H.601

Introduced by Representatives McCoy of Poultney and Southworth of Walden

Referred to Committee on

Date:

Subject: Public service; energy; renewable energy; clean energy; nuclear energy; nuclear storage

Statement of purpose of bill as introduced: This bill proposes to change the Renewable Energy Standard to the Clean Energy Standard by allowing zero emission energy to count as part of the Standard. It would also make changes to the nuclear storage at the former Vermont Yankee site.

An act relating to the Clean Energy Standard

It is hereby enacted by the General Assembly of the State of Vermont:

Sec. 1. 30 V.S.A. § 202b is amended to read:

§ 202b. STATE COMPREHENSIVE ENERGY PLAN

* * *

(e) The Commissioner of Public Service (Commissioner) shall file an annual report on progress in meeting the goals of the Plan. The report shall address each of the following sectors of energy consumption in the State: electricity, nonelectric fuels for thermal purposes, and transportation. In preparing the report, the Commissioner shall consult with the Secretaries of

Administration, of Agriculture, Food and Markets, of Natural Resources, and of Transportation and the Commissioner of Buildings and General Services.

* * *

(3) For each sector, the report shall provide:

(A) ~~In millions of British thermal units (MMBTUs) for~~ For the most recent calendar year for which data are available, the total amount of energy consumed, the amount of clean and renewable energy consumed, and the percentage of clean and renewable energy consumed. For the electricity sector, the report shall also state the amounts in megawatt hours (MWH) of retail sales and load for Vermont as well as for each retail electricity provider and the Vermont and New England summer and winter peak electric demand, including the hour and day of peak demand.

(B) Projections of the energy reductions and shift to clean and renewable energy expected to occur under existing policies, technologies, and markets. The most recent available data shall be used to inform these projections and shall be provided as a supplement to the data described in subdivision (A) of this subdivision (3).

(C) Recommendations of policies to further the clean and renewable energy requirements and goals set forth in statute and the Plan, along with an evaluation of the relative cost-effectiveness and equity-related impacts of different policy approaches.

* * *

(7) The report shall include the following information on progress toward meeting the ~~Renewable~~ Clean Energy Standard (~~RES~~ CES):

(A) An assessment of the costs and benefits of the ~~RES~~ CES based on the most current available data, including rate and economic impacts, customer savings, technology deployment, greenhouse gas emission reductions achieved both relative to 10 V.S.A § 578 requirements and societally, fuel price stability, effect on transmission and distribution upgrade costs, and any recommended changes based on this assessment.

(i) For the most recent calendar year for which data is available, each retail electricity provider's retail sales and total load, in MWh; required amounts of clean and renewable energy for each category of the ~~RES~~ CES as set forth in section 8005 of this title; and amounts of clean and renewable energy and tradeable clean and renewable energy credits eligible to satisfy the requirements of sections 8004 and 8005 of this title actually owned by the Vermont retail electricity providers, expressed as a percentage of ~~retail sales and~~ total ~~load~~ MWh purchases made by Vermont retail electricity providers to meet demand.

* * *

(iv) The report shall assess how costs and benefits of the ~~RES~~ CES are being distributed across State, to the extent possible given available

data, by retail electricity service territory, municipality, and environmental justice focus populations, as defined by 3 V.S.A. § 6002. Such an assessment shall consider metrics to monitor affordability of electric rates.

(B) Projections, looking at least 10 years ahead, of the impacts of the ~~RES~~ CES on electric utility rates, total energy consumption, fossil fuel consumption, and greenhouse gas emissions.

~~(i) The Department shall consider at least three scenarios based on high, mid-range, and low energy price forecasts.~~

~~(ii) The Department shall provide an opportunity for public comment on the model during its development and make the model and associated documents available on the Department's website.~~

~~(iii) The Department shall project, for the State, the impact of the RES in each of the following areas: electric utility rates, total energy consumption, electric energy consumption, fossil fuel consumption, and greenhouse gas emissions. The report shall compare the amount or level in each of these areas with and without the program.~~

(C) An assessment of whether the requirements of the ~~RES~~ CES have been met to date, and any recommended changes needed to achieve those requirements.

