

FLORIDA HOUSE OF REPRESENTATIVES BILL ANALYSIS

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BILL #: [CS/CS/HB 1461](#)

TITLE: Advanced Nuclear Reactors

SPONSOR(S): Miller and Gentry

COMPANION BILL: [SB 1696](#) (McClain)

LINKED BILLS: None

RELATED BILLS: None

Committee References

[Economic Infrastructure](#)

15 Y, 0 N, As CS



[Budget](#)

25 Y, 0 N



[Commerce](#)

23 Y, 0 N, As CS

SUMMARY

Effect of the Bill:

The bill authorizes the Florida Public Service Commission (PSC) to regulate advanced nuclear reactors (ANRs) and related nuclear materials, and addresses several areas of state policy related to the promotion and development of energy resources. Specifically, the bill:

- Requires the PSC, in consultation with the University of Florida's Nuclear Fuels and Materials Characterization Facility, to regulate ANRs, the possession and use of nuclear materials, and safety and construction standards for the development and operation of ANRs.
- Requires the PSC, the Florida Department of Health, and the Florida Department of Environmental Protection to jointly establish criteria for the certification of laboratories that use nuclear materials for developing technology for nuclear power plants.
- Authorizes, subject to certain conditions, the possession of nuclear materials for the research, design, testing, construction, and operation of ANRs.
- Includes the promotion of nuclear resources as a consideration in Florida's energy policy, electric utility planning, and the PSC's determination of need for new electrical power plants.
- Provides that an application for certification for an off-grid ANR as part of the Power Plant Siting Act process does not require a determination of need from the PSC.
- Provides that ANRs are not subject to the Power Plant Siting Act, under certain conditions.

Fiscal or Economic Impact:

The bill has a negative impact on state government expenditures. The PSC will be required to expend resources to implement its new responsibilities under the bill. The PSC will need to create discrete units within the agency, which may require additional staffing, office space, as well as other additional expenses.

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ANALYSIS

EFFECT OF THE BILL:

The bill addresses several areas of state policy related to nuclear energy promotion and development, utility regulation, and the [regulation of nuclear power plants and nuclear materials](#).

The bill provides that based on Florida's energy needs, economic considerations, statewide energy reliability goals, and the need for additional base-load electrical generating capacity, the Legislature intends to promote the development of nuclear energy and to protect the viability of Florida's existing nuclear energy facilities, encourage investment into nuclear energy within the state, and minimize rising electricity rates through the use of nuclear energy. (Section [1](#))

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Nuclear Regulation

The bill grants the [Florida Public Service Commission \(PSC\)](#) authority to regulate advanced nuclear reactors (ANRs) in this state and requires the PSC, in consultation with the University of Florida's [Nuclear Fuels and Materials Characterization Facility](#), to do the following, at a minimum:

- Evaluate and approve designs for ANRs.
- Issue permits for the possession, transportation, transfer, and use of [nuclear materials](#) in sufficient quantities to facilitate ANR research, design, testing, construction, and operation.
- Prescribe safety and construction standards for the use of nuclear materials in the development and operation of ANRs. (Section [1](#))

The bill defines the term “advanced nuclear reactor” to mean a nuclear fusion¹ reactor, or a nuclear fission² reactor that uses new or significantly improved designs compared to commercial nuclear reactors in operation as of January 1, 2021, including improvements such as:

- Inherent or passive safety features;
- Lower waste yields;
- Improved fuel performance or efficiency;
- Significantly improved designs, materials, fuels, or cooling systems;
- Reduced consumption of cooling water and other environmental impacts; or
- Flexibility in operational output or ability to integrate into electric or nonelectric applications. (Section [1](#))

The bill requires the PSC, the [Florida Department of Health \(FDOH\)](#), and the [Florida Department of Environmental Protection \(FDEP\)](#) to jointly establish criteria for the certification of laboratories that use nuclear materials for the purpose of researching, designing, testing, or otherwise developing technology for nuclear power plants as provided in the bill. (Section [1](#))

The bill authorizes a person, corporation, or entity to possess nuclear materials for the research, design, testing, construction, and operation of ANRs. However, the bill prohibits the possession of nuclear materials in quantities that pose a danger to national defense and security or public health and safety, except for active military personnel or contractors acting pursuant to a lawful military order. (Section [1](#))

The bill requires an ANR research facility operator to obtain a permit from the PSC for the use and storage of nuclear materials for the purpose of research and testing. The bill also requires a permit for the transfer, receipt, possession, use, or disposal of nuclear materials relating to the operation of ANRs. Before issuing such permits, the PSC must determine that the facility or reactor is equipped with radiation control devices that will abate or prevent [radiological contamination](#) in compliance with the standards and rules established under the bill. (Section [1](#))

The bill requires any construction or significant design modification of an ANR to be certified by the PSC before such construction or modification may begin. Such construction or significant design modification must include radiation control devices that will abate or prevent radiological contamination in compliance with the standards and rules established under the bill. The bill requires the PSC, before issuing such a certification, to consider, at a minimum, all of the following:

- The extent to which the design will effectively mitigate and prevent danger to the public health and safety.
- The compliance of the design with the safety standards prescribed by the commission.
- The ability of the design to address known or reasonably foreseeable risks, including system failures, accidents, natural disasters, and extreme weather events.

¹ “Fusion” occurs when two atoms slam together to form a heavier atom, like when two hydrogen atoms fuse to form one helium atom, creating huge amounts of energy without producing highly radioactive byproducts. See U.S. Dep’t of Energy (USDOE), *Fission and Fusion: What is the Difference?*, <https://www.energy.gov/ne/articles/fission-and-fusion-what-difference> (last visited Jan. 26, 2026).

² “Fission” occurs when a neutron collides with a larger atom, forcing it to excite and split into two smaller atoms, releasing a tremendous amount of energy. *Id.*

- The completeness and accuracy of engineering calculations and testing data for the design.
- The ability of the design to promote the efficient and sustainable use of water and other natural resources. (Section [1](#))

The bill provides that the PSC may grant a reciprocal permit or certification to applicants who receive a permit or certification from another state or federal agency, provided the safety standards of the other jurisdiction are no less stringent than the standards and rules established under the bill. (Section [1](#))

The bill establishes a civil penalty of up to \$100,000 per day for any violation of the provisions of the bill or rules adopted under the bill, with a maximum penalty of \$1 million for any related series of violations. (Section [1](#))

The bill requires the PSC, after consultation with FDOH and FDEP, to adopt rules to implement the provisions of the bill related to the regulation of nuclear material and certification of nuclear facilities. In developing the rules, the PSC must refer to the provisions of law and agency rules adopted under ch. 403, part II, F.S., which includes the [Florida Electrical Power Plant Siting Act \(PPSA\)](#),³ the Florida Electric Transmission Siting Act,⁴ and the [PSC's determination of need](#) for electrical power plants.⁵ (Section [1](#))

