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Bill Analysis

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Primary Sponsor: Rep. Stein

Maura McClelland, Attorney
Sam Benham, Attorney

SUMMARY

- Establishes the Ohio Nuclear Development Authority for the following purposes:
 - To be an information resource on advanced-nuclear-research reactors, isotopes, and isotope technologies for state and national departments and agencies;
 - To make Ohio a leader in the development and construction of new-type advanced-nuclear-research reactors, commercialization of isotopes and research, and the research and development of high-level-nuclear-waste reduction and storage.
- Establishes the Authority as a nonprofit entity and grants it extensive power that is necessary and convenient to carry out its purposes, including the power of eminent domain, the power to promote and facilitate agreements, to foster partnerships, and to assume certain regulatory duties.
- Requires the Authority to establish the Ohio Nuclear Development Consortium as a for-profit entity with power to carry out the Authority's mission.
- Requires the Attorney General to be the primary general counsel of the Authority, the Auditor of State to annually audit the Consortium's financial accounts, and the Treasurer of State to provide equity management, stock issuance, and shareholder related services to the Consortium.
- Conditionally authorizes a nonrefundable and transferable tax credit for investments in the Consortium, the value of which increases for each additional year the investor delays claiming the credit.

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DETAILED ANALYSIS

Overview

The bill, referred to in its title as the “Advanced Nuclear Technology Helping Energize Mankind (ANTHEM) Act,” establishes the Ohio Nuclear Development Authority. The Authority is created as a nine-member, nonprofit entity to serve as an information resource, to promote and facilitate agreements, to foster partnerships, to encourage advanced-nuclear technologies, and to serve as a regulatory authority for state activities involving nuclear research and the disposal of radioactive waste. The Authority is to be funded by soliciting grants, aid, and contributions from various sources.

The Authority must form a for-profit entity to be known as the Ohio Nuclear Development Consortium. The purposes of the Consortium include carrying out the mission of the Authority in making Ohio a leader in the commercial production of isotopes and in nuclear-waste reduction and storage. The Treasurer of State’s Office is required to provide equity management services for the Consortium, including providing for an initial offering of uncertificated private common stock. The bill also authorizes a nonrefundable and transferable tax credit for purchases of qualified consortium stock, the value of which increases for each additional year the investor delays claiming the credit.

Authority

Formation; purpose

The bill creates and constitutes a nonprofit entity, the Ohio Nuclear Development Authority. The bill states that the Authority’s exercise of powers is the performance of an essential governmental function and matters of public necessity for which public moneys may be spent and private property acquired.¹

The bill states that the Authority is established for both of the following purposes:

- To be an information resource for Ohio, the U.S. Nuclear Regulatory Commission (USNRC), all U.S. military branches, and the U.S. Department of Energy (USDOE) on advanced-nuclear-research reactors, isotopes, and isotope technologies;
- To make Ohio (1) a leader in the development and construction of new-type advanced-nuclear-research reactors, (2) a national and global leader in the commercial production of isotopes and research, and (3) a leader in the research and development of high-level-nuclear-waste reduction and storage.²

¹ R.C. 4164.05.

² R.C. 4164.07.

Powers

Eminent domain

The Authority has the right of eminent domain to acquire lands in order to meet its responsibilities under the bill.³

To carry out purposes

Under the bill, the Authority has all the powers necessary and convenient to carry out its purposes, including the following:

1. To adopt bylaws for the management and regulation of its affairs;
2. To develop and adopt a strategic plan for carrying out its purposes under the bill;
3. To promote and facilitate agreements among Ohio's public and private institutions of higher education and other research entities to carry out research projects relating to public safety, advanced-nuclear-research-reactor technology, and the production of isotopes;
4. To foster innovative partnerships and relationships among the state, Ohio's public institutions of higher education, private companies, federal laboratories, and nonprofit organizations to accomplish its purposes;
5. To identify and support, in cooperation with the public and private sectors, the development of education programs related to Ohio's isotope industry;
6. To encourage, facilitate, and support the application, commercialization, and transfer of new isotope and advanced-nuclear-research-reactor technologies;
7. To assume any regulatory powers delegated from the USNRC, the USDOE, any U.S. military branch, or similar federal agencies, departments, or programs, governing the construction and operation of noncommercial power-producing nuclear reactors and the handling of radioactive materials;
8. To act in place of the Governor in approving agreements with the USNRC and joint-development agreements with the USDOE or an equivalent regulatory agency in the event that the Authority requests any of the following:
 - a. The USNRC to delegate rules for a state-based nuclear research-and-development program;
 - b. To jointly develop advanced-nuclear-research-reactor technology with the USDOE under the USDOE's authority;

³ R.C. 4164.05.

