

Stricken language would be deleted from and underlined language would be added to present law.

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A Bill

HOUSE BILL 1142

By: Representatives Ladyman, *Beaty Jr.*, *M. Berry*, *L. Fite*, *Gramlich*, *D. Hodges*, *Hollowell*, *Long*,
Maddox, *McAlindon*, *McGrew*, *Pilkington*, *R. Scott Richardson*, *Richmond*, *Rye*

By: Senator *C. Penzo*

For An Act To Be Entitled

AN ACT TO CREATE THE ARKANSAS NUCLEAR RECYCLING PROGRAM; TO DEVELOP A FISCAL MODEL FOR COMMERCIAL APPLICATION; TO DEVELOP AN INTERIM AND LONG-TERM STORAGE PLAN FOR RESIDUAL MATERIALS; TO DEVELOP A FISCAL MODEL FOR CURRENT AND FUTURE MARKET DEMAND; TO DEVELOP ENGINEERING DOCUMENTS FOR THE RECYCLING PROCESS; TO PERFORM SITE ANALYSIS FOR PROSPECTIVE RECYCLING FACILITY LOCATIONS AND DEVELOP A CONSTRUCTION COST AND SCHEDULE REPORT; TO ESTABLISH ARKANSAS AS THE ONLY STATE TO DECLARE ITSELF INTERESTED IN PURSUING A FINAL SOLUTION FOR SPENT NUCLEAR FUEL THROUGH RECYCLING; AND FOR OTHER PURPOSES.

Subtitle

TO CREATE THE ARKANSAS NUCLEAR RECYCLING PROGRAM.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code Title 8, Chapter 9, is amended to add an additional subchapter to read as follows:

Subchapter 8 – Arkansas Nuclear Recycling Program

8-9-801. Title.



This subchapter shall be known and may be cited as the "Arkansas Nuclear Recycling Program".

8-9-802. Legislative findings.

The General Assembly finds that:

(1) In August 2016, the Argonne National Laboratory hosted a delegation from Arkansas, including staff from the Arkansas Economic Development Commission;

(2) In January 2017, the Arkansas Alternative Energy Commission issued a recommendation to the Governor to support the University of Arkansas and the United States Department of Energy national laboratories to prepare and make recommendations and to offer options on using existing technology to convert spent nuclear fuel rods into new nuclear fuel;

(3) In August 2017, the Joint Committee on Energy held hearings on advanced nuclear technology to reprocess spent nuclear fuel rods and unanimously approved an interim study resolution on the matter; and

(4) In November 2018, the Joint Committee on Energy held a meeting at Arkansas Nuclear One and further discussed the issues under subdivisions (1)-(3) of this section, including without limitation that the:

(A) University of Arkansas system, in conjunction with other institutions of higher education, can and is willing to provide a detailed analysis examining the benefits of "New Nuclear" compared to the risks of continued storage of spent fuel at Arkansas Nuclear One;

(B) Fast reactor technology and electrochemical spent fuel reprocessing are ready for commercial development; and

(C) The Department of Health and the Department of Energy and Environment support the application for federal funding for the establishment of an education, risk analysis, and optimization design program;

(5) Acts 2021, No. 1092, required the House Committee on Public Health, Welfare, and Labor and the Senate Committee on Public Health, Welfare, and Labor to jointly conduct a study on the commercial application of existing technology to reclaim and repurpose spent nuclear fuel rods; and

(6) It is appropriate to build upon the study conducted under Acts 2021, No. 1092, and to study the technical and economic feasibility and commercial viability of the interim storage and recycling of spent nuclear

fuel at locations in Arkansas.

8-9-803. Purpose.

The purpose of this subchapter is to authorize the Department of Energy and Environment to:

(1) Protect the public health and the environmental quality of the state by identifying the applicable federal standards for:

(A) Shipping spent nuclear fuel into the state and returning the shipping containers back to the point of origin after the extraction of the spent nuclear fuel for reuse and reloading;

(B) Recycling spent nuclear fuel;

(C) Interim storage of spent nuclear fuel before the spent nuclear fuel is to be recycled;

(D) Interim storage of recycled nuclear fuel; and

(E) Interim storage of waste by-products from the spent nuclear fuel recycling process;

(2) Secure federal funding to contract with one (1) or more scientific and engineering organizations to study the technical and economic feasibility and commercial viability of the interim storage and recycling of spent nuclear fuel at locations in Arkansas; and

(3) Based on the results of the study under subdivision (2) of this section, determine the appropriate time frames and conditions that must be met before it is technically and economically feasible, commercially viable, and appropriate to declare the state open to interim storage of spent nuclear fuel for the purpose of securing federal funding for the interim storage and recycling of spent nuclear fuel at locations in Arkansas.