Energy Policy and Utility Regulation

Energy Policy

The bill amends Florida's state energy policy⁶ to provide that it is the state's policy to encourage the research, development, demonstration, and application of domestic advanced nuclear energy resources. (Section [4](#))

The bill further provides that it is the intent of the Legislature to promote the development of clean energy and protect the economic viability of Florida's existing clean energy and protect the economic viability of Florida's existing clean energy facilities. The bill defines "clean energy" to mean energy produced by nuclear reactors as well as renewable energy and renewable natural gas. The bill also requires all electric utilities⁷ to develop standards for the promotion, encouragement, and expansion of the use of clean energy resources, and to file an annual report with the PSC identifying such standards. (Section [3](#))

Ten-year Site Plans

The bill requires the PSC, in reviewing whether a utility's ten-year site plan is suitable, to consider:

- The amount of nuclear energy resources the utility produces or purchases.
- The amount of nuclear energy resources the utility plans to produce or purchase over the 10-year planning horizon and the means by which the production or purchases will be achieved. (Section [2](#))

Power Plant Siting

The bill amends the PPSA to provide that a non-utility entity may apply for certification of a power plant under the provisions of the PPSA.⁸ (Section [5](#))

The bill also provides that the PPSA does not apply to the following, unless the applicant elects to apply for certification under the act:

³ [Ss. 403.501-403.518, F.S.](#), are known collectively as the "Florida Electrical Power Plant Siting Act."

⁴ [Ss. 403.52-403.5365, F.S.](#), are known collectively as the "Florida Electric Transmission Line Siting Act."

⁵ [Ss. 403.519](#) and [403.537, F.S.](#), address the PSC's determination of need for electrical power plants and electric transmission lines, respectively.

⁶ [S. 377.601, F.S.](#)

⁷ Florida law defines the term "electric utility" to mean any municipal electric utility, investor-owned electric utility, or rural electric cooperative which owns, maintains, or operates an electric generation, transmission, or distribution system within the state. [S. 366.02\(4\), F.S.](#)

⁸ The bill amends the definition of "applicant" under the PPSA to mean any electric utility or other person that applies for certification pursuant to the provisions of the PPSA.

- Capacity expansions of 75 megawatts or less, in the aggregate, of one or more ANRs installed within the boundaries of an electrical power plant site previously certified under the act.
- One or more ANRs to be located within the boundaries of an electrical power plant site previously certified under this act, provided that:
 - The ANR or ANRs are intended to replace an existing electrical power plant located on the site.
 - The certificate holder intends to retire the existing electrical power plant from service.
 - The gross capacity of the ANR or ANRs, in the aggregate, does not exceed the gross capacity of the electrical power plant to be retired. (Section [6](#))

The bill requires the PSC, in making a determination of need for an electrical power plant subject to the PPSA, to take into account whether nuclear resources are used to the extent available. The bill removes the requirement that the PSC take into consideration the use of renewable energy resources and technologies. (Section [8](#))

The bill also provides that an application for an ANR that will not be interconnected to the state's electrical power grid is not required to obtain a determination of need from the PSC as part of the PPSA process. (Sections [7](#) and [8](#))

Effective Date

The bill provides an effective date of July 1, 2026. (Section [9](#))

RULEMAKING:

The bill requires the PSC, FDOH, and FDEP to jointly establish criteria for the certification of laboratories that use nuclear materials for the purpose of researching, designing, testing, or otherwise developing technology for nuclear power plants as provided in the bill.

The bill requires the PSC to adopt rules to implement the provisions of the bill related to the regulation of nuclear material and certification of nuclear facilities.

Lawmaking is a legislative power; however, the Legislature may delegate a portion of such power to executive branch agencies to create rules that have the force of law. To exercise this delegated power, an agency must have a grant of rulemaking authority and a law to implement.

FISCAL OR ECONOMIC IMPACT:

STATE GOVERNMENT:

The bill has a negative impact on state government expenditures. The PSC will be required to expend resources to implement its new responsibilities under the bill. The PSC would assume responsibilities that will necessitate the creation of discrete units within the agency to accommodate these new responsibilities, and the recruitment of staff with the requisite training and necessary experience. The PSC estimates it will need 83 additional staff (73 Technical staff) over the course of several years. In fiscal year 2026-2027, the PSC estimates they will need 17 additional staff to begin rulemaking and infrastructure planning, as well as expenses needed to facilitate inspections of the advanced nuclear reactor facilities. The PSC also estimates a need for 4 regional office spaces, and additional vehicles equipped with standard safety features and necessary equipment to support field operations. The recurring and nonrecurring funding need by fiscal year is:

	Recurring	Non-Recurring	Total
FY 2026-27	\$ 3,662,273	\$ 236,015	\$ 3,898,288
FY 2027-28	\$ 3,654,991	\$ 851,655	\$ 4,506,646
FY 2028-29	\$ 2,011,063	\$ 373,804	\$ 2,384,867
FY 2029-30	\$ 4,481,895	\$ 1,214,973	\$ 5,696,868

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PRIVATE SECTOR:

The bill may encourage the development of new ANRs in Florida.

RELEVANT INFORMATION

SUBJECT OVERVIEW:

[Regulation of Nuclear Energy and Nuclear Material](#)

Nuclear Regulation in the US

The United States federal government maintained a complete monopoly on the use, control, and ownership of nuclear technology until 1954 when, through passage of the Atomic Energy Act of 1954 (AEA), it authorized private development of nuclear technology for peaceful purposes, such as nuclear power for generating electricity.¹⁰ In the AEA, Congress declared that the development, use, and control of atomic energy shall be directed toward two primary purposes: first, “to make the maximum contribution to the general welfare, subject at all times to the paramount objective of making the maximum contribution to the common defense”; and second, “to promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise and security.”¹¹

The AEA created the Atomic Energy Commission (AEC), which exercised exclusive jurisdiction over the license, transfer, delivery, acquisition, possession, and use of all nuclear materials, but left to the states the established jurisdiction over the generation, sale, or transmission of electric power.¹²

In 1959, Congress amended the AEA to expand state-level jurisdiction over certain nuclear materials and nuclear power.¹³ Under the amended AEA, the AEC could enter into agreements with states to relinquish regulatory authority over certain nuclear materials not capable of creating, and materials not in quantities sufficient to create, a nuclear chain reaction.¹⁴ Agreement States¹⁵ were permitted to assert increased regulatory authority in limited circumstances and with permission from the AEC. However, the amended AEA explicitly retained to the AEC jurisdiction over the construction and operation of nuclear power plants as well as the disposal of certain nuclear

⁹ Public Service Commission, pgs. 7-9, *2026 Agency Legislative Bill Analysis for HB 1461* (2026), On file with the Health Care Budget Subcommittee.