(D) A summary of the activities of distributed renewable generation programs that support the achievement of the ~~RES~~ CES, including:

(i) Standard Offer Program under section 8005a of this title, including the number of plants ~~participating~~ under contract and in service in the Program, the prices paid by the Program, and the plant capacity and average annual energy generation of the participating plants. The report shall present this information as totals for all participating plants and by category of renewable energy technology. ~~The report also shall identify the number of applications received, the number of participating plants under contract, and the number of participating plants actually in service.~~

* * *

~~(9) For the report due in 2029, the Commission shall issue a report on whether it is reasonable to expect that there will be sufficient new regional renewable resources available for a retail electricity provider with 75,000 or more customers to meet its requirement under subdivision 8005(a)(4)(B)(i)(IV) of this title at or below the alternative compliance payment rate for the new renewable generation category of section 8005 of this title during the year beginning on January 1, 2032, or during the years beginning on January 1, 2033 or January 1, 2034. The Commission shall not be required to issue this report in a contested case under 3 V.S.A. chapter 25 but shall conduct a proceeding on the issue with opportunities for participation by the retail electricity providers, Vermont Public Power Supply Authority, Renewable Energy Vermont, and other members of the public. Notwithstanding the~~

~~timeline specified in subdivision (e)(1) of this section, the Commission shall file this annual report on or before December 15, 2028.~~

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Sec. 2. 30 V.S.A. § 8002 is amended to read:

§ 8002. DEFINITIONS

As used in this chapter:

(1) "CES" means the Clean Energy Standard established under sections 8004 and 8005 of this title.

(2) "Clean energy" means both renewable energy, as defined in this section, as well as electricity produced using a technology that does not emit greenhouse gases as a by-product of energy generation.

~~(1)~~(3) "Commission" means the Public Utility Commission under section 3 of this title.

~~(2)~~(4) "Commissioned" or "commissioning" means the first time a plant is put into operation following initial construction or modernization if the costs of modernization are at least 50 percent of the costs that would be required to build a new plant including all buildings and structures technically required for the new plant's operation. However, these terms shall not include activities necessary to establish operational readiness of a plant.

~~(3)~~(5) "CPI" means the Consumer Price Index for all urban consumers, designated as "CPI-U," in the northeast region, as published by the U.S. Department of Labor, Bureau of Labor Statistics.

~~(4)~~(6) "Customer" means a retail electric consumer.

~~(5)~~(7) "Department" means the Department of Public Service under section 1 of this title, unless the context clearly indicates otherwise.

~~(6)~~(8) "Energy conversion efficiency" means the effective use of energy and heat from a combustion process.

~~(7)~~(9) "Environmental attributes" means the characteristics of a plant that enable the energy it produces to qualify as clean or renewable energy and include any and all benefits of the plant to the environment such as avoided emissions or other impacts to air, water, or soil that may occur through the plant's displacement of a nonclean or nonrenewable energy source.

~~(8)~~(10) "Existing renewable energy" means renewable energy produced by a plant that came into service prior to or on December 31, 2009.

~~(9)~~(11) "Greenhouse gas reduction credits" shall be as defined in section 8006a of this title.

~~(10)~~(12) "Group net metering system" means a net metering system serving more than one customer, or a single customer with multiple electric meters, located within the service area of the same retail electricity provider. Various buildings owned by municipalities, including water and wastewater

districts, fire districts, villages, school districts, and towns, may constitute a group net metering system. A union or district school facility may be considered in the same group net metering system with buildings of its member schools that are located within the service area of the same retail electricity provider. A system that files a complete application for a certificate of public good on or after January 1, 2026, shall not qualify for group net metering, unless the plant will be located on the same parcel, or a parcel adjacent to, the parcel where the energy is utilized.

~~(11)~~(13) "kW" means kilowatt or kilowatts (AC).

~~(12)~~(14) "kWh" means kW hour or hours.

~~(13)~~(15) "MW" means megawatt or megawatts (AC).

