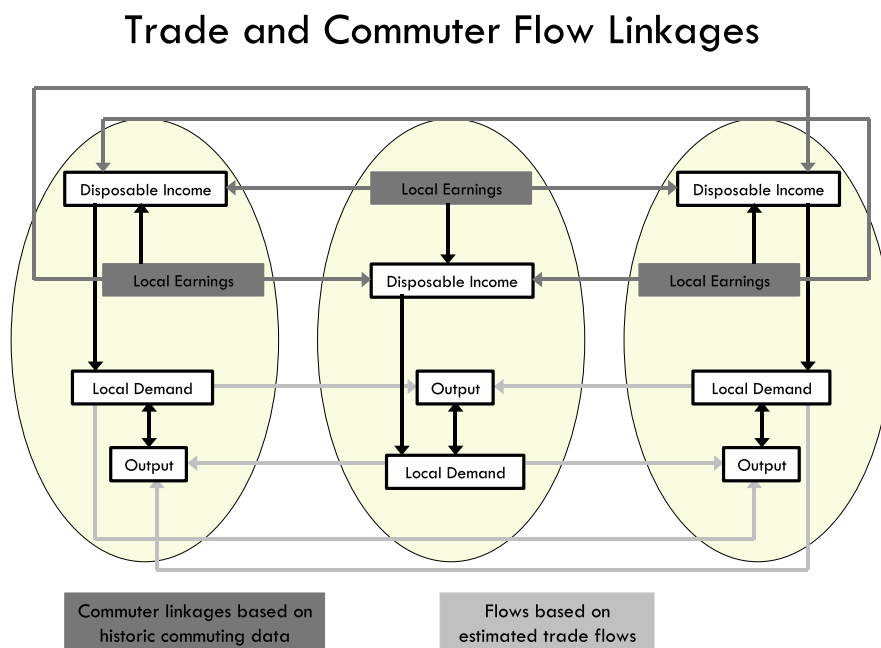
The Output and Demand block consists of output, demand, consumption, investment, government spending, exports, and imports, as well as feedback from output change due to the change in the productivity of intermediate inputs. The Labor and Capital Demand block includes labor intensity and productivity as well as demand for labor and capital. Labor force participation rate and migration equations are in the Population and Labor Supply block. The Compensation, Prices, and Costs block includes composite prices, determinants of production costs, the consumption price deflator, housing prices, and the compensation equations. The proportion of local, inter-regional, and export markets captured by each region is included in the Market Shares block.

Models can be built as single region, multi-region, or multi-region national models. A region is defined broadly as a sub-national area, and could consist of a state, province, county, or city, or any combination of sub-national areas.

Single-region models consist of an individual region, called the home region. The rest of the nation is also represented in the model. However, since the home region is only a small part of the total nation, the changes in the region do not have an endogenous effect on the variables in the rest of the nation.

Multi-regional models have interactions among regions, such as trade and commuting flows. These interactions include trade flows from each region to each of the other regions. These flows are illustrated for a three-region model in Figure A1.3.

Figure A1.3: Trade and Commuter Flow Linkages



Multiregional national models also include a central bank monetary response that constrains labor markets. Models that only encompass a relatively small portion of a nation are not endogenously constrained by changes in exchange rates or monetary responses.

#### *Block 1. Output and Demand*

This block includes output, demand, consumption, investment, government spending, import, commodity access, and export concepts. Output for each industry in the home region is determined by industry demand in all regions in the nation, the home region's share of each market, and international exports from the region.

For each industry, demand is determined by the amount of output, consumption, investment, and capital demand on that industry. Consumption depends on real disposable income per capita, relative prices, differential income elasticities, and population. Input productivity depends on access to inputs because a larger choice set of inputs means it is more likely that the input with the specific characteristics required for the job will be found. In the capital stock adjustment process, investment occurs to fill the difference between optimal and actual capital stock for residential, non-residential, and equipment investment. Government spending changes are determined by changes in the population.

### *Block 2. Labor and Capital Demand*

The Labor and Capital Demand block includes the determination of labor productivity, labor intensity, and the optimal capital stocks. Industry-specific labor productivity depends on the availability of workers with differentiated skills for the occupations used in each industry. The occupational labor supply and commuting costs determine firms' access to a specialized labor force.

Labor intensity is determined by the cost of labor relative to the other factor inputs, capital and fuel. Demand for capital is driven by the optimal capital stock equation for both non-residential capital and equipment. Optimal capital stock for each industry depends on the relative cost of labor and capital, and the employment weighted by capital use for each industry. Employment in private industries is determined by the value added and employment per unit of value added in each industry.

### *Block 3. Population and Labor Supply*

The Population and Labor Supply block includes detailed demographic information about the region. Population data is given for age, gender, and race, with birth and survival rates for each group. The size and labor force participation rate of each group determines the labor supply. These participation rates respond to changes in employment relative to the potential labor force and to changes in the real after-tax compensation rate. Migration includes retirement, military, international, and economic migration. Economic migration is determined by the relative real after-tax compensation rate, relative employment opportunity, and consumer access to variety.

### *Block 4. Compensation, Prices and Costs*

This block includes delivered prices, production costs, equipment cost, the consumption deflator, consumer prices, the price of housing, and the compensation equation. Economic geography concepts account for the productivity and price effects of access to specialized labor, goods, and services.

These prices measure the price of the industry output, taking into account the access to production locations. This access is important due to the specialization of production that takes place within each industry, and because transportation and transaction costs of distance are significant. Composite prices for each industry are then calculated based on the production costs of supplying regions, the effective distance to these regions, and the index of access to the variety of outputs in the industry relative to the access by other uses of the product.

The cost of production for each industry is determined by the cost of labor, capital, fuel, and intermediate inputs. Labor costs reflect a productivity adjustment to account for access to specialized labor, as well as underlying compensation rates. Capital costs

include costs of non-residential structures and equipment, while fuel costs incorporate electricity, natural gas, and residual fuels.

The consumption deflator converts industry prices to prices for consumption commodities. For potential migrants, the consumer price is additionally calculated to include housing prices. Housing prices change from their initial level depending on changes in income and population density.

Compensation changes are due to changes in labor demand and supply conditions and changes in the national compensation rate. Changes in employment opportunities relative to the labor force and occupational demand change determine compensation rates by industry.

### *Block 5. Market Shares*

The market shares equations measure the proportion of local and export markets that are captured by each industry. These depend on relative production costs, the estimated price elasticity of demand, and the effective distance between the home region and each of the other regions. The change in share of a specific area in any region depends on changes in its delivered price and the quantity it produces compared with the same factors for competitors in that market. The share of local and external markets then drives the exports from and imports to the home economy.

### *Fiscal Calibration*

Each Tax-PI budget category is assigned both an “Economic Indicator” that allows it to respond to changes in a specific economic variable (e.g., Personal Consumption Expenditures for Sales Tax Revenue) and a “Policy Variable” that allows it to directly impact a specific economic variable (e.g., Personal Taxes for Personal Income Tax Revenue). Because the Tax-PI model integrates the economic outlook with fiscal projections, this analysis captures the interaction between economic activity and the level of tax revenue.

# Appendix II: Scenario B Methodology and Results

## Methodology

Scenario B includes all the policy changes from Scenario A with the exception of the following adjustments: (1) removes unprepared food & food ingredients exemption from both state level sales tax and local option sales tax; (2) halves workforce incentive programs, which means attract a net of 3,000 workers for each round of each program; and (3) uses alternate to income tax rates for top tax brackets: 4.6% for individual income tax bracket \$50,001+ and corporate income tax bracket \$100,001+.

## Results

Tables A2.1-A2.21 are parallel to Tables 2-22 in the main report body for Scenario A. Explanations for each table can be found in the corresponding sections in the main body Results section.

**Table A2.1: Economic Impact Summary**

Economic Impacts															
Results Variable	Unit	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average	Total	Baseline Growth Rate	Simulation Growth Rate
Total Employment	Jobs	7,668	12,099	16,732	17,685	18,303	25,296	27,531	29,818	29,915	29,851	21,490		0.23%	0.41%
Population	Individuals	887	2,903	5,835	8,281	10,381	14,306	17,965	21,567	24,392	26,645	13,316		0.72%	0.86%
Gross State Product	Millions of Fixed (2022) Dollars	1,304.2	1,833.6	2,394.2	2,511.9	2,606.9	3,557.3	3,876.1	4,213.2	4,281.6	4,339.3		30,918.3	1.65%	1.83%
Output	Millions of Fixed (2022) Dollars	2,848.3	3,939.4	5,079.5	5,295.1	5,466.2	7,426.9	8,056.0	8,720.2	8,845.3	8,955.5		64,632.5	1.44%	1.64%
Investment Activity	Millions of Fixed (2022) Dollars	149.9	318.2	505.0	602.2	654.4	844.1	963.5	1,060.8	1,088.9	1,088.1		7,275.1	2.43%	2.78%
Personal Income	Millions of Fixed (2022) Dollars	656.4	995.9	1,368.5	1,504.1	1,614.7	2,201.7	2,470.7	2,736.6	2,849.2	2,933.8		19,331.4	2.18%	2.35%

**Table A2.2: Fiscal Impact Summary**

Fiscal Impacts													
Results Variable	Unit	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Total	
Funds Available for Strategic Property Tax Relief	Millions of Fixed (2022) Dollars	140.1	287.4	300.6	309.8	309.4	329.3	353.8	366.0	373.6	376.6	3,146.8	
Local Option Sales Taxes	Millions of Fixed (2022) Dollars	155.6	316.0	319.2	322.1	325.3	330.2	335.7	340.7	345.5	350.0	3,140.4	
Inheritance Tax Elimination	Millions of Fixed (2022) Dollars	-44.6	-87.3	-85.6	-84.0	-82.4	-80.8	-79.3	-77.7	-76.3	-74.8	-772.8	
Total State Government Revenues	Millions of Fixed (2022) Dollars	29.1	58.7	67.0	71.7	66.5	79.9	97.3	103.1	104.4	101.4	779.1	
General Sales and Gross Receipts Taxes	Millions of Fixed (2022) Dollars	662.7	1,348.4	1,368.6	1,385.4	1,400.5	1,428.0	1,458.9	1,484.8	1,508.5	1,529.1	13,574.7	
Individual Income Taxes	Millions of Fixed (2022) Dollars	-590.2	-1,198.4	-1,208.2	-1,223.3	-1,244.8	-1,262.8	-1,280.9	-1,303.6	-1,327.6	-1,351.7	-11,991.5	
Corporations Income Taxes	Millions of Fixed (2022) Dollars	-19.6	-38.8	-37.2	-36.5	-36.9	-35.6	-34.0	-33.7	-33.8	-34.6	-340.7	
Others (net of cost of incentive programs)	Millions of Fixed (2022) Dollars	-23.9	-52.5	-56.1	-53.8	-52.3	-49.6	-46.7	-44.5	-42.7	-41.4	-463.4	