¹⁰ Jason O. Heflin, Congressional Research Service (CRS), *State Authority to Regulate Nuclear Power: Federal Preemption Under the Atomic Energy Act (AEA)*, Nov. 1, 2023, at page 4, available at https://www.congress.gov/crs_external_products/R/PDF/R41984/R41984.7.pdf (last visited Jan. 24, 2026).

¹¹ See Atomic Energy Act of 1954, 42 U.S.C. § 2011, et seq. (2024).

¹² *Id.*

¹³ CRS, *State Authority to Regulate Nuclear Power: Federal Preemption Under the Atomic Energy Act (AEA)*, *supra* note 11, at page 4.

¹⁴ *Id.*

¹⁵ States that enter an agreement under the AEA to take regulatory jurisdiction over certain nuclear materials are known as “Agreement States.” Florida law defines the term “agreement state” in [s. 404.031\(2\), F.S.](#), to mean any state which has consummated an agreement with the NRC under the authority of s. 274 of the Atomic Energy Act of 1954, as amended, as authorized by compatible state legislation providing for acceptance by that state of licensing authority for agreement materials and the discontinuance of such activities by the NRC.

materials deemed by the AEC potentially hazardous.¹⁶ Additionally, the AEA continued to allow states to regulate power generation and activities for purposes other than protection against radiation hazards.¹⁷

U.S. Nuclear Regulatory Commission (NRC)

In 1974, the AEC was replaced by its successor agency, the U.S. Nuclear Regulatory Commission (NRC).¹⁸ The NRC is tasked to ensure the safe use of radioactive materials for beneficial civilian purposes while protecting people and the environment.¹⁹ Its mission is to protect public health and safety and advance the nation's common defense and security by enabling the safe and secure use and deployment of civilian nuclear energy technologies and radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment.²⁰ The NRC's regulatory jurisdiction extends to three primary areas:

- Reactors: Commercial nuclear power plants for generating electric power and research and test reactors used for research, testing, and training.
- Materials: Uses of nuclear material in medical, industrial, and academic settings and facilities that produce nuclear fuel.
- Waste: Transportation, storage, and disposal of nuclear materials and waste, and decommissioning of nuclear facilities from service.²¹

The NRC's primary responsibility is to protect the health and safety of the public.²² Its regulatory functions include establishing standards and regulations, issuing licenses for nuclear facilities and users of nuclear materials, and inspecting facilities and users of nuclear materials to ensure compliance with its requirements.²³

Nuclear Materials

The AEA distinguishes between different categories of nuclear material for regulatory purposes, including special nuclear material, source material, byproduct material, and radium. Congress included in the AEA a clause that states:

Source and special nuclear material, production facilities, and utilization facilities are affected with the public interest, and regulation by the United States of the production and utilization of atomic energy and of the facilities used in connection therewith is necessary in the national interest to assure the common defense and security and to protect the health and safety of the public.²⁴

Special nuclear material (SNM) includes plutonium, uranium-233, and uranium enriched in the isotopes uranium-233 or uranium-235.²⁵ SNMs do not occur naturally but are produced by the irradiation of certain nuclear material in nuclear reactors and could be extracted from used nuclear fuel by chemical separation.²⁶ SNM is only mildly radioactive, but it includes certain isotopes that, in concentrated form, could be used as the primary ingredients of nuclear explosives. These materials, in amounts greater than formula quantities, are defined as "strategic special nuclear material" (SSNM).²⁷

¹⁶ CRS, *State Authority to Regulate Nuclear Power: Federal Preemption Under the Atomic Energy Act (AEA)*, *supra* note 11, at page 5.

¹⁷ *Id.*

¹⁸ Nuclear Regulatory Commission (NRC), *About NRC*, <https://www.nrc.gov/about-nrc> (last visited Jan. 24, 2026).

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

²² NRC, *NRC—Independent Regulator of Nuclear Safety*, <https://www.nrc.gov/reading-rm/doc-collections/nuregs/brochures/br0164/index> (last visited Jan 24, 2026).

²³ *Id.*

²⁴ NRC, *Special Nuclear Material*, <https://www.nrc.gov/materials/types/sp-nucmaterials> (last visited Jan. 24, 2026).

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

Source material includes most uranium and thorium ores and product resulting from the mining and milling processes.²⁸ Source material can also be generated as a side product during the refining of ores mined for other precious metals.²⁹ Source material is used for a variety of private commercial applications, including as fuel for nuclear reactors, production of metals used to make capacitors for electronic devices, and the manufacture of certain industrial and military products.³⁰ One source material, natural uranium, contains uranium-235, a material that can be concentrated (enriched) to make highly enriched uranium, the primary ingredient of some nuclear explosive designs.³¹

Byproduct materials include various materials, some of which are regulated and some exempt from regulation, and can be used for a variety of applications, including commercial, medical, and research activity.³² Under the AEA, Agreement States can exercise regulatory authority over byproduct material, but the NRC retains authority in other states.³³

NRC Agreement State Program

The AEA allows states to establish regulatory programs to assume authority to license and regulate byproduct materials (radioisotopes), source materials (uranium and thorium), and certain quantities of special nuclear materials.³⁴ To transfer authority to a state, the AEA requires an agreement signed by the Governor of the state and the Chairman of the NRC.³⁵

As part of its regulatory oversight of Agreement States, the NRC conducts training courses and workshops, evaluates technical licensing and inspection issues, evaluates state rule changes, and provides early and substantive involvement of the states in NRC rulemaking and other regulatory efforts.³⁶ The NRC also coordinates with Agreement States the reporting of event information and responses to allegations reported to NRC involving Agreement States.³⁷

Florida became an Agreement State in 1964.³⁸ The FDOH's Bureau of Radiation Control is the primary state office that administers the Agreement State program in Florida and oversees the licensing and control of nuclear materials and facilities.³⁹ The Florida Division of Emergency Management implements NRC directives with respect to radiological emergencies.⁴⁰ In its last periodic review of Florida's Agreement State program, the NRC found Florida's performance to be adequate to protect public health and safety but not compatible with the NRC's program due in part to delayed implementation of recent NRC requirements.⁴¹

²⁸ NRC, *Source Material*, <https://www.nrc.gov/materials/types/srcmaterial> (last visited Jan. 24, 2026).

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

³² NRC, *Byproduct Material*, <https://www.nrc.gov/materials/types/byproduct-mat> (last visited Jan. 24, 2026).

³³ *Id.*

³⁴ NRC, *Agreement State Program*, <https://www.nrc.gov/about-nrc/state-tribal/agreement-states> (last visited Jan. 24, 2026).