~~(14)~~(16) "MWH" means MW hour or hours.

~~(15)~~(17) "Net metering" means measuring the difference between the electricity supplied to a customer and the electricity fed back by the customer's net metering system during the customer's billing period:

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~~(16)~~(18) "Net metering system" means a plant for generation of electricity that:

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~~(17)~~(19) "New renewable energy" means renewable energy capable of delivery in New England and produced by a specific and identifiable plant

coming into service on or after January 1, 2010, but excluding energy generated by a hydroelectric generation plant with a capacity of 200 MW or greater.

* * *

~~(18)~~(20) "Plant" means an independent technical facility that generates electricity from renewable energy. A group of facilities, such as wind turbines, shall be considered one plant if the group is part of the same project and uses common equipment and infrastructure such as roads, control facilities, and connections to the electric grid. Common ownership, contiguity in time of construction, and proximity of facilities to each other shall be relevant to determining whether a group of facilities is part of the same project.

~~(19)~~(21) "Plant capacity" means the rated electrical nameplate for a plant, except that, in the case of a solar energy plant, the term shall mean the aggregate AC nameplate capacity of all inverters used to convert the plant's output to AC power.

~~(20)~~(22) "Plant owner" means a person who has the right to sell electricity generated by a plant.

~~(21)~~(23) "Renewable energy" means energy produced using a technology that relies on a resource that is being consumed at a harvest rate at or below its natural regeneration rate.

* * *

~~(22)~~(24)(A) "Renewable pricing" shall mean an optional service provided or contracted for by an electric company:

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~~(23)~~(25) "Retail electricity provider" or "provider" means a company engaged in the distribution or sale of electricity directly to the public.

~~(24)~~(26) "Standard Offer Facilitator" means an entity appointed by the Commission pursuant to subsection 8005a(a) of this title.

~~(25) [Repealed.]~~

~~(26)~~(27) "Tradeable renewable energy credits" means all of the environmental attributes associated with a single unit of energy generated by a renewable energy source where:

* * *

(28) "Tradeable zero emissions credits" or "ZECs" means all of the environmental attributes associated with a single unit of energy generated by a clean energy source where:

(A) those attributes are transferred or recorded separately from that unit of energy;

(B) the party claiming ownership of the tradeable zero emissions credits has acquired the exclusive legal ownership of all, and not less than all, the environmental attributes associated with that unit of energy; and

(C) exclusive legal ownership can be verified through an auditable contract path or pursuant to the system established or authorized by the Commission or any program for tracking and verification of the ownership of environmental attributes of energy legally recognized in any state and approved by the Commission.

~~(27)~~(29) "Vermont composite electric utility system" means the combined generation, transmission, and distribution resources along with the combined retail load requirements of the Vermont retail electricity providers.

~~(28)~~(30) "Energy transformation project" means an undertaking that provides energy-related goods or services but does not include or consist of the generation of electricity and that results in a net reduction in fossil fuel consumption by the customers of a retail electricity provider and in the emission of greenhouse gases attributable to that consumption. Examples of energy transformation projects may include home weatherization or other thermal energy efficiency measures; air source or geothermal heat pumps; high efficiency heating systems; increased use of biofuels; biomass heating systems; support for transportation demand management strategies; support for electric vehicles or related infrastructure; and infrastructure for the storage of renewable energy on the electric grid.

~~(29) "RES" means the Renewable Energy Standard established under sections 8004 and 8005 of this title.~~

(~~30~~)(31) "Energy storage facility" has the same meaning as in section 201 of this title.

(~~31~~)(32) "Load" means the total amount of electricity utilized by a retail electricity provider over a 12-month calendar year period, including its retail electric sales, any use by the provider itself not included in retail sales, and transmission and distribution line losses associated with and allocated to the retail electricity provider.

(~~32~~)(33) "Load growth" means the increase above a baseline year in a retail electricity provider's load.