**Table A2.3: Employment by Region**

Employment by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average
Panhandle	Jobs	346	518	693	728	750	1,024	1,117	1,206	1,217	1,220	882
Sandhills	Jobs	89	138	189	204	216	290	317	343	348	350	248
Northeast	Jobs	1,356	1,998	2,652	2,789	2,876	3,889	4,221	4,545	4,577	4,581	3,348
Omaha Consortium	Jobs	3,779	5,935	8,156	8,581	8,845	12,111	13,091	14,134	14,108	14,033	10,277
Lincoln MSA	Jobs	342	831	1,390	1,507	1,589	2,446	2,729	3,022	3,031	3,013	1,990
Southeast	Jobs	509	758	1,017	1,073	1,111	1,524	1,665	1,803	1,825	1,834	1,312
Grand Island MSA	Jobs	396	593	805	848	876	1,212	1,323	1,432	1,440	1,438	1,036
Central	Jobs	377	613	872	942	993	1,388	1,531	1,674	1,696	1,704	1,179
Mid Plains	Jobs	474	716	958	1,014	1,047	1,411	1,537	1,658	1,674	1,678	1,217

**Table A2.4: Employment by Industry (Top 10)**

Employment by Industry (Top 10)												
Industries	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average
Food manufacturing	Jobs	1,562	2,022	2,473	2,489	2,501	3,368	3,589	3,816	3,821	3,827	2,947
Construction	Jobs	679	1,333	2,076	2,367	2,460	3,210	3,552	3,786	3,681	3,456	2,660
Food services and drinking places	Jobs	668	830	1,018	1,076	1,133	1,420	1,536	1,671	1,715	1,754	1,282
Retail trade	Jobs	47	444	860	957	1,044	1,606	1,775	1,989	2,009	2,034	1,277
Monetary authorities - central bank; Credit intermediation and related activities	Jobs	685	859	1,031	1,031	1,031	1,369	1,451	1,534	1,529	1,524	1,204
Agriculture	Jobs	637	820	1,000	1,006	1,010	1,357	1,447	1,537	1,540	1,542	1,190
Management of companies and enterprises	Jobs	603	757	911	912	912	1,218	1,295	1,372	1,372	1,372	1,072
Professional, scientific, and technical services	Jobs	380	559	747	799	840	1,125	1,232	1,342	1,371	1,394	979
Administrative and support services	Jobs	326	503	686	713	735	1,031	1,115	1,205	1,206	1,205	872
Real estate	Jobs	384	503	648	685	715	928	1,001	1,086	1,097	1,103	815

**Table A2.5: Population by Region**

Population by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average
Panhandle	Individuals	31	116	239	341	426	588	740	888	1,004	1,096	547
Sandhills	Individuals	-3	10	35	59	81	119	156	191	219	240	111
Northeast	Individuals	260	682	1,227	1,680	2,064	2,733	3,359	3,966	4,451	4,843	2,527
Omaha Consortium	Individuals	554	1,550	2,924	4,064	5,041	6,805	8,428	10,026	11,270	12,271	6,293
Lincoln MSA	Individuals	-158	-133	37	173	291	637	964	1,299	1,549	1,735	639
Southeast	Individuals	58	188	376	536	674	931	1,176	1,417	1,611	1,770	874
Grand Island MSA	Individuals	66	180	336	466	578	786	983	1,175	1,326	1,445	734
Central	Individuals	-5	73	217	346	463	689	904	1,120	1,291	1,429	653
Mid Plains	Individuals	83	237	443	617	763	1,017	1,255	1,486	1,669	1,816	939

**Table A2.6: Population by Age**

Population by Age												
Ages	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average
Ages 0-17	Individuals	228	773	1,587	2,292	2,925	4,079	5,186	6,303	7,232	8,017	3,862
Ages 18-34	Individuals	363	1,208	2,420	3,360	4,096	5,589	6,891	8,088	8,863	9,323	5,020
Ages 35-64	Individuals	234	796	1,632	2,352	2,993	4,171	5,309	6,469	7,451	8,310	3,972
Ages 65+	Individuals	62	126	195	276	367	466	579	707	846	994	462

**Table A2.7: Output by Industry (Top 10)**

Output by Industry (Top 10)													
Industries	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total	
Food manufacturing	Millions of Fixed (2022) Dollars	714.2	942.2	1,173.0	1,200.5	1,226.3	1,675.5	1,810.0	1,951.8	1,984.4	2,018.4	14,696.3	
Agriculture	Millions of Fixed (2022) Dollars	221.0	290.0	359.8	367.8	375.3	512.0	553.2	596.5	606.5	616.9	4,499.1	
Real estate	Millions of Fixed (2022) Dollars	166.9	221.5	288.3	307.6	323.8	424.9	461.4	503.9	512.6	519.1	3,730.1	
Utilities	Millions of Fixed (2022) Dollars	197.2	249.3	302.4	305.7	309.4	413.8	443.0	474.2	478.6	483.1	3,656.7	
Rail transportation	Millions of Fixed (2022) Dollars	194.7	244.6	293.3	292.9	292.2	386.9	408.3	429.8	427.4	425.4	3,395.5	
Chemical manufacturing	Millions of Fixed (2022) Dollars	160.1	203.1	246.5	249.4	252.5	339.3	364.8	391.7	397.2	402.8	3,007.4	
Monetary authorities - central bank; Credit intermediation and related activities	Millions of Fixed (2022) Dollars	142.4	183.4	225.7	231.2	236.9	321.6	348.1	376.2	383.5	391.2	2,840.3	
Management of companies and enterprises	Millions of Fixed (2022) Dollars	143.9	183.5	223.7	226.9	229.9	309.9	332.6	356.1	360.0	364.1	2,730.5	
Construction	Millions of Fixed (2022) Dollars	60.1	121.6	194.0	224.7	236.8	313.1	349.7	376.2	369.5	350.5	2,596.0	
Wholesale trade	Millions of Fixed (2022) Dollars	95.8	139.3	184.2	194.7	204.0	276.5	300.0	326.1	331.1	336.8	2,388.5	

**Table A2.8: GSP by Industry (Top 10)**

GSP by Industry (Top 10)													
Industries	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total	
Food manufacturing	Millions of Fixed (2022) Dollars	152.1	201.3	251.7	258.7	265.5	364.6	396.0	427.0	433.9	440.9	3,191.7	
Real estate	Millions of Fixed (2022) Dollars	117.2	155.6	202.6	216.3	227.9	299.5	325.8	356.6	363.4	368.5	2,633.3	
Utilities	Millions of Fixed (2022) Dollars	120.3	152.0	184.3	186.4	188.8	252.7	270.9	290.6	293.9	297.0	2,236.9	
Monetary authorities - central bank; Credit intermediation and related activities	Millions of Fixed (2022) Dollars	96.2	124.2	153.1	157.2	161.5	219.9	238.8	258.7	264.1	269.8	1,943.6	
Management of companies and enterprises	Millions of Fixed (2022) Dollars	94.7	120.7	147.2	149.3	151.4	204.3	219.5	235.5	238.5	241.5	1,802.8	
Agriculture	Millions of Fixed (2022) Dollars	79.4	104.7	130.5	134.0	137.5	188.7	205.2	221.5	225.5	229.5	1,656.5	
Rail transportation	Millions of Fixed (2022) Dollars	91.7	114.5	136.6	135.7	134.7	177.5	186.5	196.7	195.8	195.1	1,564.8	
Data processing, hosting, and related services; Other information services	Millions of Fixed (2022) Dollars	71.1	94.0	118.2	122.3	126.4	174.8	191.1	209.0	215.1	221.4	1,543.4	
Wholesale trade	Millions of Fixed (2022) Dollars	58.4	85.2	112.9	119.8	125.9	171.4	186.8	203.5	206.9	210.7	1,481.5	
Construction	Millions of Fixed (2022) Dollars	31.8	64.7	103.7	120.6	127.8	169.8	190.8	205.7	202.3	192.1	1,409.4	

**Table A2.9: Investment Activity by Industry (Top 10)**

Investment Activity by Industry (Top 10)												
Industries	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Construction	Millions of Fixed (2022) Dollars	62.9	142.1	234.7	274.6	288.8	380.2	425.6	456.8	445.6	417.6	3,128.9
Real estate	Millions of Fixed (2022) Dollars	9.3	26.2	47.8	57.2	60.4	81.7	91.9	98.9	95.5	87.8	656.6
Computer and electronic product manufacturing	Millions of Fixed (2022) Dollars	12.6	24.3	36.2	44.7	51.3	64.6	76.6	86.6	94.1	100.3	591.3
Professional, scientific, and technical services	Millions of Fixed (2022) Dollars	6.5	15.6	26.6	35.5	43.1	55.8	67.9	79.9	90.0	99.2	520.1
Motor vehicles, bodies and trailers, and parts manufacturing	Millions of Fixed (2022) Dollars	10.4	19.7	28.5	34.2	38.1	46.6	53.8	60.8	66.0	70.2	428.3
Support activities for mining	Millions of Fixed (2022) Dollars	12.3	21.0	28.7	31.9	33.1	40.7	44.8	47.3	47.0	45.7	352.3
Machinery manufacturing	Millions of Fixed (2022) Dollars	8.2	15.2	21.6	25.3	27.6	32.9	37.0	41.8	45.4	48.3	303.3
Wholesale trade	Millions of Fixed (2022) Dollars	3.2	6.2	9.4	11.8	13.7	17.3	20.6	23.7	26.1	28.3	160.3
Oil and gas extraction	Millions of Fixed (2022) Dollars	5.7	9.4	12.4	13.2	13.3	15.7	16.7	17.6	17.6	17.1	138.7
Retail trade	Millions of Fixed (2022) Dollars	2.9	5.7	8.7	10.6	12.0	15.0	17.6	19.9	21.4	22.6	136.5