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.*

³⁸ See U.S. Atomic Energy Commission, *Agreement Between the Atomic Energy Commission and the State of Florida, Discontinuance of Certain Commission Regulatory Authority and Responsibility Within the State*, available at <https://bmswnrcgovsamediaprd.blob.core.windows.net/prd/libraries/media/nrcweb/nmss/pdf/flagreements.pdf> (last visited Jan. 24, 2026); see also [s. 404.061\(1\), F.S.](#) (authorizing the Governor to enter into agreements with the Federal Government which provide for the assumption by certain responsibilities with respect to sources of ionizing radiation).

³⁹ NRC, *Florida: Agreement State Information*, <https://www.nrc.gov/agreement-states/florida> (last visited Jan. 26, 2026).

⁴⁰ [S. 252.60, F.S.](#)

⁴¹ NRC, *Integrated Materials Performance Evaluation Program Review of the Florida Agreement State Program: Final Report*, June 12-16, 2023, available at <https://www.nrc.gov/docs/ML2328/ML23289A168.pdf> (last visited Jan. 26, 2026). In its review, the NRC found Florida's performance satisfactory for Technical Staffing and Training, Status of Materials Inspection Program, Technical Quality of Inspections, Technical Quality of Licensing Actions, Technical Quality of Incidents and Allegation Activities, and Sealed Source and Device Evaluation; but found it unsatisfactory for Legislation, Regulations, and other Program Elements.

Recent Federal Activity to Promote Nuclear Energy

More recently, the AEA was amended again in 2024 when Congress passed the “Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act of 2024,” also known as the “ADVANCE Act.”⁴² The ADVANCE Act revised the NRC’s mission and responsibilities to prioritize regulatory efficiency and to support the development of nuclear energy in several ways, including decreasing licensing application fees for advanced reactors, increasing staffing for NRC reviews, providing for prize awards for deployment, and eliminating costs associated with pre-application activities and early site permits at U.S. Department of Energy (USDOE) sites.⁴³ The ADVANCE Act also requires 25-month deadlines for NRC license issuance after receiving an application, requires the NRC to develop guidance to license and regulate microreactor designs, and increases permitting speed for certain sites.⁴⁴

In 2025, President Donald J. Trump issued Executive Orders directed toward reforming nuclear energy policy on the federal level:

- **Executive Order 14299: Deploying Advanced Nuclear Reactor Technologies for National Security:**
 - This order established a comprehensive national security policy focused on accelerating the development, deployment, and export of U.S.-designed advanced nuclear technologies. The policy aims to ensure rapid development and deployment of advanced nuclear technologies to support national security objectives, enable private sector investment and innovation, and coordinate regulatory efforts across the U.S. Department of War and the USDOE.
- **Executive Order 14300: Ordering the Reform of the Nuclear Regulatory Commission:**
 - This order initiated a comprehensive reform of the NRC with a goal of deploying new nuclear reactor technologies and expanding U.S. nuclear energy capacity from approximately 100 GW in 2024 to 400 GW by 2050. The order directed the NRC to undergo significant structural and operational reforms, including reorganization, potential reductions in its workforce, and a wholesale revision of regulations and guidance documents to be completed by November of 2026. The order redefined the NRC’s mission to include facilitating nuclear power while ensuring reactor safety and required the NRC to consider the benefits of nuclear power to economic and national security alongside traditional safety, health, and environmental considerations.
- **Executive Order 14301: Reforming Nuclear Reactor Testing at the Department of Energy:**
 - This order sought to reform nuclear reactor testing at the USDOE and accelerate the development of advanced nuclear technologies for domestic production. The order established a comprehensive framework to expedite the review, approval, and deployment of advanced reactors within the USDOE’s jurisdiction. The order also mandated environmental review reforms under the National Environmental Policy Act (NEPA) and directed the use of all available authorities to eliminate or expedite environmental reviews for various permits and approvals.
- **Executive Order 14302: Reinvigorating the Nuclear Industrial Base:**
 - This order aimed to reinvigorate America’s nuclear energy industrial base in an effort to ensure national and economic security. The order established a comprehensive policy to expedite and promote nuclear energy production and operation to provide affordable, reliable, safe, and secure energy to the American people. It also aimed to power ANR technologies and build associated supply chains that secure global industrial and digital dominance, while achieving energy independence. The order required the U.S. Secretary of Energy to develop plans for expanding domestic uranium conversion and enrichment capabilities and prioritized work with the nuclear

⁴² Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act of 2024, Pub. L. No. 118-67, 118th Cong. (July 9, 2024).

⁴³ PSC, *Advanced Nuclear Power Feasibility Report*, Mar. 31, 2025, at page 47, available at

<https://www.floridapsc.com/pscfiles/website-files//PDF/Home/Advanced%20Nuclear%20Power%20Feasibility%20Report.pdf> (last visited Jan. 26, 2026).

⁴⁴ *Id.*

industry to facilitate 5 gigawatts of power uprates to existing reactors and have 10 new large reactors under construction by 2030.⁴⁵

Preemption in Nuclear Regulation

The legal doctrine of preemption is derived from the constitutional principle that federal law takes precedence over inconsistent state law. The “Supremacy Clause” of the U.S. Constitution states: “[t]his Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land.”⁴⁶ Thus, a federal law will prevail over an inconsistent state law. However, a state law need not be utterly incompatible with federal law in order to be preempted.⁴⁷ Courts interpret the Supremacy Clause to conclude that where Congress has expressed an intent to displace state authority within a given subject matter by establishing exclusive federal authority, state action in the field is thereby preempted.⁴⁸

While courts have recognized the AEA to grant the NRC exclusive authority over radiological safety related to the construction and operation of nuclear power plants, the precise extent of preemption over state law is unclear.⁴⁹ Some states have sought to assert authority over nuclear power production by directing laws at the initial determination of whether a need for nuclear power exists or whether nuclear power is economically feasible.⁵⁰

Texas, et al. v. NRC

One recent attempt to clarify the precise boundary of federal-state authority is a lawsuit⁵¹ filed on December 30, 2024, against the NRC by various states and private industry entities.⁵² The state of Florida joined the lawsuit on April 7, 2025.⁵³ The lawsuit alleges that certain ANRs fall outside the scope of the NRC’s original authority, and that by requiring smaller, less hazardous reactors to comply with the same regulations as traditional reactors, the NRC has overstepped its jurisdiction.⁵⁴ After issuance of the Trump administration’s executive orders supporting nuclear energy, the court granted a stay to permit the parties to discuss a potential path forward without further litigation.⁵⁵ That case is still pending.