- c. To jointly develop advanced-nuclear-research-reactor technology with the U.S. Department of Defense (USDOD) or another U.S. military agency under the authority of the department or agency.⁴

The agreements that the bill allows the Authority to approve may involve pursuing agreement state status for the assumption by Ohio of specified licensing and related regulatory authority from the USNRC with respect to byproduct material, source material, the commercial disposal of low-level radioactive waste, and special nuclear material in quantities not sufficient to form a critical mass. Under current law, the Ohio Department of Health (ODH) is the only agency authorized to pursue such an agreement. The bill permits the Authority and, under continuing law, requires ODH to enter into negotiations with the USNRC for pursuing such an agreement.⁵

Ohio State Nuclear Technology Research Program

The bill requires the Authority to adopt rules provided for by the USNRC, USDOE, USDOD or another U.S. military agency, or a comparable federal agency for an Ohio State Nuclear Technology Research Program for the purposes of developing and studying advanced-nuclear-research reactors to produce isotopes and to reduce Ohio's high-level nuclear waste. The rules must reasonably ensure Ohioans of their safety in respect to nuclear technology research and development and radioactive materials utilized by the Ohio Nuclear Development Consortium.⁶

The bill prohibits rules adopted under continuing law by the Director of ODH for radiation control from conflicting with or superseding the rules adopted by the Authority under the bill.⁷ Similarly, the bill states that it is not to be construed as superseding any agreement between ODH and the USNRC that has been entered into under continuing law governing radiation control with respect to regulating activities not within the scope of activities of the Authority.⁸

Authority collaboration on advanced-nuclear-reactor components

The bill requires the Authority to work with industrial and academic institutions and the USDOE or U.S. military branches to approve designs for the commercialization of advanced-nuclear-reactor components. The bill states that those components may include neutronics analysis and experimentation; safety and plant safety; fuels and materials, fuels-and-materials research and development, testing programs to develop fuels and materials-manufacturing processes, experimental data, formulae, technological processes, and facilities and equipment used to manufacture advanced-nuclear-reactor fuels and materials; steam-supply systems and

⁴ R.C. 4164.19.

⁵ R.C. 3748.03.

⁶ R.C. 4164.21.

⁷ R.C. 3748.23.

⁸ R.C. 3748.03 and 4164.71.

associated components and equipment; engineered-safety features and associated components; building; instrumentation, control, and application of computer science; quality and inspection practices; plant design and construction, debug, test-run, operation, maintenance, and decommissioning technology; economic methodology and evaluation technology; treatment, storage, recycling, and disposal technology for advanced-nuclear-reactor and system-spent fuel; treatment, storage, and disposal technology for advanced-nuclear-reactor and system radioactive waste; and other areas that the parties and their executive agents agree upon in writing.⁹

Project priority

The Authority must give priority to all Consortium projects that reduce nuclear waste and produce isotopes.¹⁰

Membership; meetings

Appointments

Under the bill, the Authority is to consist of nine members representing the following three stakeholder groups within the nuclear-engineering-and-manufacturing industry: (1) safety, (2) industry, and (3) engineering research and development. The Governor, the Speaker of the House of Representatives, and the President of the Senate must each appoint one member from each of the three stakeholder groups.¹¹

The bill requires members to serve five-year terms, unless the Consortium approves terms of an alternative duration. Any appointment to fill a vacancy on the Authority is to be made for the unexpired term of the member whose death, resignation, or removal created the vacancy.¹² Initial appointments must be made not later than 60 days after the bill's effective date.¹³

Qualifications

The bill requires members appointed from each stakeholder group to meet certain requirements. A member appointed from the **safety group** must hold at least a Bachelor's degree in nuclear, mechanical, chemical, or electrical engineering and at least one of the following must also apply:

1. The member is a recognized professional in nuclear-reactor safety or developing ISO 9000 standards.

⁹ R.C. 4164.25.