**Table A2.10: Output by Region**

Output by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Panhandle	Millions of Fixed (2022) Dollars	108.8	149.0	190.3	197.5	202.9	274.9	298.1	321.5	326.0	329.7	2,398.7
Sandhills	Millions of Fixed (2022) Dollars	30.9	43.1	55.8	59.0	61.8	83.1	90.6	98.2	100.3	102.0	724.7
Northeast	Millions of Fixed (2022) Dollars	515.5	698.1	885.0	919.5	946.6	1,277.5	1,384.3	1,493.7	1,518.0	1,539.7	11,177.9
Omaha Consortium	Millions of Fixed (2022) Dollars	1,263.9	1,754.4	2,263.2	2,355.3	2,429.0	3,286.7	3,550.9	3,840.0	3,883.7	3,926.4	28,553.4
Lincoln MSA	Millions of Fixed (2022) Dollars	218.1	323.2	441.1	466.3	486.2	684.1	752.0	822.8	835.0	843.3	5,872.0
Southeast	Millions of Fixed (2022) Dollars	286.3	381.8	480.3	495.9	508.5	689.6	746.6	805.6	818.7	830.7	6,044.0
Grand Island MSA	Millions of Fixed (2022) Dollars	128.8	178.2	231.5	242.8	251.7	344.6	376.3	409.0	416.6	422.7	3,002.3
Central	Millions of Fixed (2022) Dollars	144.7	203.0	265.4	279.8	291.7	399.0	436.4	474.8	484.5	492.4	3,471.5
Mid Plains	Millions of Fixed (2022) Dollars	151.3	208.5	267.0	279.1	288.0	387.3	420.9	454.7	462.6	468.8	3,388.2

**Table A2.11: GSP by Region**

GSP by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Panhandle	Millions of Fixed (2022) Dollars	51.0	70.7	91.2	95.2	98.2	133.5	145.3	157.4	160.0	162.0	1,164.5
Sandhills	Millions of Fixed (2022) Dollars	15.2	21.6	28.2	30.1	31.7	42.7	46.8	50.9	52.1	53.1	372.4
Northeast	Millions of Fixed (2022) Dollars	181.0	252.2	326.1	342.7	355.7	482.3	526.3	570.5	581.0	589.7	4,207.5
Omaha Consortium	Millions of Fixed (2022) Dollars	677.1	943.6	1,222.5	1,276.1	1,320.2	1,791.4	1,941.6	2,106.8	2,135.4	2,162.6	15,577.1
Lincoln MSA	Millions of Fixed (2022) Dollars	101.5	155.4	216.8	231.0	242.3	344.2	380.2	418.1	425.0	429.5	2,944.1
Southeast	Millions of Fixed (2022) Dollars	106.7	144.9	184.8	192.5	198.7	270.5	294.6	318.9	324.6	329.5	2,365.7
Grand Island MSA	Millions of Fixed (2022) Dollars	46.7	67.1	89.8	95.6	100.2	138.3	152.3	166.6	170.0	172.5	1,199.0
Central	Millions of Fixed (2022) Dollars	64.1	91.9	122.2	130.0	136.5	188.3	207.4	226.9	232.2	236.3	1,635.7
Mid Plains	Millions of Fixed (2022) Dollars	61.0	86.3	112.4	118.8	123.4	166.2	181.7	197.2	201.1	204.1	1,452.3

**Table A2.12: Investment Activity by Region**

Investment Activity by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Panhandle	Millions of Fixed (2022) Dollars	9.1	18.3	28.1	33.5	36.7	46.8	53.8	59.6	62.2	63.5	411.6
Sandhills	Millions of Fixed (2022) Dollars	0.3	1.3	2.8	3.8	4.6	6.2	7.4	8.3	8.7	8.8	52.2
Northeast	Millions of Fixed (2022) Dollars	14.8	32.7	53.3	64.2	70.0	90.6	103.6	113.8	116.5	115.9	775.3
Omaha Consortium	Millions of Fixed (2022) Dollars	91.1	181.8	276.3	321.3	342.3	433.1	487.0	530.2	538.6	533.6	3,735.2
Lincoln MSA	Millions of Fixed (2022) Dollars	6.7	22.1	43.1	55.0	62.4	86.8	102.8	116.1	120.6	121.1	736.7
Southeast	Millions of Fixed (2022) Dollars	3.5	9.5	17.5	22.3	25.2	34.3	40.3	45.2	47.0	47.3	292.2
Grand Island MSA	Millions of Fixed (2022) Dollars	3.7	8.7	15.1	18.7	20.9	27.7	32.2	35.9	37.1	37.1	237.1
Central	Millions of Fixed (2022) Dollars	4.2	11.5	21.0	26.9	30.7	41.5	48.8	54.9	57.3	57.9	354.7
Mid Plains	Millions of Fixed (2022) Dollars	16.6	32.2	47.9	56.6	61.7	77.0	87.7	96.6	100.9	102.9	680.1

**Table A2.13 Personal Income Increase by Income Group**

Personal Income Increase by Income Group												
Category	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Income Group <50k	Millions of Fixed (2022) Dollars	53.8	81.6	112.2	123.3	132.3	180.5	202.5	224.3	233.5	240.5	1,584.5
Income Group 50k-200k	Millions of Fixed (2022) Dollars	158.3	240.2	330.0	362.7	389.4	530.9	595.8	659.9	687.1	707.5	4,661.8
Income Group >200k	Millions of Fixed (2022) Dollars	444.3	674.1	926.3	1,018.1	1,092.9	1,490.3	1,672.4	1,852.3	1,928.5	1,985.8	13,085.1

**Table A2.14 Personal Income Per Capita by Region**

Personal Income Per Capita by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Panhandle	Fixed (2022) Dollars	189.5	258.7	314.1	300.8	284.7	376.7	370.2	365.7	323.8	288.6	3,072.8
Sandhills	Fixed (2022) Dollars	164.7	241.3	305.8	313.6	315.2	399.4	405.6	412.6	390.3	372.8	3,321.3
Northeast	Fixed (2022) Dollars	274.0	359.2	427.0	394.9	361.0	488.9	469.2	453.5	385.7	328.4	3,941.7
Omaha Consortium	Fixed (2022) Dollars	428.3	572.7	701.5	684.3	663.9	884.4	896.3	914.1	854.1	803.3	7,403.0
Lincoln MSA	Fixed (2022) Dollars	179.6	266.9	346.7	357.1	360.6	469.5	486.8	502.2	478.5	455.7	3,903.7
Southeast	Fixed (2022) Dollars	225.3	310.6	381.8	365.6	346.4	467.5	459.7	455.1	402.8	359.1	3,773.9
Grand Island MSA	Fixed (2022) Dollars	219.5	294.5	363.2	350.8	332.3	441.0	432.7	423.7	368.2	317.9	3,543.9
Central	Fixed (2022) Dollars	191.4	276.2	350.8	352.5	348.6	459.0	466.2	473.6	440.7	411.4	3,770.3
Mid Plains	Fixed (2022) Dollars	242.4	319.4	379.6	357.2	331.0	433.5	419.3	408.0	353.5	307.3	3,551.2

**Table A2.15 Percentage of Total Individual Income Taxes Relief by Region**

Percentage of Total Individual Income Taxes Relief by Region												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percentage	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
Sandhills	Percentage	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Northeast	Percentage	11.4%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.4%	11.3%
Omaha Consortium	Percentage	51.6%	51.6%	51.6%	51.6%	51.5%	51.4%	51.3%	51.3%	51.2%	51.2%	51.4%
Lincoln MSA	Percentage	15.2%	15.3%	15.4%	15.4%	15.5%	15.5%	15.6%	15.6%	15.6%	15.6%	15.5%
Southeast	Percentage	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Grand Island MSA	Percentage	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Central	Percentage	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.6%	6.6%	6.6%	6.5%
Mid Plains	Percentage	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%

**Table A2.16 Local Option Sales Taxes Revenue by Region**

Local Option Sales Taxes Revenue by Region												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Total
Panhandle	Millions of Fixed (2022) Dollars	6.3	12.7	12.8	13.0	13.1	13.3	13.5	13.6	13.8	14.0	126.0
Sandhills	Millions of Fixed (2022) Dollars	2.2	4.5	4.5	4.6	4.7	4.7	4.8	4.9	5.0	5.1	45.0
Northeast	Millions of Fixed (2022) Dollars	17.8	36.0	36.3	36.7	37.0	37.6	38.2	38.8	39.4	40.0	357.9
Omaha Consortium	Millions of Fixed (2022) Dollars	71.0	144.2	145.7	147.0	148.3	150.5	152.9	155.1	157.1	158.9	1,430.6
Lincoln MSA	Millions of Fixed (2022) Dollars	25.1	51.2	51.9	52.4	52.9	53.8	54.8	55.8	56.7	57.5	512.1
Southeast	Millions of Fixed (2022) Dollars	8.3	16.8	17.0	17.1	17.3	17.5	17.8	18.0	18.3	18.5	166.5
Grand Island MSA	Millions of Fixed (2022) Dollars	6.1	12.2	12.3	12.4	12.5	12.7	12.9	13.1	13.3	13.4	121.0
Central	Millions of Fixed (2022) Dollars	11.1	22.5	22.7	23.0	23.2	23.6	24.0	24.4	24.8	25.2	224.4
Mid Plains	Millions of Fixed (2022) Dollars	7.8	15.8	15.9	16.1	16.2	16.5	16.8	17.0	17.3	17.6	156.9

**Table A2.17 Tax Burden Change for Income Group <50K**

Tax Burden Change for Income Group <50K												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	-5.4%	-10.4%	-10.7%	-10.8%	-11.1%	-11.6%	-11.6%	-12.0%	-12.0%	-12.2%	-10.8%
Sandhills	Percent	-6.1%	-11.9%	-12.1%	-12.2%	-12.6%	-12.9%	-12.9%	-13.3%	-13.3%	-13.4%	-12.1%
Northeast	Percent	-7.7%	-14.9%	-15.1%	-15.2%	-15.5%	-15.9%	-15.9%	-16.2%	-16.3%	-16.4%	-14.9%
Omaha Consortium	Percent	-10.4%	-20.3%	-20.7%	-20.9%	-21.2%	-21.6%	-21.8%	-21.9%	-22.1%	-22.2%	-20.3%
Lincoln MSA	Percent	-9.5%	-18.7%	-18.9%	-19.2%	-19.5%	-19.8%	-19.9%	-20.0%	-20.1%	-20.1%	-18.6%
Southeast	Percent	-7.0%	-13.6%	-13.9%	-14.0%	-14.3%	-14.7%	-14.7%	-15.0%	-15.0%	-15.1%	-13.7%
Grand Island MSA	Percent	-7.4%	-14.5%	-14.8%	-15.0%	-15.3%	-15.7%	-15.8%	-16.1%	-16.2%	-16.3%	-14.7%
Central	Percent	-7.4%	-14.5%	-14.7%	-14.8%	-15.1%	-15.5%	-15.5%	-15.8%	-15.8%	-15.9%	-14.5%
Mid Plains	Percent	-5.8%	-11.0%	-11.2%	-11.3%	-11.6%	-11.9%	-11.9%	-12.3%	-12.3%	-12.3%	-11.2%