Advanced Nuclear Reactors (ANRs)

An advanced nuclear reactor (ANR) is a term that describes a category of nuclear technology that maintains the benefits of existing technology while offering improved safety, scaling, and output features, as well as increased industrial applications and additional use cases.⁵⁶

ANR designs seek to use combinations of new and existing technologies and materials to improve upon earlier generations of nuclear reactors in one or more of the following areas: cost, safety, security, waste management, and

⁴⁵ PSC, *Advanced Nuclear Update*, at pages 1-2, available at <https://www.floridapsc.com/pscfiles/website-files//PDF/Home/AdvancedNuclearUpdate.pdf> (last visited Jan. 16, 2026). See also The White House, *Executive Orders*, <https://www.whitehouse.gov/presidential-actions/executive-orders> (last visited Jan. 26, 2026).

⁴⁶ U.S. Const. art. VI, cl. 2.

⁴⁷ CRS, *State Authority to Regulate Nuclear Power: Federal Preemption Under the Atomic Energy Act (AEA)*, *supra* note 11, at page 2.

⁴⁸ *Id.*

⁴⁹ *Id.* at 12.

⁵⁰ *Id.*

⁵¹ *Texas v. NRC*, Case No. 6:24-cv-00507-JDK (E.D. Tex.).

⁵² PSC, *Advanced Nuclear Update*, *supra* note 46, at page 8.

⁵³ *Id.* at 9.

⁵⁴ *Id.* at 8-9.

⁵⁵ *Id.*

⁵⁶ PSC, *Advanced Nuclear Power Feasibility Report*, *supra* note 44, at page 19.

versatility.⁵⁷ To achieve these improvements, advanced designs may incorporate one or more of the following characteristics: inherent or passive safety features, simplified or modular designs, enhanced load-following capabilities, high-temperature stability, fast neutron spectrums, and “closed” fuel cycles.⁵⁸ ANRs also fall under sub-categories based on their output capacity:

- Microreactor: < 50 Megawatts (MW)
- Small (SMR): 50-300 MW
- Medium: 300-600 MW
- Large: >600 MW⁵⁹

Some ANRs have standardized or modular designs and are commonly referred to as small modular reactors (SMRs). SMRs can be factory built, have a smaller site footprint once installed, and can be incrementally scaled by installing additional units in sequence.⁶⁰ While a number of SMRs are in the process of seeking certification, the NRC has approved only one SMR design, the NuScale Power Module, which was approved by the NRC in 2023.⁶¹

Currently, there are three large ANR designs certified by the NRC: Korea Electric Power Corporation’s Advanced Power Reactor 1400 (APR1400), GE Hitachi’s Economic Simplified Boiling Water Reactor (BWR), and Westinghouse’s AP1000.⁶² The AP1000 is the only large ANR presently in commercial service in the U.S., located at Plant Vogtle in Georgia.⁶³

Florida Public Service Commission (PSC)

The Florida Public Service Commission (PSC) is an arm of the legislative branch of government.⁶⁴ The role of the PSC is to ensure Florida’s consumers receive utility services, including electric, natural gas, telephone, water, and wastewater, in a safe and reliable manner and at fair prices.⁶⁵ The PSC exercises regulatory authority over utilities in the following areas: rate base or economic regulation; competitive market oversight; and monitoring of safety, reliability, and service issues.⁶⁶ In carrying out its duties, the PSC sets rates and charges for investor-owned electric, natural gas, water, and wastewater utilities;⁶⁷ approves territorial agreements and resolves service area disputes among electric and natural gas utilities;⁶⁸ certifies service areas for water and wastewater utilities;⁶⁹ and oversees carrier-to-carrier relationships and related interconnection agreements to prevent anticompetitive behavior in the telecommunications sector.⁷⁰ In 2024, the PSC regulated four investor-owned electric companies, five investor-owned natural gas utilities, and 153 investor-owned water and wastewater utilities, and exercised competitive market oversight over 276 telecommunications companies operating in the state.⁷¹

⁵⁷ CRS, *Advanced Nuclear Reactors: Technology Overview and Current Issues*, Feb. 17, 2023, at page 7, available at https://www.congress.gov/crs_external_products/R/PDF/R45706/R45706.7.pdf (last visited Jan. 16, 2026).

⁵⁸ *Id.*

⁵⁹ PSC, *Advanced Nuclear Power Feasibility Report*, *supra* note 44, at page 19.

⁶⁰ See, e.g., NuScale, *NuScale Power Module*, <https://www.nuscalepower.com/products/nuscale-power-module> (last visited Jan. 26, 2026).

⁶¹ USDOE, *NRC Certifies First U.S. Small Modular Reactor Design*, Jan. 20, 2023, <https://www.energy.gov/ne/articles/nrc-certifies-first-us-small-modular-reactor-design> (last visited Jan. 26, 2026).

⁶² PSC, *Advanced Nuclear Power Feasibility Report*, *supra* note 44, at page 21.

⁶³ *Id.*

⁶⁴ [S. 350.001, F.S.](#)

⁶⁵ See PSC, *PSC Homepage*, <http://www.psc.state.fl.us> (last visited Jan. 26, 2026).

⁶⁶ PSC, *About the PSC*, <https://www.psc.state.fl.us/about> (last visited Jan. 26, 2026).

⁶⁷ [Ss. 366.04\(2\)\(b\), 366.06\(1\), 367.011\(2\)](#), and [367.081\(1\)](#), F.S.

⁶⁸ [S. 366.04\(2\)\(d\)-\(e\) and \(3\)\(a\)-\(b\)](#), F.S.

⁶⁹ [Ss. 367.031 and 367.045](#), F.S.

⁷⁰ See [s. 364.16](#), F.S.

⁷¹ PSC, *About the PSC*, *supra* note 67. While the PSC does not fully regulate publicly owned municipal or cooperative utilities, it retains limited jurisdiction, including territorial boundaries, over 35 municipally owned electric systems, 18 rural electric cooperatives, 27 municipally owned natural gas utilities, and 4 gas districts, and exercises statewide safety authority over all electric and natural gas systems.