Sec. 3. 30 V.S.A. § 8004 is amended to read:

§ 8004. SALES OF ELECTRIC ENERGY; ~~RENEWABLE~~ CLEAN ENERGY STANDARD (~~RES~~ CES)

(a) ~~Establishment~~ Expansion; requirements. The ~~RES~~ Renewable Energy Standard is ~~established~~ expanded to become the CES. Under this program, a retail electricity provider shall not sell or otherwise provide or offer to sell or provide electricity in the State of Vermont without ownership of sufficient energy produced by clean and renewable energy plants or sufficient tradeable renewable energy and zero emissions credits from plants whose energy is capable of delivery in New England that reflect the required amounts of clean and renewable energy set forth in section 8005 of this title or without support of energy transformation projects in accordance with that section. A retail

electricity provider may meet the required amounts of clean and renewable energy through eligible tradeable renewable energy and zero emissions credits that it owns and retires, eligible clean and renewable energy resources with environmental attributes still attached, or a combination of those credits and resources.

(b) Rules. The Commission shall ~~adopt~~ update the rules that are necessary to allow the Commission and the Department to implement and supervise further the implementation and maintenance of the ~~RES~~ CES.

(c) ~~RECS~~ RECs and ZECs; banking. The Commission shall allow a provider that has met the required ~~amount~~ amounts of clean and renewable energy or zero emissions credits in a given year, commencing with 2017, to retain tradeable renewable energy or zero emissions credits created or purchased in excess of that amount for application to the provider's required amount of clean or renewable energy in one of the following three years.

(d) Alternative compliance payment. In lieu of purchasing renewable energy or tradeable renewable energy or zero emissions credits or supporting energy transformation projects to satisfy the requirements of this section and section 8005 of this title, a retail electricity provider in this State may pay to the Vermont Clean Energy Development Fund established under section 8015 of this title an alternative compliance payment at the applicable rate set forth in section 8005. The administrator of the Vermont Clean Energy Development

Fund shall use the payment from a retail electricity provider electing to make an alternative compliance payment to satisfy its obligations under subdivisions 8005(a)(1), 8005(a)(2), 8005(a)(4), and 8005(a)(5) of this title for the development of renewable energy plants that are intended to serve and benefit customers with low income of the retail electricity provider that has made the payment. Such plants shall be located within the provider's service territory, if feasible. In the event that such a payment is insufficient to enable the development of a renewable energy plant, the administrator may use the payment for other initiatives allowed under section 8015 of this title that will benefit customers with low income of the retail electricity provider that has made the payment. As used in this subsection ~~(d)~~, "customer with low income" means a person purchasing energy from a retail electricity provider and with an income that is less than or equal to 80 percent of area median income, adjusted for family size, as published annually by the U.S. Department of Housing and Urban Development.

* * *

(f) Joint efforts. Retail electricity providers may engage in joint efforts to meet one or more categories within the ~~RES~~ CES.

Sec. 4. 30 V.S.A. § 8005 is amended to read:

§ 8005. ~~RES~~ CES CATEGORIES

(a) Categories. This section specifies five categories of required resources to meet the requirements of the ~~RES~~ CES established in section 8004 of this title: total clean and renewable energy, distributed renewable generation, energy transformation, new renewable energy, and load growth renewable energy. In order to support progress toward Vermont's climate goals and requirements, a provider may, but shall not be required to, exceed the statutorily required amounts under this section.

(1) Total clean and renewable energy.

(A) Purpose; establishment. To encourage the economic and environmental benefits of clean and renewable energy, this subdivision establishes, for the ~~RES~~ CES, minimum total amounts of clean and renewable energy within the supply portfolio of each retail electricity provider. To satisfy this requirement, a provider may use clean energy generated within New England or renewable energy with environmental attributes attached or any class of tradeable renewable energy credits generated by any renewable energy plant whose energy is capable of delivery in New England.

(B) Required amounts.

(i) The amounts of total ~~renewable~~ clean energy required by this subsection (a) shall be 63 percent of each retail electricity provider's annual

load during the year beginning on January 1, 2025, increasing by ~~at least~~ an additional ~~four~~ 7.4 percent each ~~third~~ January 1 thereafter until reaching 100 percent~~:~~ on and after January 1, 2030.