**Table A2.18 Tax Burden Change for Income Group 50K-200K**

Tax Burden Change for Income Group 50K-200K												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	1.4%	3.2%	3.2%	3.1%	2.9%	2.6%	2.6%	2.4%	2.3%	2.2%	2.6%
Sandhills	Percent	1.4%	3.2%	3.1%	3.0%	2.7%	2.4%	2.5%	2.3%	2.2%	2.1%	2.5%
Northeast	Percent	0.8%	2.0%	2.0%	1.9%	1.6%	1.4%	1.4%	1.2%	1.1%	1.0%	1.4%
Omaha Consortium	Percent	0.0%	0.2%	0.2%	0.1%	-0.1%	-0.4%	-0.3%	-0.5%	-0.6%	-0.7%	-0.2%
Lincoln MSA	Percent	0.0%	0.5%	0.4%	0.3%	0.1%	-0.2%	-0.1%	-0.2%	-0.3%	-0.4%	0.0%
Southeast	Percent	0.7%	1.8%	1.7%	1.7%	1.4%	1.1%	1.2%	1.0%	0.9%	0.7%	1.2%
Grand Island MSA	Percent	0.9%	2.1%	2.0%	2.0%	1.7%	1.4%	1.5%	1.3%	1.2%	1.1%	1.5%
Central	Percent	0.9%	2.2%	2.2%	2.2%	1.9%	1.7%	1.7%	1.6%	1.5%	1.4%	1.7%
Mid Plains	Percent	1.4%	3.1%	3.1%	3.0%	2.8%	2.5%	2.5%	2.4%	2.3%	2.2%	2.5%

**Table A2.19 Tax Burden Change for Income Group 200K-500K**

Tax Burden Change for Income Group 200K-500K												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	-1.3%	-2.2%	-2.2%	-2.3%	-2.5%	-2.7%	-2.6%	-2.8%	-2.9%	-3.0%	-2.4%
Sandhills	Percent	-1.3%	-2.3%	-2.3%	-2.3%	-2.6%	-2.8%	-2.8%	-2.9%	-2.9%	-3.1%	-2.5%
Northeast	Percent	-1.9%	-3.4%	-3.4%	-3.4%	-3.6%	-3.9%	-3.8%	-3.9%	-4.0%	-4.1%	-3.5%
Omaha Consortium	Percent	-2.7%	-5.1%	-5.1%	-5.2%	-5.3%	-5.6%	-5.5%	-5.6%	-5.6%	-5.8%	-5.1%
Lincoln MSA	Percent	-2.6%	-4.9%	-4.9%	-5.0%	-5.2%	-5.4%	-5.2%	-5.3%	-5.4%	-5.5%	-4.9%
Southeast	Percent	-2.0%	-3.6%	-3.6%	-3.6%	-3.9%	-4.1%	-4.0%	-4.2%	-4.2%	-4.4%	-3.8%
Grand Island MSA	Percent	-1.9%	-3.3%	-3.3%	-3.4%	-3.6%	-3.8%	-3.7%	-3.8%	-3.9%	-4.0%	-3.5%
Central	Percent	-1.8%	-3.1%	-3.1%	-3.2%	-3.4%	-3.6%	-3.5%	-3.6%	-3.7%	-3.8%	-3.3%
Mid Plains	Percent	-1.4%	-2.3%	-2.3%	-2.3%	-2.5%	-2.8%	-2.7%	-2.8%	-2.9%	-3.0%	-2.5%

**Table A2.20 Tax Burden Change for Income Group 500K-1M**

Tax Burden Change for Income Group 500K-1M												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	1.7%	3.8%	3.8%	3.7%	3.5%	3.2%	3.2%	3.0%	2.9%	2.7%	3.1%
Sandhills	Percent	1.7%	3.8%	3.7%	3.6%	3.3%	3.0%	3.1%	2.9%	2.8%	2.7%	3.1%
Northeast	Percent	1.1%	2.6%	2.6%	2.5%	2.3%	2.0%	2.0%	1.8%	1.7%	1.6%	2.0%
Omaha Consortium	Percent	0.3%	0.9%	0.8%	0.7%	0.5%	0.2%	0.3%	0.1%	0.0%	-0.2%	0.3%
Lincoln MSA	Percent	0.3%	1.1%	1.0%	0.9%	0.7%	0.4%	0.5%	0.4%	0.3%	0.2%	0.6%
Southeast	Percent	1.0%	2.4%	2.3%	2.3%	2.0%	1.7%	1.8%	1.6%	1.5%	1.3%	1.8%
Grand Island MSA	Percent	1.2%	2.7%	2.6%	2.6%	2.3%	2.0%	2.1%	1.9%	1.8%	1.6%	2.1%
Central	Percent	1.2%	2.9%	2.8%	2.8%	2.5%	2.3%	2.3%	2.2%	2.1%	1.9%	2.3%
Mid Plains	Percent	1.7%	3.8%	3.7%	3.6%	3.4%	3.1%	3.1%	3.0%	2.9%	2.7%	3.1%

**Table A2.21 Tax Burden Change for Income Group >1M**

Tax Burden Change for Income Group >1M												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	21.6%	43.3%	42.9%	42.5%	42.0%	41.3%	41.0%	40.5%	40.2%	39.7%	39.5%
Sandhills	Percent	21.7%	43.4%	42.9%	42.6%	42.0%	41.3%	41.1%	40.6%	40.2%	39.8%	39.6%
Northeast	Percent	21.3%	42.6%	42.2%	41.8%	41.3%	40.6%	40.3%	39.8%	39.5%	39.1%	38.8%
Omaha Consortium	Percent	20.8%	41.6%	41.1%	40.7%	40.2%	39.5%	39.2%	38.7%	38.4%	38.0%	37.8%
Lincoln MSA	Percent	20.8%	41.7%	41.2%	40.9%	40.4%	39.7%	39.4%	39.0%	38.6%	38.2%	38.0%
Southeast	Percent	21.2%	42.4%	42.0%	41.6%	41.1%	40.4%	40.1%	39.6%	39.3%	38.9%	38.7%
Grand Island MSA	Percent	21.3%	42.6%	42.2%	41.8%	41.3%	40.6%	40.3%	39.9%	39.5%	39.1%	38.9%
Central	Percent	21.4%	42.8%	42.4%	42.1%	41.5%	40.8%	40.6%	40.1%	39.8%	39.3%	39.1%
Mid Plains	Percent	21.6%	43.3%	42.8%	42.5%	42.0%	41.2%	41.0%	40.5%	40.1%	39.7%	39.5%

# Appendix III: Scenario C Methodology and Results

## Methodology

Scenario C includes all the policy changes from Scenario A with the exception of following adjustments: (1) removes unprepared food & food ingredients exemption from both state level sales tax and local option sales tax; (2) halves workforce incentive programs, which means attract a net of 3,000 workers for each round of each program; (3) uses alternate to income tax rates for top tax brackets: 4.6% for individual income tax bracket \$50,001+ and corporate income tax bracket \$100,001+; and (4) retains Earned Income Tax Credit (EITC) for individual income tax.

## Results

Tables A3.1-A3.21 are parallel to Tables 2-22 in the main report body for Scenario A. Explanations for each table can be found in the corresponding sections in the main body Results section.

**Table A3.1: Economic Impact Summary**

Economic Impacts		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average	Total	Baseline Growth Rate	Simulation Growth Rate
<b>Results Variable</b>	<b>Unit</b>														
Total Employment	Jobs	8,182	12,697	17,367	18,320	18,926	25,905	28,121	30,398	30,483	30,415	22,081		0.23%	0.41%
Population	Individuals	1,169	3,414	6,532	9,124	11,340	15,357	19,090	22,752	25,627	27,924	14,233		0.72%	0.86%
Gross State Product	Millions of Fixed (2022) Dollars	1,346.5	1,883.2	2,447.6	2,566.2	2,661.2	3,611.4	3,929.4	4,266.7	4,334.9	4,393.1		31,440.3	1.65%	1.83%
Output	Millions of Fixed (2022) Dollars	2,920.6	4,024.3	5,170.7	5,387.4	5,558.2	7,518.1	8,145.6	8,809.8	8,934.5	9,045.5		65,514.8	1.44%	1.64%
Investment Activity	Millions of Fixed (2022) Dollars	167.4	343.6	533.1	629.5	679.3	866.2	982.6	1,077.3	1,103.3	1,101.0		7,483.2	2.43%	2.78%
Personal Income	Millions of Fixed (2022) Dollars	684.0	1,031.8	1,409.7	1,548.2	1,660.7	2,248.9	2,518.8	2,785.4	2,899.0	2,984.7		19,771.2	2.18%	2.35%

**Table A3.2: Fiscal Impact Summary**

Fiscal Impacts		FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Total
<b>Results Variable</b>	<b>Unit</b>											
Funds Available for Strategic Property Tax Relief	Millions of Fixed (2022) Dollars	119.9	246.3	259.2	267.7	266.5	285.5	308.9	320.2	326.8	328.9	2,729.9
Local Option Sales Taxes	Millions of Fixed (2022) Dollars	155.7	316.2	319.4	322.4	325.5	330.5	336.0	341.0	345.8	350.3	3,142.8
Inheritance Tax Elimination	Millions of Fixed (2022) Dollars	-44.6	-87.3	-85.6	-84.0	-82.4	-80.8	-79.3	-77.7	-76.3	-74.8	-772.8
Total State Government Revenues	Millions of Fixed (2022) Dollars	8.8	17.5	25.4	29.3	23.4	35.8	52.2	56.9	57.3	53.5	360.0
General Sales and Gross Receipts Taxes	Millions of Fixed (2022) Dollars	664.0	1,351.0	1,371.3	1,388.2	1,403.5	1,431.0	1,462.0	1,487.9	1,511.7	1,532.4	13,603.1
Individual Income Taxes	Millions of Fixed (2022) Dollars	-612.1	-1,242.8	-1,253.2	-1,269.2	-1,291.6	-1,310.6	-1,329.9	-1,353.6	-1,378.6	-1,403.7	-12,445.3
Corporations Income Taxes	Millions of Fixed (2022) Dollars	-19.5	-38.6	-37.0	-36.3	-36.7	-35.4	-33.8	-33.4	-33.6	-34.4	-338.8
Others (net of cost of incentive programs)	Millions of Fixed (2022) Dollars	-23.7	-52.1	-55.7	-53.4	-51.8	-49.1	-46.2	-44.0	-42.2	-40.8	-459.0

**Table A3.3: Employment by Region**

Employment by Region		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average
<b>Region</b>	<b>Units</b>											
Panhandle	Jobs	357	530	706	741	764	1,038	1,130	1,219	1,230	1,233	895
Sandhills	Jobs	92	142	194	209	221	295	322	348	352	354	253
Northeast	Jobs	1,398	2,048	2,705	2,842	2,927	3,939	4,270	4,592	4,623	4,626	3,397
Omaha Consortium	Jobs	4,057	6,253	8,490	8,912	9,169	12,426	13,395	14,433	14,401	14,324	10,586
Lincoln MSA	Jobs	441	950	1,519	1,637	1,719	2,573	2,854	3,146	3,153	3,135	2,113
Southeast	Jobs	526	778	1,039	1,095	1,133	1,545	1,686	1,824	1,845	1,855	1,333
Grand Island MSA	Jobs	414	614	828	870	898	1,233	1,343	1,451	1,458	1,456	1,057
Central	Jobs	407	649	911	981	1,031	1,426	1,568	1,709	1,731	1,738	1,215
Mid Plains	Jobs	488	732	976	1,031	1,065	1,429	1,554	1,675	1,690	1,694	1,233