The PSC consists of five Commissioners selected for their knowledge and competence in one or more fields substantially related to the duties and functions of the PSC, including economics, accounting, engineering, finance, natural resource conservation, energy, public affairs, and law.⁷² Assisting the Commissioners in evaluating petitions and proceedings before it, the PSC has a staff comprised of various divisions with particular areas of expertise, including engineering, economics, accounting and finance, and law.⁷³

The PSC's operations are funded through the Florida Public Service Regulatory Trust Fund, and each utility regulated by the PSC is required to pay a regulatory assessment fee twice a year that, to the extent practicable, is related to the PSC's cost of regulating that type of company.⁷⁴ While the PSC's budget is set annually by the Legislature, the PSC does not receive any funding from the General Revenue Fund.⁷⁵

[Florida Department of Health \(FDOH\)](#)

The Florida Department of Health (FDOH) was created for the purpose of protecting and promoting the health of all residents and visitors in the state through organized state and community efforts.⁷⁶ FDOH's primary tasks are to:

- Identify, diagnose, and conduct surveillance of diseases and health conditions in the state and accumulate the health statistics necessary to establish trends.
- Implement interventions that prevent or limit the impact or spread of diseases and health conditions.
- Collect, manage, and analyze vital statistics and other health data to inform the public and formulate public health policy and planning.
- Maintain and coordinate preparedness for and responses to public health emergencies in the state.
- Provide or ensure the provision of quality health care and related services to identified populations in the state.
- Regulate environmental activities that have a direct impact on public health in the state.
- Regulate health practitioners for the preservation of the health, safety, and welfare of the public.⁷⁷

Bureau of Radiation Control

FDOH's Bureau of Radiation Control (BRC) is the primary state office that administers the NRC's Agreement State program in Florida to oversee the licensing and regulation of radioactive materials users.⁷⁸ The program is authorized under ch. 404, F.S., known as the Florida Radiation Protection Act.⁷⁹ The BRC's program licenses more than 1,800 users, including hospitals, universities, industrial facilities, doctors, roofing companies, a food irradiator, and a medical product irradiator.⁸⁰ The radioactive material employed by these users may be contained in a medical pharmaceutical or inside an industrial device such as a moisture density gauge or a static eliminator. The licenses are dynamic documents that may be amended to accommodate the licensees' needs and industry's changing needs in the use of radioactive materials, and each year the BRC issues over 2,100 license amendments or changes requested by licensees.⁸¹

Each materials license is valid for five years. Program staff inspects each licensee periodically from every six months to every five years depending on the type of license. During the inspection, which may take 100 hours or more at a large facility, the inspector takes direct radiation readings and interviews and observes personnel. The

⁷² [Ss. 350.01, 350.031, F.S.](#)

⁷³ PSC, *About the PSC*, *supra* note 67.

⁷⁴ [S. 350.113, F.S.](#); *see also, e.g., s. 366.14, F.S.*

⁷⁵ Senate Regulated Industries Committee, *Bill Analysis for SB 1312 (2023)*, Mar. 30, 2023, available at <https://flsenate.gov/Session/Bill/2023/1312/Analyses/2023s01312.ri.PDF> (last visited Jan. 26, 2026).

⁷⁶ [S. 20.43, F.S.](#)

⁷⁷ [S. 20.43\(1\), F.S.](#)

⁷⁸ NRC, *Florida: Agreement State Information*, <https://www.nrc.gov/agreement-states/florida> (last visited Jan. 26, 2026).

⁷⁹ [Ss. 404.022\(1\), 404.062, F.S.](#)

⁸⁰ FDOH, *Radioactive Materials*, <https://www.floridahealth.gov/licensing-regulations/radiation-control/radioactive-materials/> (last visited Jan. 26, 2026).

⁸¹ *Id.*

inspector also reviews records, and if necessary, collects samples from equipment surfaces and the general environment which are later analyzed for contamination at FDOH’s radiation laboratory.⁸²

[Florida Department of Environmental Protection \(FDEP\)](#)

The Florida Department of Environmental Protection (FDEP) is the state agency tasked with environmental management and stewardship and with protecting the state’s air, water, and land.⁸³ FDEP’s work is divided into three primary areas:

- **Land and Recreation:** FDEP acquires and protects lands for preservation and recreation, overseeing 175 state parks and trails and more than 12 million acres of public lands and 4 million acres of coastal uplands and submerged lands.
- **Regulatory:** FDEP safeguards natural resources by overseeing permitting and compliance activities that protect air and water quality, and FDEP manages waste cleanups.
- **Ecosystems Restoration:** FDEP protects and improves Florida’s water quality and aquatic resources, working with communities, local governments, and other agencies to protect and restore water quality and supply and to provide funding assistance for water restoration and infrastructure projects, and FDEP coordinates the protection of Florida’s submerged lands and coastal areas.⁸⁴

FDEP is also responsible for collecting and analyzing information concerning energy resources in this state; for coordinating the energy conservation programs of state agencies; and for coordinating the development, review, and implementation of the state’s energy policy.⁸⁵

[Florida Energy Policy & Utility Regulation](#)

Public Utilities

In Florida, the term “public utility” means every person, corporation, partnership, association, or other legal entity supplying electricity or gas to or for the public within the state.⁸⁶ However, the term does not include rural electric cooperatives, municipally owned utilities, or certain other specified entities.⁸⁷ The PSC has jurisdiction to regulate and supervise each public utility in the state with respect to its rates and service.⁸⁸ Public utilities in Florida may not charge or receive any rate not approved by the PSC.⁸⁹

The Florida Supreme Court has, in interpreting the definition of “public utility,” held that the sale of electricity to a single customer makes the provider a public utility under Florida law.⁹⁰

[Energy Policy](#)

The state’s energy policy is codified in [s. 377.601, F.S.](#), and was last revised in 2024.⁹¹ The purpose of the policy is to ensure an adequate, reliable, and cost-effective supply of energy for the state in a manner that promotes the health and welfare of the public and economic growth.⁹² The Legislature requires that the state’s energy policy must be guided by the following goals:

- Ensuring a cost-effective and affordable energy supply.
- Ensuring adequate supply and capacity.

⁸² *Id.*

⁸³ FDEP, *About DEP*, <https://floridadep.gov/sec/sec/content/about-dep> (last visited Jan. 26, 2026).

⁸⁴ *Id.*

⁸⁵ [S. 20.255\(7\), F.S.](#)

⁸⁶ [S. 366.02\(8\), F.S.](#)

⁸⁷ *Id.*

⁸⁸ [S. 366.04\(1\), F.S.](#)

⁸⁹ [S. 366.06\(1\), F.S.](#)

⁹⁰ *PW Ventures, Inc. v. Nichols*, 533 So. 2d 281, 282-84 (Fla. 1988) (interpreting the phrase “to the public”).

⁹¹ Ch. 2024-186, Laws of Fla.