¹⁰ R.C. 4164.29.

¹¹ R.C. 4164.09(A) and (B).

¹² R.C. 4164.09(D) and (E).

¹³ R.C. 4164.09(F).

2. The member has been employed by or has worked closely with the USDOE or USNRC and the member also has a professional background in nuclear-energy-technology development or advanced-nuclear-reactor concepts.
3. The member has been employed by a contractor that has built concept reactors and the member also worked with hazardous substances, either nuclear or chemical, during that employment.

A member appointed from the **industry group** must have at least five years of experience in one or more of the following:

1. Nuclear-power-plant operation;
2. Processing and extracting isotopes;
3. Managing a facility that deals with hazardous substances, either nuclear or chemical;
4. Handling and storing nuclear waste.

A member appointed from the **engineering research and development group** must hold at least a Bachelor's degree in nuclear, mechanical, chemical, or electrical engineering and must also be a recognized professional in at least one of the following areas of study:

1. Advanced nuclear reactors;
2. Materials science involving the study of alloys and metallurgy, ceramics, or composites;
3. Molten-salt chemistry;
4. Solid-state chemistry;
5. Chemical physics;
6. Actinide chemistry;
7. Instrumentation and sensors;
8. Control systems.¹⁴

Officers

The bill requires the Consortium shareholders to annually elect, from among the Authority members, a chairperson, a vice-chairperson, and a treasurer. The Consortium shareholders must also annually elect an Authority secretary. The secretary is not required to be an Authority member.

The bill permits, prior to the first organizational Consortium meeting, Authority members to appoint a temporary chairperson, vice-chairperson, treasurer, and secretary.¹⁵

¹⁴ R.C. 4164.09(C).

¹⁵ R.C. 4164.13.

Duties begin immediately upon appointment

The bill requires members to begin the performance of their duties immediately upon appointment to the Authority.¹⁶

State officers and employees may be members and provide services

The bill provides that no officer or employee of the state of Ohio forfeits the officer's or employee's office or employment due to acceptance of membership on the Authority or by providing service to the Authority or the Consortium.¹⁷

Authority meetings

The bill requires Authority meetings to be held in accordance with the Ohio's Open Meetings Law.¹⁸

Annual plan, summary of activities, and recommendations

The bill requires the Authority, on or before July 4 of each year, to submit the following (see **COMMENT 2**):

- An updated strategic plan;
- A summary of the Authority's activities;
- Recommendations for the support and expansion of the bill's purposes.¹⁹

Fund solicitation

Under the bill, the Authority, in order to fund and support the Authority's and Consortium's activities, must apply for, solicit, and accept from any source, including any agency of Ohio, any other state, the United States, any political subdivision, any Consortium shareholder, or any private corporation or other entity, any of the following:

1. Grants, including grants available under federal law;
2. Aid;
3. Contributions of money, property, or other things of value, which must be held, used, and applied for the purposes specified under the bill.²⁰

Authority's general counsel

The bill designates the Attorney General or the Attorney General's designated representative as the Authority's primary general counsel. The general counsel must represent

¹⁶ R.C. 4164.11.

¹⁷ R.C. 4164.73.

¹⁸ R.C. 4164.15; R.C. 121.22, not in the bill.

¹⁹ R.C. 4164.33.

²⁰ R.C. 4164.27.

the Authority in any litigation concerning the Authority's activities with other states and the federal government.²¹

Consortium

Formation; purposes

Within 180 days after the appointment of its initial members, the Authority must provide for the formation of a for-profit entity to be known as the Ohio Nuclear Development Consortium. The Consortium is to be created, organized, and governed, its business is to be conducted, and its directors are to be chosen, in the same manner as is provided in Ohio's General Corporation Law,²² to the extent that it is not inconsistent with the bill. The purposes of the Consortium include carrying out the mission of the Authority in:

1. Making Ohio a leader in the commercial production of isotopes and in nuclear-waste reduction and storage;
2. Serving as an interdisciplinary study, research, and information resource for Ohio, the USNRC, USDOE, and USDOD on isotopes.