**Table A3.4: Employment by Industry (Top 10)**

Employment by Industry (Top 10)												
Industries	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average
Food manufacturing	Jobs	1,566	2,026	2,477	2,493	2,505	3,372	3,593	3,820	3,826	3,831	2,951
Construction	Jobs	775	1,469	2,222	2,505	2,584	3,317	3,641	3,861	3,744	3,510	2,763
Retail trade	Jobs	136	539	957	1,055	1,141	1,703	1,870	2,085	2,104	2,131	1,372
Food services and drinking places	Jobs	704	871	1,063	1,124	1,182	1,471	1,588	1,724	1,769	1,809	1,330
Monetary authorities - central bank; Credit intermediation and related activities	Jobs	687	861	1,033	1,033	1,033	1,370	1,452	1,535	1,530	1,525	1,206
Agriculture	Jobs	637	820	1,000	1,006	1,010	1,357	1,447	1,537	1,540	1,542	1,190
Management of companies and enterprises	Jobs	603	757	911	912	912	1,218	1,295	1,372	1,372	1,372	1,073
Professional, scientific, and technical services	Jobs	397	579	769	821	861	1,146	1,253	1,362	1,391	1,415	999
Administrative and support services	Jobs	346	525	709	737	758	1,054	1,138	1,228	1,228	1,228	895
Real estate	Jobs	409	533	679	717	746	959	1,032	1,116	1,127	1,133	845

**Table A3.5: Population by Region**

Population by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average
Panhandle	Individuals	40	132	261	366	455	619	773	923	1,040	1,132	574
Sandhills	Individuals	0	15	42	67	90	129	166	202	230	253	120
Northeast	Individuals	292	737	1,302	1,769	2,164	2,842	3,474	4,086	4,575	4,969	2,621
Omaha Consortium	Individuals	689	1,793	3,256	4,467	5,500	7,310	8,970	10,598	11,868	12,893	6,734
Lincoln MSA	Individuals	-108	-41	165	330	471	836	1,179	1,527	1,789	1,985	814
Southeast	Individuals	71	213	409	575	719	980	1,229	1,472	1,669	1,830	917
Grand Island MSA	Individuals	76	199	361	496	612	823	1,022	1,215	1,367	1,486	766
Central	Individuals	15	108	266	404	529	761	981	1,200	1,375	1,515	715
Mid Plains	Individuals	95	258	471	649	799	1,056	1,296	1,529	1,714	1,861	973

**Table A3.6: Population by Age**

Population by Age												
Ages	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Average
Ages 0-17	Individuals	306	916	1,785	2,535	3,207	4,394	5,528	6,669	7,619	8,422	4,138
Ages 18-34	Individuals	487	1,428	2,713	3,703	4,472	5,987	7,299	8,499	9,270	9,723	5,358
Ages 35-64	Individuals	315	943	1,837	2,604	3,284	4,497	5,666	6,854	7,864	8,752	4,262
Ages 65+	Individuals	62	127	198	282	376	480	598	730	874	1,027	476

**Table A3.7: Output by Industry (Top 10)**

Output by Industry (Top 10)												
Industries	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Food manufacturing	Millions of Fixed (2022) Dollars	715.9	944.0	1,174.9	1,202.4	1,228.2	1,677.4	1,811.9	1,953.9	1,986.6	2,020.6	14,715.8
Agriculture	Millions of Fixed (2022) Dollars	221.0	290.0	359.8	367.8	375.3	512.0	553.2	596.5	606.5	616.9	4,499.1
Real estate	Millions of Fixed (2022) Dollars	177.6	234.2	302.2	321.7	337.8	438.8	475.0	517.4	526.0	532.5	3,863.2
Utilities	Millions of Fixed (2022) Dollars	198.4	250.6	303.8	307.1	310.8	415.3	444.5	475.6	480.1	484.6	3,670.9
Rail transportation	Millions of Fixed (2022) Dollars	194.8	244.6	293.2	292.8	292.1	386.7	408.1	429.5	427.2	425.2	3,394.3
Chemical manufacturing	Millions of Fixed (2022) Dollars	160.5	203.5	246.8	249.8	252.9	339.7	365.2	392.0	397.5	403.2	3,011.1
Monetary authorities - central bank; Credit intermediation and related activities	Millions of Fixed (2022) Dollars	142.9	184.0	226.2	231.7	237.3	322.0	348.5	376.6	383.8	391.6	2,844.7
Management of companies and enterprises	Millions of Fixed (2022) Dollars	144.0	183.5	223.7	226.9	229.9	310.0	332.6	356.1	360.0	364.1	2,730.8
Construction	Millions of Fixed (2022) Dollars	69.2	134.6	208.2	238.3	249.1	323.8	358.7	383.8	375.9	356.0	2,697.7
Wholesale trade	Millions of Fixed (2022) Dollars	100.3	144.2	189.4	199.9	209.3	281.9	305.5	331.7	336.8	342.6	2,441.6

**Table A3.8: GSP by Industry (Top 10)**

GSP by Industry (Top 10)												
Industries	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Food manufacturing	Millions of Fixed (2022) Dollars	152.4	201.7	252.1	259.1	265.9	365.0	396.4	427.5	434.4	441.4	3,195.9
Real estate	Millions of Fixed (2022) Dollars	124.7	164.5	212.3	226.2	237.7	309.3	335.4	366.1	372.9	378.0	2,727.1
Utilities	Millions of Fixed (2022) Dollars	121.0	152.8	185.2	187.3	189.7	253.6	271.8	291.5	294.8	297.9	2,245.6
Monetary authorities - central bank; Credit intermediation and related activities	Millions of Fixed (2022) Dollars	96.6	124.6	153.5	157.6	161.8	220.2	239.1	258.9	264.4	270.0	1,946.6
Management of companies and enterprises	Millions of Fixed (2022) Dollars	94.8	120.8	147.2	149.3	151.4	204.3	219.5	235.5	238.5	241.5	1,803.0
Agriculture	Millions of Fixed (2022) Dollars	79.4	104.7	130.5	134.0	137.5	188.7	205.2	221.5	225.5	229.5	1,656.5
Rail transportation	Millions of Fixed (2022) Dollars	91.7	114.6	136.5	135.6	134.6	177.4	186.4	196.6	195.8	195.0	1,564.2
Data processing, hosting, and related services; Other information services	Millions of Fixed (2022) Dollars	71.5	94.5	118.8	122.9	127.0	175.4	191.7	209.7	215.8	222.1	1,549.4
Wholesale trade	Millions of Fixed (2022) Dollars	61.1	88.2	116.1	123.0	129.2	174.8	190.2	206.9	210.5	214.3	1,514.3
Construction	Millions of Fixed (2022) Dollars	36.7	71.6	111.3	128.0	134.4	175.6	195.7	209.9	205.8	195.2	1,464.2

**Table A3.9: Investment Activity by Industry (Top 10)**

Investment Activity by Industry (Top 10)												
Industries	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Construction	Millions of Fixed (2022) Dollars	74.8	159.2	253.2	292.2	304.6	393.7	436.7	466.1	453.2	423.9	3,257.5
Real estate	Millions of Fixed (2022) Dollars	12.7	31.0	53.0	62.1	64.8	85.4	94.9	101.4	97.5	89.5	692.3
Computer and electronic product manufacturing	Millions of Fixed (2022) Dollars	12.8	24.7	36.7	45.3	51.9	65.2	77.3	87.3	94.9	101.1	597.3
Professional, scientific, and technical services	Millions of Fixed (2022) Dollars	7.1	16.5	27.6	36.5	44.2	56.9	68.9	80.9	91.0	100.2	529.8
Motor vehicles, bodies and trailers, and parts manufacturing	Millions of Fixed (2022) Dollars	10.6	20.0	28.9	34.6	38.6	47.1	54.4	61.3	66.5	70.7	432.8
Support activities for mining	Millions of Fixed (2022) Dollars	12.5	21.3	29.0	32.2	33.4	41.0	45.1	47.5	47.2	45.9	355.1
Machinery manufacturing	Millions of Fixed (2022) Dollars	8.3	15.4	21.9	25.6	27.9	33.2	37.4	42.2	45.8	48.7	306.4
Wholesale trade	Millions of Fixed (2022) Dollars	3.3	6.4	9.6	12.0	13.9	17.5	20.8	23.9	26.3	28.5	162.1
Oil and gas extraction	Millions of Fixed (2022) Dollars	5.8	9.5	12.5	13.4	13.4	15.8	16.8	17.8	17.7	17.2	139.8
Retail trade	Millions of Fixed (2022) Dollars	3.0	5.9	8.9	10.9	12.2	15.3	17.8	20.1	21.6	22.8	138.5

**Table A3.10: Output by Region**

Output by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Panhandle	Millions of Fixed (2022) Dollars	110.3	150.7	192.2	199.4	204.8	276.8	300.0	323.4	327.9	331.5	2,417.0
Sandhills	Millions of Fixed (2022) Dollars	31.4	43.7	56.4	59.7	62.4	83.7	91.2	98.8	100.9	102.6	730.8
Northeast	Millions of Fixed (2022) Dollars	521.1	704.9	892.2	926.7	953.7	1,284.5	1,391.1	1,500.4	1,524.6	1,546.3	11,245.5
Omaha Consortium	Millions of Fixed (2022) Dollars	1,303.9	1,799.8	2,311.4	2,403.8	2,477.3	3,334.7	3,598.1	3,887.3	3,931.0	3,974.2	29,021.5
Lincoln MSA	Millions of Fixed (2022) Dollars	231.8	340.1	459.8	485.4	505.5	703.5	771.1	841.9	854.1	862.6	6,055.8
Southeast	Millions of Fixed (2022) Dollars	288.8	384.9	483.6	499.2	511.9	692.9	749.9	808.8	821.9	833.9	6,075.8
Grand Island MSA	Millions of Fixed (2022) Dollars	131.6	181.6	235.1	246.5	255.2	348.1	379.6	412.2	419.7	425.8	3,035.5
Central	Millions of Fixed (2022) Dollars	148.6	207.7	270.5	285.1	296.9	404.2	441.5	479.8	489.5	497.4	3,521.1
Mid Plains	Millions of Fixed (2022) Dollars	153.2	210.8	269.4	281.6	290.5	389.8	423.3	457.1	464.9	471.2	3,411.8