⁹² [S. 377.601\(1\), F.S.](#)

- Ensuring a secure, resilient, and reliable energy supply, with an emphasis on a diverse supply of domestic energy resources.
- Protecting public safety.
- Protecting the state’s natural resources, including its coastlines, tributaries, and waterways.
- Supporting economic growth.⁹³

To further those goals, it is the state’s policy to:

- Promote the cost-effective development and use of a diverse supply of domestic energy resources in the state and discourage energy waste.
- Promote the cost-effective development and maintenance of energy infrastructure that is resilient to natural and manmade threats to the security and reliability of the state’s energy supply.
- Reduce reliance on foreign energy resources.
- Include energy reliability and security considerations in all state, regional, and local planning.
- Utilize and manage effectively energy resources used within state agencies.
- Encourage local governments to include energy considerations in all planning and to support their work in promoting energy management programs.
- Include the full participation of citizens in the development and implementation of energy programs.
- Consider in its decisions the energy needs of each economic sector, including residential, industrial, commercial, agricultural, and governmental uses, and reduce those needs whenever possible.
- Promote energy education and the public dissemination of information on energy and its impacts in relation to the goals.
- Encourage the research, development, demonstration, and application of domestic energy resources, including the use of renewable energy resources.
- Consider, in its decisionmaking, the impacts of energy-related activities on the goals, including the whole-life-cycle impacts of any potential energy use choices, so that detrimental effects of these activities are understood and minimized.
- Develop and maintain energy emergency preparedness plans to minimize the effects of an energy shortage within this state.⁹⁴

Florida law also states that it is in the public interest to promote the development of renewable energy resources in this state, and that renewable energy resources have the potential to help diversify fuel types to meet Florida’s growing dependency on natural gas for electric production, minimize the volatility of fuel costs, encourage investment within the state, improve environmental conditions, and make Florida a leader in new and innovative technologies.⁹⁵ Each public utility in Florida, as well as certain municipal electric utilities and rural electric cooperatives, must continuously offer a purchase contract to producers of renewable energy based on the utility’s full avoided costs.⁹⁶ Such utilities must also offer standardized interconnection agreements and net-metering programs for customer-owned renewable generation, subject to certain requirements.⁹⁷ However, Florida law requires the contracting producer of renewable energy to pay the actual costs of its interconnection with the transmission grid or distribution system.⁹⁸

⁹³ [S. 377.601\(2\), F.S.](#)

⁹⁴ [S. 377.601\(3\), F.S.](#)

⁹⁵ [S. 366.91\(1\), F.S.](#)

⁹⁶ [S. 366.91\(3\)-\(4\), F.S.](#) The term “full avoided costs” is defined in [s. 366.051, F.S.](#), for regulated electric utilities to mean the incremental costs to the utility of the electric energy or capacity, or both, which, but for the purchase, such utility would generate itself or purchase from another source.

⁹⁷ [S. 366.91\(5\)-\(6\), F.S.](#)

⁹⁸ [S. 366.91\(8\), F.S.](#)

Florida's Energy Mix

As of 2023, approximately 73% of Florida's electricity generation comes from natural gas power plants, 11% comes from nuclear power plants, and approximately 7% comes from renewable energy sources.⁹⁹ Florida currently has four nuclear reactors in operation generating electricity, located at Turkey Point and St. Lucie, with all four reactors owned and operated by Florida Power & Light Company.¹⁰⁰ Florida's natural gas power plants are supplied by five interstate pipelines that deliver gas across the state.¹⁰¹

Ten-Year Site Plans

Each electric utility in Florida that generates electricity is required to annually submit to the PSC a Ten-year Site Plan (TYSP) to estimate the utility's power generating needs and the general location of its proposed power plant sites over a 10-year planning horizon.¹⁰² A utility's TYSP is the culmination of a process known as integrated resource planning (IRP), in which the utility considers its forecasted load, conducts a reliability analysis, and evaluates a cost-effective combination of demand-side resources and supply-side resources.¹⁰³

The PSC reviews each TYSP and is required to classify each plan as "suitable" or "unsuitable."¹⁰⁴ The PSC's annual review of utility TYSPs is non-binding, and each TYSP is considered tentative information for planning purposes only, but it does provide state, regional, and local agencies advance notice of proposed power plants and transmission facilities.¹⁰⁵ In its preliminary study of the TYSPs, the PSC must consider:

- The need, including the need as determined by the PSC, for electrical power in the area to be served.
- The effect on fuel diversity within the state.
- The anticipated environmental impact of each proposed electrical power plant site.
- Possible alternatives to the proposed plan.
- The views of appropriate local, state, and federal agencies, including the views of the appropriate water management to the availability of water and its recommendation as to the use by the proposed plant of salt water or fresh water for cooling purposes.
- The extent to which the plan is consistent with the state comprehensive plan.
- The plan with respect to the information of the state on energy availability and consumption.
- The amount of renewable energy resources the utility produces or purchases.
- The amount of renewable energy resources the utility plans to produce or purchase over the ten-year planning horizon and the means by which the production or purchases will be achieved.
- A statement describing how the production and purchase of renewable energy resources impact the utility's present and future capacity and energy needs.¹⁰⁶

Any concerns identified during the review of the utilities' TYSPs may be addressed by the PSC at a formal public hearing, such as a power plant need determination proceeding.¹⁰⁷ After its review of the TYSPs, the PSC makes all of its findings available to FDEP for its consideration at any subsequent site certification proceeding under the

⁹⁹ PSC, *Facts and Figures of the Florida Utility Industry*, 2025, at page 2, available at

<https://www.floridapsc.com/pscfiles/website-files/PDF/Publications/Reports/General/FactsAndFigures/April%202025.pdf> (last visited Jan. 16, 2026).

¹⁰⁰ *Id.* at 7.

¹⁰¹ *Id.* at 18.

¹⁰² PSC, *Review of the 2025 Ten Year Site Plans of Florida's Electric Utilities*, at page 1,

<https://www.floridapsc.com/pscfiles/website-files/PDF/Utilities/Electricgas/TenYearSitePlans//2025/Review.pdf> (last visited Jan. 26, 2026); R. 25-6.071, F.A.C.

¹⁰³ PSC, *Review of the 2025 Ten Year Site Plans of Florida's Electric Utilities*, *supra* note 103, at page 1.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*; [s. 186.801\(2\), F.S.](#)

¹⁰⁶ [S. 186.801\(2\), F.S.](#)

¹⁰⁷ PSC, *Review of the 2025 Ten Year Site Plans of Florida's Electric Utilities*, *supra* note 103, at page 1.