The bill states that the Consortium is to be solely responsible for the internment and sequestration of high-level nuclear waste, or its destruction or reduction, that is produced in Ohio if the federal government defaults on its obligation to dispose of or store Ohio produced high-level nuclear waste. It is permitted to seek funds of the USDOE to develop alternative technologies to store, reduce, or consume Ohio's high-level nuclear waste. The bill grants the Consortium legal standing to represent Ohio if the USDOE fails in its obligation to provide a viable repository for the state's high-level nuclear waste.

The bill authorizes the Consortium to commit to research and development agreements with other state organizations that are authorized to enter into such agreements, though it cannot obligate the state to these agreements. It must annually report to the Authority on its nonproprietary activities.²³

Finally, the Consortium is required to pay the administrative expenses of the Authority. Those expenses cannot exceed 5% of the shareholders' equity in the Consortium each year.²⁴

Stock

The Treasurer of State's Office is required to provide equity management services for the Consortium, including providing for an initial offering of uncertificated private common Consortium stock that is set at 20 million shares at \$50 per share. The Office must establish an online exchange to purchase, sell, and trade the stock. To cover the costs incurred by the Office

²¹ R.C. 4164.35.

²² More specifically, R.C. Chapters 1701 and 1704, not in the bill.

²³ R.C. 4164.41.

²⁴ R.C. 4164.43.

in providing these services, the Treasurer of State may charge each purchaser of the stock a monthly fee.²⁵

The bill establishes the following purchase requirements for consortium stock:

--If the purchaser is an Ohio resident who pays Ohio income tax or a business entity organized under Ohio law, no minimum purchase of shares is required.

--If the purchaser is an out-of-state resident, the minimum purchase is 100 shares.

--If the purchaser is a business entity organized under the laws of another state, the minimum purchase is 1,000 shares.

A foreign national, foreign company, or foreign country cannot own more than 33% shares of stock that entitle the holder to vote, but they may own an unlimited amount of preferred stock that does not allow the holder to vote.²⁶

Shareholder meetings

The Authority may preside over the first organizational meeting of the shareholders, which must be held as early as 540 days after the formation of the Consortium, or within 180 days after the sale of one million shares of the original offering of stock, whichever comes first. Thereafter, the annual meeting of the shareholders for the election of directors and the transaction of other business is to be held on the date in each year determined by the Board of Directors.²⁷

Business of the Consortium

eGeneration Foundation as agent

The bill specifies that, immediately after the Consortium's organization and before its first organizational meeting, the nonprofit eGeneration Foundation, or its successor entity, is to act as an agent to encourage investment into the Consortium, to educate the public of the importance of isotopes, and to lobby the federal government, as the Authority approves. The Foundation may expend Consortium-derived funds, at its discretion and with the approval of the Authority, of up to one million dollars annually, provided the Foundation remains a nonprofit organization and pays no more than one manager \$110,000 or less annually and no other employees more than \$70,000 annually. The Authority, at its discretion, may approve more discretionary spending for the Foundation prior to the first organizational meeting of the Consortium.²⁸

²⁵ R.C. 4164.45.

²⁶ R.C. 4164.46.

²⁷ R.C. 4164.17 and 4164.48.

²⁸ R.C. 4164.50(A) and (B).

Directors

The Consortium is to be managed by a board of directors. Directors must be at least 18 years old, an Ohio resident, and an American citizen. The number of directors constituting the entire board of directors is to be the number, not less than one or more than 20, that is fixed from time-to-time by a majority of the total number of directors that the Consortium would have, prior to any increase or decrease, if there were no vacancies. Until otherwise fixed by the directors, the number of directors constituting the entire board is to be four.