**Table A3.11: GSP by Region**

GSP by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Panhandle	Millions of Fixed (2022) Dollars	51.8	71.8	92.3	96.3	99.3	134.6	146.5	158.5	161.1	163.2	1,175.5
Sandhills	Millions of Fixed (2022) Dollars	15.5	21.9	28.6	30.5	32.1	43.1	47.2	51.2	52.5	53.5	376.0
Northeast	Millions of Fixed (2022) Dollars	184.2	256.0	330.3	346.9	359.9	486.4	530.3	574.4	584.9	593.6	4,246.8
Omaha Consortium	Millions of Fixed (2022) Dollars	700.5	970.2	1,250.9	1,304.7	1,348.8	1,819.9	1,969.7	2,135.1	2,163.8	2,191.3	15,854.7
Lincoln MSA	Millions of Fixed (2022) Dollars	109.6	165.3	227.8	242.3	253.7	355.6	391.5	429.5	436.5	441.1	3,053.0
Southeast	Millions of Fixed (2022) Dollars	108.1	146.6	186.7	194.4	200.6	272.5	296.5	320.8	326.5	331.4	2,384.2
Grand Island MSA	Millions of Fixed (2022) Dollars	48.3	69.1	91.9	97.7	102.3	140.3	154.3	168.5	171.9	174.3	1,218.5
Central	Millions of Fixed (2022) Dollars	66.3	94.6	125.2	133.1	139.6	191.4	210.4	229.9	235.1	239.3	1,665.1
Mid Plains	Millions of Fixed (2022) Dollars	62.1	87.7	113.9	120.3	124.9	167.7	183.2	198.7	202.6	205.5	1,466.4

**Table A3.12: Investment Activity by Region**

Investment Activity by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Panhandle	Millions of Fixed (2022) Dollars	9.6	19.0	28.8	34.2	37.4	47.4	54.3	60.0	62.6	63.8	417.1
Sandhills	Millions of Fixed (2022) Dollars	0.4	1.6	3.1	4.1	4.8	6.5	7.6	8.5	8.8	8.9	54.2
Northeast	Millions of Fixed (2022) Dollars	16.4	35.2	55.9	66.8	72.3	92.6	105.3	115.3	117.7	116.9	794.4
Omaha Consortium	Millions of Fixed (2022) Dollars	100.2	195.0	290.7	335.3	355.1	444.4	496.8	538.8	546.1	540.4	3,842.7
Lincoln MSA	Millions of Fixed (2022) Dollars	9.7	26.5	48.0	59.9	66.9	90.9	106.4	119.3	123.4	123.7	774.8
Southeast	Millions of Fixed (2022) Dollars	4.2	10.6	18.7	23.4	26.3	35.3	41.1	45.9	47.6	47.8	301.1
Grand Island MSA	Millions of Fixed (2022) Dollars	4.2	9.6	16.0	19.6	21.7	28.5	32.8	36.4	37.5	37.5	243.8
Central	Millions of Fixed (2022) Dollars	5.3	13.1	22.8	28.6	32.3	42.9	50.0	56.0	58.2	58.8	368.2
Mid Plains	Millions of Fixed (2022) Dollars	17.2	33.1	48.9	57.6	62.5	77.7	88.3	97.2	101.3	103.2	687.1

**Table A3.13: Personal Income Increase by Income Group**

Personal Income Increase by Income Group												
Category	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Income Group <50k	Millions of Fixed (2022) Dollars	56.1	84.6	115.5	126.9	136.1	184.3	206.5	228.3	237.6	244.6	1,620.6
Income Group 50k-200k	Millions of Fixed (2022) Dollars	164.9	248.8	340.0	373.4	400.5	542.3	607.4	671.7	699.1	719.8	4,767.9
Income Group >200k	Millions of Fixed (2022) Dollars	463.0	698.4	954.2	1,047.9	1,124.1	1,522.2	1,704.9	1,885.4	1,962.3	2,020.3	13,382.8

**Table A3.14: Personal Income Per Capita by Region**

Personal Income Per Capita by Region												
Region	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Panhandle	Fixed (2022) Dollars	190.8	258.1	311.5	296.3	278.6	369.1	361.3	355.9	313.1	277.3	3,012.1
Sandhills	Fixed (2022) Dollars	165.8	240.4	302.7	308.2	307.9	390.4	395.2	401.2	378.1	359.9	3,249.6
Northeast	Fixed (2022) Dollars	276.9	359.6	424.9	390.1	353.9	479.7	458.3	441.4	372.5	314.4	3,871.8
Omaha Consortium	Fixed (2022) Dollars	437.0	577.6	702.4	681.0	656.8	873.9	882.8	898.4	836.3	783.9	7,330.0
Lincoln MSA	Fixed (2022) Dollars	184.7	270.4	347.7	355.1	355.8	462.2	477.3	490.9	465.6	441.7	3,851.5
Southeast	Fixed (2022) Dollars	228.4	311.5	380.3	361.6	340.3	459.5	449.8	444.1	390.6	346.1	3,712.2
Grand Island MSA	Fixed (2022) Dollars	222.9	296.7	363.4	348.6	327.8	434.3	424.0	413.6	356.9	305.9	3,494.0
Central	Fixed (2022) Dollars	194.7	277.1	349.0	347.8	341.4	449.5	454.9	460.8	426.7	396.5	3,698.4
Mid Plains	Fixed (2022) Dollars	243.3	318.2	376.4	351.9	324.0	425.0	409.4	397.3	342.0	295.2	3,482.7

**Table A3.15: Percentage of Total Individual Income Taxes Relief by Region**

Percentage of Total Individual Income Taxes Relief by Region												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percentage	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
Sandhills	Percentage	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Northeast	Percentage	11.3%	11.3%	11.3%	11.2%	11.2%	11.2%	11.3%	11.3%	11.3%	11.3%	11.3%
Omaha Consortium	Percentage	51.6%	51.6%	51.6%	51.5%	51.5%	51.4%	51.3%	51.3%	51.2%	51.2%	51.4%
Lincoln MSA	Percentage	15.3%	15.4%	15.4%	15.5%	15.5%	15.6%	15.6%	15.6%	15.6%	15.6%	15.5%
Southeast	Percentage	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Grand Island MSA	Percentage	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Central	Percentage	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.6%	6.6%	6.5%
Mid Plains	Percentage	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%

**Table A3.16: Local Option Sales Taxes Revenue by Region**

Local Option Sales Taxes Revenue by Region												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Total
Panhandle	Millions of Fixed (2022) Dollars	6.3	12.7	12.9	13.0	13.1	13.3	13.5	13.6	13.8	14.0	126.1
Sandhills	Millions of Fixed (2022) Dollars	2.2	4.5	4.6	4.6	4.7	4.7	4.8	4.9	5.0	5.1	45.0
Northeast	Millions of Fixed (2022) Dollars	17.8	36.0	36.4	36.7	37.1	37.6	38.3	38.9	39.4	40.0	358.1
Omaha Consortium	Millions of Fixed (2022) Dollars	71.1	144.3	145.8	147.1	148.4	150.6	153.0	155.2	157.2	159.0	1,431.7
Lincoln MSA	Millions of Fixed (2022) Dollars	25.1	51.2	51.9	52.4	53.0	53.9	54.9	55.8	56.7	57.5	512.5
Southeast	Millions of Fixed (2022) Dollars	8.3	16.8	17.0	17.1	17.3	17.5	17.8	18.0	18.3	18.5	166.7
Grand Island MSA	Millions of Fixed (2022) Dollars	6.1	12.3	12.3	12.4	12.5	12.7	12.9	13.1	13.3	13.5	121.1
Central	Millions of Fixed (2022) Dollars	11.1	22.5	22.7	23.0	23.2	23.6	24.0	24.4	24.8	25.2	224.5
Mid Plains	Millions of Fixed (2022) Dollars	7.8	15.8	15.9	16.1	16.3	16.5	16.8	17.1	17.3	17.6	157.0

**Table A3.17: Tax Burden Change for Income Group <50K**

Tax Burden Change for Income Group <50K												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	-12.9%	-17.8%	-18.0%	-18.1%	-18.4%	-18.8%	-18.9%	-19.2%	-19.2%	-19.3%	-18.1%
Sandhills	Percent	-13.6%	-19.4%	-19.7%	-19.7%	-20.0%	-20.4%	-20.4%	-20.7%	-20.7%	-20.8%	-19.5%
Northeast	Percent	-15.6%	-22.6%	-22.8%	-23.0%	-23.2%	-23.5%	-23.6%	-23.8%	-23.9%	-24.0%	-22.6%
Omaha Consortium	Percent	-18.8%	-28.7%	-29.0%	-29.2%	-29.5%	-29.9%	-30.0%	-30.1%	-30.3%	-30.4%	-28.6%
Lincoln MSA	Percent	-17.8%	-26.9%	-27.1%	-27.4%	-27.7%	-28.0%	-28.0%	-28.1%	-28.2%	-28.2%	-26.7%
Southeast	Percent	-14.8%	-21.3%	-21.5%	-21.6%	-21.9%	-22.2%	-22.2%	-22.5%	-22.5%	-22.6%	-21.3%
Grand Island MSA	Percent	-15.3%	-22.3%	-22.5%	-22.7%	-23.0%	-23.4%	-23.4%	-23.7%	-23.8%	-23.9%	-22.4%
Central	Percent	-15.3%	-22.3%	-22.4%	-22.5%	-22.8%	-23.2%	-23.2%	-23.4%	-23.4%	-23.5%	-22.2%
Mid Plains	Percent	-13.2%	-18.4%	-18.6%	-18.6%	-18.9%	-19.2%	-19.2%	-19.5%	-19.5%	-19.5%	-18.5%

**Table A3.18: Tax Burden Change for Income Group 50K-200K**

Tax Burden Change for Income Group 50K-200K												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	1.4%	3.3%	3.2%	3.1%	2.9%	2.6%	2.6%	2.5%	2.3%	2.2%	2.6%
Sandhills	Percent	1.4%	3.2%	3.1%	3.1%	2.8%	2.5%	2.5%	2.4%	2.3%	2.1%	2.5%
Northeast	Percent	0.8%	2.1%	2.0%	1.9%	1.7%	1.4%	1.4%	1.3%	1.2%	1.0%	1.5%
Omaha Consortium	Percent	0.0%	0.3%	0.2%	0.1%	-0.1%	-0.4%	-0.3%	-0.5%	-0.5%	-0.7%	-0.2%
Lincoln MSA	Percent	0.0%	0.5%	0.4%	0.3%	0.1%	-0.1%	-0.1%	-0.2%	-0.3%	-0.4%	0.0%
Southeast	Percent	0.7%	1.8%	1.8%	1.7%	1.4%	1.2%	1.2%	1.0%	0.9%	0.8%	1.2%
Grand Island MSA	Percent	0.9%	2.1%	2.0%	2.0%	1.7%	1.5%	1.5%	1.3%	1.2%	1.1%	1.5%
Central	Percent	0.9%	2.3%	2.3%	2.2%	2.0%	1.7%	1.8%	1.6%	1.5%	1.4%	1.8%
Mid Plains	Percent	1.4%	3.2%	3.1%	3.1%	2.8%	2.5%	2.6%	2.4%	2.3%	2.2%	2.6%