8-9-804. Creation of program – Authorization to enter into charter.

The Division of Environmental Quality shall establish the Arkansas Nuclear Recycling Program to:

(1) Secure a federal charter from the United States Government and receive federal funding for the program as outlined in the Acts 2021, No. 1092, report submitted to the House Committee on Public Health, Welfare, and Labor and the Senate Committee on Public Health, Welfare, and Labor; and

(2) Perform research to establish and identify the following for technical and economic feasibility and commercial viability:

- (A) Recycling spent nuclear fuel;
- (B) The market value of recycled spent nuclear fuel;
- (C) Through design documentation, the cost and schedule to build a nuclear recycling facility;
- (D) Potential sites within the state that meet specific seismic and accessibility criteria meeting federal requirements to establish a port or rail yard and transfer area; and
- (E) An analysis on acceptable methods of:
 - (i) Shipping the spent nuclear fuel to the selected sites under study;
 - (ii) Returning the shipping containers back to the sender for reuse and reloading;
 - (iii) Interim storage of the spent nuclear fuel;
 - (iv) Interim storage of recycled spent nuclear fuel;
 - (v) Storage of short-term waste by-products; and
 - (vi) Disposal of long-term waste by-products.

8-9-805. Reporting – Hearings.

(a) Upon completion of the analysis of the technical and economic feasibility and commercial viability requirements in § 8-9-804, the Division of Environmental Quality shall present a report on the results of the analysis to the Legislative Council.

(b) The Legislative Council shall hold hearings on the technical and economic feasibility and commercial viability of the interim storage and recycling of spent nuclear fuel and include the following committees, the:

- (1) House Committee on Insurance and Commerce;
- (2) Senate Committee on Insurance and Commerce;
- (3) House Committee on Public Health, Welfare, and Labor;
- (4) Senate Committee on Public Health, Welfare, and Labor; and
- (5) Joint Energy Committee.

(c) The Legislative Council shall develop a recommendation based upon the hearings and present the recommendation to the Governor regarding the technical and economic feasibility and commercial viability of the interim storage and recycling of spent nuclear fuel at locations in Arkansas.

(d) Upon a finding by the Legislative Council and approval by the Governor that it is technically and economically feasible, commercially

viable, and appropriate to declare the state open to the interim storage and recycling of spent nuclear fuel for the purpose of securing federal funds for the interim storage and recycling of spent nuclear fuel, public outreach and education under § 8-9-806 may begin.

8-9-806. Public outreach and education.

The University of Arkansas, with direction and assistance from the federal charter under § 8-9-804, shall:

(1) Develop and implement a public outreach and education program to the sites selected within Arkansas to gather public opinion on the construction and operation of a spent nuclear fuel interim storage and recycling facility;

(2) Hold public meetings to interact with citizens to determine their opposition to and support of a spent nuclear fuel interim storage and recycling facility in their location;

(3) Measure the level of opposition and support of those citizens through surveys, polls, and other recognized means;

(4) Provide a report to the Legislative Council on the outcome of the public meetings for final approval and assistance in site selection; and

(5) Contingent upon a demonstration of public support as a result of the public outreach and education effort, endow a chair within the university to develop a nuclear science and engineering program to provide future generations of nuclear engineers to capitalize on future opportunities available at the spent nuclear interim storage and recycling facility initially funded by federal funds.

8-9-807. Construction and operation.

The entities under the federal charter under § 8-9-804 shall be responsible for the construction and operation of the spent nuclear fuel interim storage and recycling facility and through the use of federal funds shall:

(1) Receive the design documentation completed under § 8-9-804;

(2) Develop construction documents, update cost data, and establish a schedule for construction to be completed with a national laboratory;

(3) Contract with a design firm to provide design and construction documents for the spent nuclear fuel interim storage and recycling facility containment building;

(4) Contract with a contractor to build the spent nuclear fuel interim storage and recycling facility as designed and provide start-up assistance with the spent nuclear fuel interim storage and recycling facilities; and

(5) Contract with a national laboratory to provide installation management of the pyrotechnic lines inside the spent nuclear fuel interim storage and recycling facility containment building and to provide start-up management and training for permanent operators and maintenance.

8-9-808. Applicability.

This subchapter applies only to the interim storage and recycling of spent nuclear fuel from commercial nuclear reactors, university nuclear reactors, and other research or government-operated nuclear reactors under this subchapter.

/s/Ladyman