Directors are to be elected at each annual meeting of shareholders to hold office until the next annual meeting and until their successors have been elected and qualified or until their death, resignation, or removal in the manner provided by the bill.

For their own government, the directors may adopt bylaws that are not inconsistent with the articles or regulations.²⁹

Budget

After its first meeting, the Consortium is to determine its annual budget.³⁰

Audits

The Auditor of State or the Auditor's legally authorized representatives is required to annually audit the financial accounts of the Consortium, provided that the working papers and files of the Auditor relating to the audits are not public records.³¹

Power-producing nuclear reactors

The bill authorizes the Consortium, with the consent of a majority of its shareholders and the USDOE, USNRC, or U.S. military, to build one or more demonstration power-producing nuclear reactors in Ohio. The reactors cannot, however, transmit electricity or district heat outside Ohio.³² The bill prohibits both the Authority and Consortium from operating a power-producing reactor or research reactor outside Ohio.³³

Tax credits for consortium investments

The bill authorizes a nonrefundable tax credit for a person that purchases stock in the Consortium from its initial offering (see "**Stock**," above). The shareholder applies to the Director of Development Services to receive a certificate authorizing the purchaser to claim the credit.³⁴

²⁹ R.C. 4164.52.

³⁰ R.C. 4164.50(C).

³¹ R.C. 4164.63.

³² R.C. 4164.58.

³³ R.C. 4164.59.

³⁴ R.C. 122.97(B).

The credit may be claimed against a variety of taxes, i.e., the commercial activity tax, personal income tax, financial institutions tax, insurance premiums tax, petroleum activity tax, and public utility excise taxes. However, it may not be claimed immediately. Instead, the credit may not be claimed until at least the fifth year after the certificate is issued or for any of the ten following years.

The amount of the credit is based on a percentage of the Consortium stock's purchase price. If the credit is claimed in the fifth year after the certificate is issued, the credit amounts to 10% of this purchase price. If a shareholder defers claiming the credit, the credit percentage increases by 2.5% each year until the credit is claimed. But the credit must be claimed for the earlier of the 15th year after the certificate's issuance, at which time the credit equals 35% of the purchase price, or the year in which the Consortium dissolves, terminates, or declares bankruptcy. The credit is nonrefundable, but any unclaimed balance may be carried forward for 15 years.³⁵

Credit transfer

A person that holds a tax credit certificate may transfer the certificate and, thus, the right to claim the credit to another person. The new holder may then claim the credit on the same terms and within the same time period applicable to the shareholder who was initially issued the certificate. After the transfer is made, the bill requires the seller to certify the identity of the new holder to the Director of Development Services.³⁶

Model for future legislation for other industries

The bill codifies the intent of the General Assembly in enacting the bill as being the encouragement of the bill's use as a model for future legislation to further the pursuit of innovative research and development for any industry in Ohio.³⁷

COMMENT

1. As explained above, the bill creates the Ohio Nuclear Development Authority, which is required to form the *for-profit* Ohio Nuclear Development Consortium. The bill grants the Consortium certain duties and authority. It requires the Treasurer of State's office to provide for an initial offering of Consortium stock, provide equity management services for the Consortium, and establish an online exchange to purchase, sell, and trade Consortium stock. It also requires the Auditor of State to annually audit the private financial accounts of the Consortium.

³⁵ R.C. 122.97(C), 5725.98, 5726.98, 5729.98, 5747.02, 5747.98, and 5751.98.

³⁶ R.C. 122.97(D).

³⁷ R.C. 4164.02.

The Ohio Constitution prohibits the General Assembly from passing a special act conferring corporate powers.³⁸ Relevantly, a plaintiff wishing to challenge a law on this ground may have difficulty showing standing to bring an action.³⁹

2. The bill requires the Authority to submit annually an updated strategic plan, a summary of activities, and recommendations, but does not specify to whom these items must be submitted.⁴⁰

HISTORY

Action	Date
Introduced	02-26-19

H0104-I-133/ks

³⁸ Article XIII, §1.

³⁹ See *ProgressOhio.org, Inc. v. JobsOhio*, 139 Ohio St.3d 520 (2014).

⁴⁰ R.C. 4164.33.