**Table A3.19: Tax Burden Change for Income Group 200K-500K**

Tax Burden Change for Income Group 200K-500K												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	-1.3%	-2.2%	-2.2%	-2.2%	-2.4%	-2.7%	-2.6%	-2.7%	-2.8%	-2.9%	-2.4%
Sandhills	Percent	-1.3%	-2.2%	-2.3%	-2.3%	-2.5%	-2.8%	-2.7%	-2.8%	-2.9%	-3.0%	-2.5%
Northeast	Percent	-1.9%	-3.3%	-3.4%	-3.4%	-3.6%	-3.8%	-3.7%	-3.9%	-4.0%	-4.1%	-3.5%
Omaha Consortium	Percent	-2.7%	-5.0%	-5.1%	-5.1%	-5.3%	-5.5%	-5.4%	-5.5%	-5.6%	-5.7%	-5.1%
Lincoln MSA	Percent	-2.6%	-4.8%	-4.9%	-4.9%	-5.1%	-5.3%	-5.2%	-5.3%	-5.3%	-5.4%	-4.9%
Southeast	Percent	-2.0%	-3.6%	-3.6%	-3.6%	-3.8%	-4.1%	-4.0%	-4.1%	-4.2%	-4.3%	-3.7%
Grand Island MSA	Percent	-1.8%	-3.3%	-3.3%	-3.3%	-3.5%	-3.8%	-3.7%	-3.8%	-3.9%	-4.0%	-3.4%
Central	Percent	-1.8%	-3.1%	-3.1%	-3.1%	-3.3%	-3.5%	-3.4%	-3.6%	-3.6%	-3.7%	-3.2%
Mid Plains	Percent	-1.4%	-2.2%	-2.3%	-2.3%	-2.5%	-2.7%	-2.6%	-2.8%	-2.8%	-2.9%	-2.5%

**Table A3.20: Tax Burden Change for Income Group 500K-1M**

Tax Burden Change for Income Group 500K-1M												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	1.7%	3.9%	3.8%	3.7%	3.5%	3.2%	3.2%	3.0%	2.9%	2.8%	3.2%
Sandhills	Percent	1.7%	3.8%	3.7%	3.7%	3.4%	3.1%	3.1%	2.9%	2.9%	2.7%	3.1%
Northeast	Percent	1.1%	2.7%	2.6%	2.5%	2.3%	2.0%	2.0%	1.9%	1.7%	1.6%	2.1%
Omaha Consortium	Percent	0.3%	0.9%	0.8%	0.7%	0.5%	0.2%	0.3%	0.1%	0.0%	-0.1%	0.4%
Lincoln MSA	Percent	0.4%	1.1%	1.0%	0.9%	0.7%	0.5%	0.5%	0.4%	0.3%	0.2%	0.6%
Southeast	Percent	1.0%	2.4%	2.4%	2.3%	2.1%	1.8%	1.8%	1.6%	1.5%	1.4%	1.8%
Grand Island MSA	Percent	1.2%	2.7%	2.7%	2.6%	2.4%	2.1%	2.1%	1.9%	1.8%	1.7%	2.1%
Central	Percent	1.2%	2.9%	2.9%	2.8%	2.6%	2.3%	2.4%	2.2%	2.1%	2.0%	2.3%
Mid Plains	Percent	1.7%	3.8%	3.7%	3.7%	3.4%	3.1%	3.2%	3.0%	2.9%	2.8%	3.1%

**Table A3.21: Tax Burden Change for Income Group >1M**

Tax Burden Change for Income Group >1M												
Region	Units	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	Average
Panhandle	Percent	21.6%	43.4%	42.9%	42.6%	42.1%	41.3%	41.1%	40.6%	40.2%	39.8%	39.6%
Sandhills	Percent	21.7%	43.5%	43.0%	42.7%	42.1%	41.4%	41.1%	40.7%	40.3%	39.9%	39.6%
Northeast	Percent	21.3%	42.7%	42.2%	41.9%	41.4%	40.6%	40.4%	39.9%	39.5%	39.1%	38.9%
Omaha Consortium	Percent	20.9%	41.6%	41.1%	40.8%	40.3%	39.5%	39.3%	38.8%	38.4%	38.0%	37.9%
Lincoln MSA	Percent	20.9%	41.8%	41.3%	40.9%	40.4%	39.7%	39.5%	39.0%	38.7%	38.3%	38.1%
Southeast	Percent	21.2%	42.5%	42.0%	41.7%	41.2%	40.5%	40.2%	39.7%	39.3%	38.9%	38.7%
Grand Island MSA	Percent	21.3%	42.7%	42.2%	41.9%	41.4%	40.7%	40.4%	39.9%	39.6%	39.1%	38.9%
Central	Percent	21.4%	42.9%	42.5%	42.1%	41.6%	40.9%	40.6%	40.2%	39.8%	39.4%	39.1%
Mid Plains	Percent	21.6%	43.3%	42.9%	42.5%	42.0%	41.3%	41.0%	40.6%	40.2%	39.8%	39.5%

## Amos, Shonna

---

**From:** Elizabeth Colegrove <Elizabeth.Colegrove@remi.com>  
**Sent:** Monday, October 18, 2021 1:29 PM  
**To:** Thayer, Jill E.  
**Cc:** Garrity, Marty; Peter Evangelakis  
**Subject:** RE: RFP No. BLR-210002 -- Information Request  
**Attachments:** REMI Proposal for Arkansas BLR re State Budgeting and Revenue Forecasting Consulting Services, updated.pdf; Equal Employment Opportunity.pdf

Hello Ms. Thayer.

Please find attached the proposal updated with section by section responses to the numbered paragraphs, and a copy of our Equal Employment Opportunity Policy. Please accept our apologies for the previous omission of these items.

Unfortunately we are not yet able to provide a Certificate of Good Standing issued by the Arkansas Secretary of State. We do have a registered agent in the state, and they have filed our business registration with the SOS, but we believe that it will likely be another week before the registration accepted. Is it possible for us provide the certificate at a later date?

Sincerely,  
Elizabeth

Elizabeth Colegrove  
*Contract Administrator*  
**Regional Economic Models, Inc. (REMI)**  
433 West Street  
Amherst, MA 01002  
Main: 413-549-1169  
[elizabeth@remi.com](mailto:elizabeth@remi.com)  
[www.remi.com](http://www.remi.com)

Washington D.C. Office  
1717 K Street, NW  
Suite 900  
Washington, D.C. 20006  
Main: 202-469-7861

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**From:** Thayer, Jill E. <Thayerj@blr.arkansas.gov>  
**Sent:** Wednesday, October 13, 2021 5:58 PM  
**To:** Elizabeth Colegrove <Elizabeth.Colegrove@remi.com>  
**Cc:** Garrity, Marty <garritym@blr.arkansas.gov>  
**Subject:** RFP No. BLR-210002 -- Information Request

Ms. Colegrove,

After reviewing the proposal submitted by REMI, Inc., in response to RFP No. BLR-210002, the following items required by the RFP were missing from your proposal:

- Documentation that REMI, Inc. is authorized to do business in the State of Arkansas;
- Copy of your Equal Employment Opportunity Policy; and
- Response to each numbered paragraph of the RFP.

Please submit these items to me by Monday, October 18. Let me know if you have any questions regarding submission of these items.

Sincerely,

Jillian E. Thayer  
**Legal Counsel to the Director**  
Bureau of Legislative Research  
State Capitol, Rm. 315  
Little Rock, Arkansas 72201

Phone: (501) 683-0720  
Fax: (501) 682-1936  
[thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov)

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## **General Employment Policies**

### **Equal Employment Opportunity**

REMI is committed to providing equal employment opportunities for all employees and applicants without regard to race, color, religion, creed, national origin or ancestry, ethnicity, sex (including pregnancy), gender (including gender nonconformity, status as a transgender individual, and gender identity), pregnancy and pregnancy-related conditions, including breastfeeding, sexual orientation, age (40 and over), physical or mental disability, citizenship, past, current, or prospective service in the uniformed services, genetic information, or any other characteristic protected under applicable federal, state, or local law. REMI makes all employment decisions based on job-related criteria and the needs of REMI and its employees. REMI's policy of equal employment opportunity governs all aspects of employment, including hiring, job assignment, compensation, discipline, promotion, termination, benefits, training, and all other terms, conditions, and privileges of employment.

Employees with questions or concerns about any type of discrimination at REMI, should contact their immediate supervisor, department manager, Human Resources, or another member of REMI management as soon as possible. Employees may raise concerns without fear of retaliation and any complaint will be kept confidential to the extent practical.

Any employee, regardless of position or title, who REMI determines has subjected an individual to discrimination or retaliation in violation of this policy will be subject to discipline, up to and including termination of employment.

### **Sexual Harassment and Other Harassment**

REMI is committed to maintaining a work environment that is free from sexual harassment and other types of discriminatory harassment. REMI's commitment begins with the recognition and acknowledgment that such harassment is, of course, unlawful. To reinforce our commitment, REMI has developed a policy against harassment and a reporting procedure for employees who have been subject to or witnessed harassment. This policy applies to all work-related settings and activities, whether inside or outside the workplace, and includes business trips and business-related social events. REMI property (e.g., telephones, copy machines, fax machines, computers, and computer applications such as e-mail and internet) may not be used to engage in conduct which violates this policy. REMI's policy against harassment covers employees and other individuals who have a relationship with REMI which enables REMI to exercise some control over the individual's conduct in places and activities that relate to REMI's work (e.g., directors, officers, contractor, vendors, customers, etc.).

#### **Prohibition of Sexual Harassment**

REMI's policy against sexual harassment prohibits sexual advances or requests for sexual favors or other physical or verbal conduct of a sexual nature, when (1) submission to or rejection of such conduct is made an express or implicit condition of employment; (2) submission to or rejection of such conduct is used as a basis for employment decisions affecting the individual

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**From:** Thayer, Jill E.  
**Sent:** Friday, October 22, 2021 8:16 AM  
**To:** Amos, Shonna  
**Subject:** FW: RFP No. BLR-210002 -- Information Request  
**Attachments:** AR Cert of Auth.pdf

Shonna,

Please place a copy of this email and the attached document in the binders behind the REMI tab.

Thank you!

Jill.