~~(i) on and after January 1, 2035 for a retail electricity provider who serves a single customer that takes service at 115 kilovolts and each municipal retail electricity provider formed under local charter or chapter 79 of this title; and~~

(ii) ~~on and after January 1, 2030, for all other retail electricity providers~~ The amount of total renewable energy required by this subsection (a) shall be 63 percent of each retail electricity provider's annual electricity purchases during the year beginning on January 1, 2025, increasing to 67 percent of each retail electricity provider's annual electricity purchases during the year beginning on January 1, 2028, increasing to 71 percent of each retail electricity provider's annual electricity purchases during the year beginning on January 1, 2030, and increasing to 75 percent of each retail electricity provider's annual electricity purchases on and after January 1, 2032.

* * *

(2) Distributed renewable generation.

(A) Purpose; establishment. This subdivision establishes a distributed renewable generation category for the ~~RES~~ CES. This category encourages the use of distributed generation to support the reliability of the

State's electric system~~;~~, reduce line losses~~;~~, contribute to avoiding or deferring improvements to that system necessitated by transmission or distribution constraints~~;~~, and diversify the size and type of resources connected to that system. This category requires the use of renewable energy for these purposes to reduce environmental and health impacts from air emissions that would result from using other forms of generation.

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(3) Energy transformation.

(A) Purpose; establishment. This subdivision (3) establishes an energy transformation category for the ~~RES~~ CES. This category encourages Vermont retail electricity providers to support additional distributed renewable generation or to support other projects to reduce fossil fuel consumed by their customers and the emission of greenhouse gases attributable to that consumption. A retail electricity provider may satisfy the energy transformation requirement through distributed renewable generation in addition to the generation used to satisfy subdivision (2) of this subsection (a) or energy transformation projects or a combination of such generation and projects.

* * *

(4) New renewable energy.

(A) Purpose; establishment. This subdivision (4) establishes a new regional renewable energy category for the ~~RES~~ CES. This category encourages the use of new renewable generation to support the reliability of the regional ISO-NE electric system. To satisfy this requirement, a provider shall use new renewable energy with environmental attributes attached or any class of tradeable renewable energy credits generated by any renewable energy plant coming into service after January 1, 2010, whose energy is capable of delivery in New England.

* * *

(E) On or before December 15, 2026, the Commission shall issue a report on whether it is reasonable to expect that there will be sufficient new regional renewable resources available for a retail electricity provider with 75,000 or more customers to meet its requirement under subdivision (4)(B)(i)(IV) of this subsection (a) at or below the alternative compliance payment rate for the new renewable generation category of this section during the year beginning on January 1, 2030, or at any time in the subsequent five years. The Commission shall not be required to issue this report in a contested case under 3 V.S.A. chapter 25 but shall conduct a proceeding on the issue with opportunities for participation by the retail electricity providers, Vermont Public Power Supply Authority, Renewable Energy Vermont, and other members of the public. The Commission may use its authority under sections

20 and 21 of this title as may be necessary to support technical analysis necessary to develop this report.

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Sec. 5. 30 V.S.A. § 8006 is amended to read:

§ 8006. TRADEABLE CREDITS; ENVIRONMENTAL ATTRIBUTES; RECOGNITION, MONITORING, AND DISCLOSURE

(a) The Commission shall ~~establish or adopt a~~ amend and expand its system of tradeable renewable energy credits for renewable resources that may be earned by electric generation qualifying for the prior RES to include clean energy generation. The system shall recognize tradeable renewable energy credits monitored and traded on the New England Generation Information System (GIS); shall provide a process for the recognition, approval, and monitoring of environmental attributes attached to clean and renewable energy that are eligible to satisfy the requirements of sections 8004 and 8005 of this title but are not monitored and traded on the GIS; and shall otherwise be consistent with regional practices.

(b) The Commission shall ensure that all electricity provider and provider-affiliate disclosures and representations made with regard to a provider's portfolio are accurate and reasonably supported by objective data. Further, the Commission shall ensure that providers disclose the types of generation used and shall clearly distinguish between energy or tradeable energy credits

provided from clean, renewable, and nonrenewable energy sources and existing and new renewable energy.