PPSA or the Florida Electric Transmission Line Siting Act.¹⁰⁸ The PSC also provides a copy to the Florida Department of Agriculture and Consumer Services as part of its report on electricity and natural gas forecasts.¹⁰⁹

Florida Power Plant Siting Act (PPSA)

The Power Plant Siting Act (PPSA)¹¹⁰ is the state's centralized process for licensing large power plants.¹¹¹ A certification under the PPSA replaces all local and state permits, but local governments within whose jurisdiction the power plant is to be built, as well as state agencies whose regulatory authority is implicated by the plant, participate in the process. Certification addresses permitting, land use and zoning, and property interests. A certification grants approval for the location of the power plant and its associated facilities such as a natural gas pipeline supplying the plant's fuel, rail lines for bringing coal to the site, and roadways and electrical transmission lines carrying power to the electrical grid, among others.¹¹² A PPSA certification is issued by the Siting Board, comprised of the Governor and the Cabinet, or, in uncontested cases, by FDEP.¹¹³ The PPSA applies to all steam or solar electrical power plants that generate 75 MW or more, but power plants that generate less than 75 MW may elect to apply for certification under the PPSA.¹¹⁴

PSC Determination of Need

The PSC is the exclusive forum for a determination of need for all electrical power plants subject to the PPSA.¹¹⁵ In making its determination, the PSC must consider:

- The need for electric system reliability and integrity.
- The need for adequate electricity at a reasonable cost.
- The need for fuel diversity and supply reliability.
- Whether the proposed plant is the most cost-effective alternative available.
- Whether renewable energy sources and technologies, as well as conservation measures, are utilized to the extent reasonably available.
- The conservation measures taken by or reasonably available to the applicant or its members which might mitigate the need for the proposed plant.
- Other matters within its jurisdiction which it deems relevant.¹¹⁶

For nuclear power plants, the PSC is required to hold a hearing within 90 days after the filing of the petition to determine need and to issue an order granting or denying the petition within 135 days after the date of the filing of the petition.¹¹⁷ In making a determination to either grant or deny the petition, the PSC must consider:

- The need for electric system reliability and integrity, including fuel diversity.
- The need for base-load generating capacity.
- The need for adequate electricity at a reasonable cost.
- Whether renewable energy sources and technologies, as well as conservation measures, are utilized to the extent reasonably available.¹¹⁸

The PSC is also required to take into account whether the proposed nuclear power plant will:

- Provide needed base-load capacity.

¹⁰⁸ [S. 186.801\(2\), F.S.](#), [Ss. 403.501-403.518, F.S.](#), are known collectively as the “Florida Electrical Power Plant Siting Act,” and [ss. 403.52-403.5365, F.S.](#), are known collectively as the “Florida Electric Transmission Line Siting Act.”

¹⁰⁹ [S. 377.703\(2\)\(e\), F.S.](#); PSC, *Review of the 2025 Ten Year Site Plans of Florida’s Electric Utilities*, *supra* note 103, at page 2.

¹¹⁰ [Ss. 403.501-403.518, F.S.](#), are known collectively as the “Florida Electrical Power Plant Siting Act.”

¹¹¹ FDEP, *Power Plant Siting Act*, <https://floridadep.gov/water/siting-coordination-office/content/power-plant-siting-act> (last visited Jan. 26, 2026).

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Id.* See also [s. 403.506\(1\), F.S.](#)

¹¹⁵ [S. 403.519, F.S.](#)

¹¹⁶ [S. 403.519\(3\), F.S.](#)

¹¹⁷ [S. 403.519\(4\), F.S.](#)

¹¹⁸ [S. 403.519\(4\), F.S.](#)

- Enhance the reliability of electric power production within the state by improving the balance of power plant fuel diversity and reducing Florida’s dependence on fuel oil and natural gas.
- Provide the most cost-effective source of power, taking into account the need to improve the balance of fuel diversity, reduce Florida’s dependence on fuel oil and natural gas, reduce air emission compliance costs, and contribute to the long-term stability and reliability of the electric grid.¹¹⁹

After the PSC grants a determination of need for a nuclear power plant, Florida law authorizes a utility to recover certain costs incurred prior to commercial operation of the plant and limits the ability to challenge a utility’s recovery of such costs through rates.¹²⁰

Radiological Contamination

Exposure to very high levels of radiation, such as being close to an atomic blast, can cause acute health effects such as skin burns and acute radiation syndrome (“radiation sickness”).¹²¹ It can also result in long-term health effects such as cancer and cardiovascular disease.¹²² Exposure to low levels of radiation does not cause immediate health effects, but can cause a small increase in the risk of cancer over a lifetime.¹²³

University of Florida – Nuclear Fuels and Materials Characterization Facility

The University of Florida’s [Nuclear Fuels and Materials Characterization Facility](#) (NFMC), is the state’s only nuclear engineering program.¹²⁴ The NFMC hosts a 100-kW thermal training reactor along with equipment, facilities, and programs to conduct research and training in nuclear fuels and materials research, including irradiation, analysis, and waste disposal. The NFMC supports both short-term projects and long-term research collaborations for industry, national labs, academic partners, and government partners.¹²⁵

¹¹⁹ [S. 403.519\(4\)\(b\), F.S.](#)

¹²⁰ [S. 403.519\(4\)\(e\), F.S.](#)

¹²¹ U.S. Env’tl. Prot. Agency, *Radiation Health Effects*, <https://www.epa.gov/radiation/radiation-health-effects> (last visited Jan. 26, 2026).

¹²² *Id.*

¹²³ *Id.*¹²⁴ UF Department of Materials Science & Engineering, *UF Nuclear Fuels and Materials Characterization Facility (NFMC)*, <https://mse.ufl.edu/research/facilities/uf-nuclear-fuels-and-materials-characterization-facility-nfmc/> (last visited Feb. 25, 2026).

¹²⁴ UF Department of Materials Science & Engineering, *UF Nuclear Fuels and Materials Characterization Facility (NFMC)*, <https://mse.ufl.edu/research/facilities/uf-nuclear-fuels-and-materials-characterization-facility-nfmc/> (last visited Feb. 25, 2026).

¹²⁵ *Id.*

BILL HISTORY

COMMITTEE REFERENCE	ACTION	DATE	STAFF DIRECTOR/ POLICY CHIEF	ANALYSIS PREPARED BY
Economic Infrastructure Subcommittee	15 Y, 0 N, As CS	1/28/2026	Keating	Rubottom
THE CHANGES ADOPTED BY THE COMMITTEE:	<ul style="list-style-type: none"> • Clarified a provision of the bill granting regulatory authority to the Public Service Commission (PSC). • Clarified the definition of “clean energy” to include energy produced by all nuclear reactors. • Clarified a provision of the bill related to the applicability of the Florida Power Plant Siting Act to advanced nuclear reactors not interconnected to the grid. • Corrected certain other technical drafting errors. 			
Budget Committee	25 Y, 0 N	2/16/2026	Pridgeon	Day
Commerce Committee	23 Y, 0 N, As CS	2/24/2026	Hamon	Rubottom

THE CHANGES ADOPTED BY THE COMMITTEE:	<ul style="list-style-type: none"> • Added legislative findings. • Added a provision requiring the PSC to consult with the University of Florida’s Nuclear Fuels and Materials Characterization Facility in exercising the authority granted by the bill. • Removed a provision amending the definition of the term “public utility.” • Removed a provision exempting advanced nuclear reactors that will not be interconnected to the grid from the power plant siting act. • Added provisions exempting advanced nuclear reactors that will not be interconnected to the grid from the PSC’s need determination process. 			
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THIS BILL ANALYSIS HAS BEEN UPDATED TO INCORPORATE ALL OF THE CHANGES DESCRIBED ABOVE.