*Jillian E. Thayer*

Legal Counsel to the Director  
Bureau of Legislative Research  
State Capitol, Rm. 315  
Little Rock, Arkansas 72201

Phone: (501) 683-0720

Fax: (501) 682-1936

[thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov)

---

**From:** Elizabeth Colegrove [mailto:[Elizabeth.Colegrove@remi.com](mailto:Elizabeth.Colegrove@remi.com)]  
**Sent:** Friday, October 22, 2021 8:11 AM  
**To:** Thayer, Jill E.  
**Cc:** Garrity, Marty; Peter Evangelakis  
**Subject:** RE: RFP No. BLR-210002 -- Information Request

Hi Jill.

We received our Certificate of Authority from the Arkansas Secretary of State. Please find attached. Thank you—and the subcommittee—for your patience.

Sincerely,  
Elizabeth

---

**From:** Thayer, Jill E. <[Thayerj@blr.arkansas.gov](mailto:Thayerj@blr.arkansas.gov)>  
**Sent:** Monday, October 18, 2021 5:25 PM  
**To:** Elizabeth Colegrove <[Elizabeth.Colegrove@remi.com](mailto:Elizabeth.Colegrove@remi.com)>  
**Cc:** Garrity, Marty <[garritym@blr.arkansas.gov](mailto:garritym@blr.arkansas.gov)>; Peter Evangelakis <[Peter.Evangelakis@remi.com](mailto:Peter.Evangelakis@remi.com)>  
**Subject:** RE: RFP No. BLR-210002 -- Information Request

Thanks, Elizabeth. I will note for the subcommittee members that you are in the process of obtaining the certificate of authority from the Secretary of State's office.

Jill.

*Jillian E. Thayer*

Legal Counsel to the Director  
Bureau of Legislative Research  
State Capitol, Rm. 315  
Little Rock, Arkansas 72201

Phone: (501) 683-0720  
Fax: (501) 682-1936  
[thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov)

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**From:** Elizabeth Colegrove [<mailto:Elizabeth.Colegrove@remi.com>]  
**Sent:** Monday, October 18, 2021 1:29 PM  
**To:** Thayer, Jill E.  
**Cc:** Garrity, Marty; Peter Evangelakis  
**Subject:** RE: RFP No. BLR-210002 -- Information Request

Hello Ms. Thayer.

Please find attached the proposal updated with section by section responses to the numbered paragraphs, and a copy of our Equal Employment Opportunity Policy. Please accept our apologies for the previous omission of these items.

Unfortunately we are not yet able to provide a Certificate of Good Standing issued by the Arkansas Secretary of State. We do have a registered agent in the state, and they have filed our business registration with the SOS, but we believe that it will likely be another week before the registration accepted. Is it possible for us provide the certificate at a later date?

Sincerely,  
Elizabeth

Elizabeth Colegrove  
*Contract Administrator*  
**Regional Economic Models, Inc. (REMI)**  
433 West Street  
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Main: 413-549-1169  
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[www.remi.com](http://www.remi.com)

Washington D.C. Office  
1717 K Street, NW  
Suite 900  
Washington, D.C. 20006  
Main: 202-469-7861

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**From:** Thayer, Jill E. <[Thayerj@blr.arkansas.gov](mailto:Thayerj@blr.arkansas.gov)>  
**Sent:** Wednesday, October 13, 2021 5:58 PM  
**To:** Elizabeth Colegrove <[Elizabeth.Colegrove@remi.com](mailto:Elizabeth.Colegrove@remi.com)>

**Cc:** Garrity, Marty <[garritym@blr.arkansas.gov](mailto:garritym@blr.arkansas.gov)>  
**Subject:** RFP No. BLR-210002 -- Information Request

Ms. Colegrove,

After reviewing the proposal submitted by REMI, Inc., in response to RFP No. BLR-210002, the following items required by the RFP were missing from your proposal:

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- Copy of your Equal Employment Opportunity Policy; and
- Response to each numbered paragraph of the RFP.

Please submit these items to me by Monday, October 18. Let me know if you have any questions regarding submission of these items.

Sincerely,

*Jillian E. Thayer*

**Legal Counsel to the Director**  
Bureau of Legislative Research  
State Capitol, Rm. 315  
Little Rock, Arkansas 72201

Phone: (501) 683-0720

Fax: (501) 682-1936

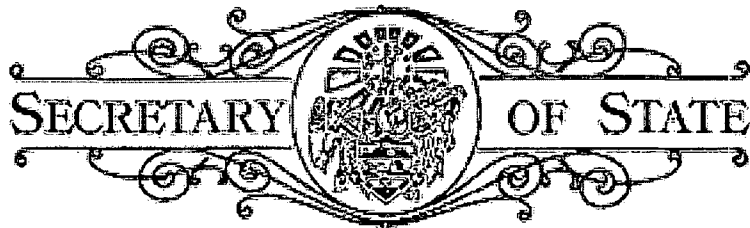
[thayerj@blr.arkansas.gov](mailto:thayerj@blr.arkansas.gov)

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STATE OF ARKANSAS



John Thurston

ARKANSAS SECRETARY OF STATE

To All to Whom These Presents Shall Come, Greetings:

I, John Thurston, Arkansas Secretary of State of Arkansas, do hereby certify that the following and hereto attached instrument of writing is a true and perfect copy of

**Application for Certificate of Authority**

of

**REGIONAL ECONOMIC MODELS, INC.**

filed in this office  
October 20, 2021

In Testimony Whereof, I have hereunto set my hand and affixed my official Seal. Done at my office in the City of Little Rock, this 20th day of October 2021.

  
John Thurston  
Secretary of State

Online Certificate Authorization Code: 4761386170701662143  
To verify the Authorization Code, visit [sos.arkansas.gov](http://sos.arkansas.gov)





# Arkansas Secretary of State

## John Thurston

1401 W. Capitol Avenue, Suite 250, Little Rock, AR 72201  
501-682-3409 • www.sos.arkansas.gov

### Application for Certificate of Authority

(Please type or print)

Pursuant to the provisions of the Act 958 of 1987 and Arkansas Code Annotated § 4-27-1503, the undersigned as the duly authorized and acting president, secretary, treasurer, superintendent or managing agent in the State of Arkansas of the foreign corporation named below (the "corporation") for which this statement is submitted, under oath hereby states:

1a. The name of the corporation is: REGIONAL ECONOMIC MODELS, INC.

b. Fictitious name to be used in Arkansas: \_\_\_\_\_

(The corporation may use a fictitious name to transact business in Arkansas, if its real name is unavailable, and it delivers to the Secretary of State a copy of the resolution of its board of directors, certified by its secretary, adopting a fictitious name.)

2. The state, territory or foreign country under whose laws the corporation was incorporated is: MA

Date Incorporated: 03/26/1980 Period of Duration: Perpetual

3. The nature of the business of the corporation and the object or purposes to be transacted, promoted or carried on by it are: ECONOMIC CONSULTING AND SOFTWARE DEVELOPMENT

4. The address of the general office or place of business of the corporation in Arkansas is designated to be:

(Street or Address) (City) (State) (ZIP)

5. The name and address of the registered agent upon whom Service of Process is authorized to be made in Arkansas is:

C.T. Corporation, System 124 West Capitol Avenue, Suite 1900 Little Rock, AR 72201  
(Name) (Street or Address) (City) (State) (ZIP)

6. The address of the general office or principal place of business of the corporation is:

433 WEST STREET, AMHERST, MA 01002  
(Street or Address) (City) (State) (ZIP)

7. The number and par value, if any, of shares of the corporation's capital stock owned or to be owned by residents of Arkansas:

Number of shares: 12,000 Par value of shares: \$0.00

8. The name and title of at least one corporate officer (attach additional page, if needed)

Name: FREDERICK R. TREYZ Title: (President, Vice President, Secretary, Treasurer, Controller, etc.) PRESIDENT

9. The foreign corporation shall deliver with the completed application a certificate of existence (or document of similar import) duly authorized by the Secretary of State or other official having custody of corporate records in the state or country under whose laws it is incorporated.

10. A filing fee of \$300.00 is submitted herewith in accordance with A.C.A. 4-27-122.

11. I understand that knowingly signing a false document with the intent to file it with the Arkansas Secretary of State is a Class C misdemeanor and is punishable by a fine up to \$100.00 and/or imprisonment up to 30 days.

Witness the hand executed under oath by the undersigned in behalf of the corporation on this the 15 day of October, 2021.

\_\_\_\_\_  
(Signature of Authorized Officer) PRESIDENT  
(Title of Authorized Officer)



# Arkansas Secretary of State

## John Thurston

1401 W. Capitol, Suite 250, Little Rock, AR 72201  
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### CORPORATE FRANCHISE TAX

In order for this corporation to receive its annual corporate franchise tax reporting form, please complete and file with the office of the Secretary of State at the time of incorporation or qualification.

Regional Economic Models, Inc.

Corporate name

Mitcheline Mekal

Contact person.

433 West Street

Street address or Post Office Box number

Amherst, MA 01002

City, State, ZIP

413-549-1169

Telephone number

mitcheline.mekal@remi.com

E-mail address

04-2699678

Federal Tax ID

IRS link for obtaining a Federal Tax ID: <https://www.irs.gov/businesses/small-businesses-self-employed/how-to-apply-for-an-ein>

I affirm that franchise taxes are due by May 1st of the year following formation of this entity.

I understand that knowingly signing a false document with the intent to file with the Arkansas Secretary of State is a Class C misdemeanor and is punishable by a fine up to \$100.00 and/or imprisonment up to 30 days.

Mitcheline Mekal

Authorized Officer (Type or Print)

*mitcheline mekal*

Authorized Signature of Incorporator, Officer or Agent for the Corporation



*The Commonwealth of Massachusetts*  
*Secretary of the Commonwealth*  
*State House, Boston, Massachusetts 02133*

William Francis Galvin  
 Secretary of the  
 Commonwealth

Date: October 18, 2021

To Whom It May Concern :

I hereby certify that according to the records of this office,

**REGIONAL ECONOMIC MODELS, INC.**

is a domestic corporation organized on March 26, 1980, under the General Laws of the Commonwealth of Massachusetts. I further certify that there are no proceedings presently pending under the Massachusetts General Laws Chapter 156D section 14.21 for said corporation's dissolution; that articles of dissolution have not been filed by said corporation; that said corporation has filed all annual reports, and paid all fees with respect to such reports, and so far as appears of record said corporation has legal existence and is in good standing with this office.



In testimony of which,  
 I have hereunto affixed the  
 Great Seal of the Commonwealth  
 on the date first above written.

*William Francis Galvin*

Secretary of the Commonwealth

Certificate Number: 21100395980

Verify this Certificate at: <http://corp.sec.state.ma.us/CorpWeb/Certificates/Verify.aspx>

Processed by: .bod