Sec. 6. 30 V.S.A. § 8008 is amended to read:

§ 8008. AGREEMENTS; ATTRIBUTE REVENUES; DISPOSITION BY COMMISSION

(a) As used in this section, "the revenues" means revenues that are from the sale, through tradeable clean or renewable energy certificates or other means, of environmental attributes associated with the generation of clean and renewable energy from a system of generation resources with a total plant capacity greater than 200 MW and that are received by a Vermont retail electricity provider on or after May 1, 2012, pursuant to an agreement, contract, memorandum of understanding, or other transaction in which a person or entity agrees to transfer such revenues or rights associated with such attributes to the provider.

* * *

Sec. 7. 10 V.S.A. § 6505 is amended to read:

§ 6505. EXEMPTION

This subchapter does not apply to any temporary storage ~~by Vermont Yankee Nuclear Power Corporation~~ of spent nuclear fuel elements or other radioactive waste at ~~its present~~ the site of the former Vermont Yankee Nuclear Power Station generated at the same site.

Sec. 8. 10 V.S.A. § 6522 is amended to read:

§ 6522. PUBLIC UTILITY COMMISSION REVIEW OF PROPOSALS FOR NEW STORAGE FACILITIES FOR SPENT NUCLEAR FUEL

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(c) In addition, the following limiting conditions shall apply:

(1) Any certificate of public good issued by the Commission shall permit storage only of spent fuel ~~that is derived from the operation of~~ at the former Vermont Yankee ~~and not from any other source~~ site.

(2) ~~Any certificate of public good issued by the Commission shall limit the cumulative total amount of spent fuel stored at Vermont Yankee to the amount derived from the operation of the facility up to, but not beyond, March 21, 2012, the end of the current operating license. Authorized capacity may include on-site storage capacity to accommodate full core offload or any order or requirement of the Nuclear Regulatory Commission with respect to the fuel derived from these operations.~~ [Repealed.]

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(4) ~~Compliance with the provisions of this subchapter shall constitute compliance with the provisions of this chapter that require that approval be obtained from the General Assembly before construction or establishment of a facility for the deposit or storage of spent nuclear fuel, but only to the extent specified in this subchapter or authorized under this subchapter. The Public~~

~~Utility Commission is authorized to hear and issue a certificate of public good for such a facility under 30 V.S.A. § 248 to the extent specified or authorized in this subchapter. Other agencies of the State also may receive and act on applications related to the construction or establishment of such a facility, provided that any approval for such a facility applies only to the extent specified or authorized in this subchapter. Storage of spent fuel derived from the operation of Vermont Yankee after March 21, 2012 shall require the approval of the General Assembly under this chapter.~~ [Repealed.]

(5) ~~Compliance with the provisions of this subchapter shall not confer any expectation or entitlement to continued operation of Vermont Yankee following the expiration of its current operating license on March 21, 2012. Before the owners of the generation facility may operate the generation facility beyond that date, they must first obtain a certificate of public good from the Public Utility Commission under Title 30.~~ [Repealed.]

Sec. 9. REPEAL

30 V.S.A. § 254 (construction or extended operation of a nuclear power plant; public engagement process) is repealed.

Sec. 10. 30 V.S.A. § 248 is amended to read:

§ 248. NEW GAS AND ELECTRIC PURCHASES, INVESTMENTS, AND FACILITIES; CERTIFICATE OF PUBLIC GOOD

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(e)~~(1) Before a certificate of public good is issued for the construction of a nuclear energy generating plant within the State, the Public Utility Commission shall obtain the approval of the General Assembly and the Assembly's determination that the construction of the proposed facility will promote the general welfare. The Public Utility Commission shall advise the General Assembly of any petition submitted under this section for the construction of a nuclear energy generating plant within this State, by written notice delivered to the Speaker of the House of Representatives and to the President of the Senate. The Department of Public Service shall submit recommendations relating to the proposed plant and shall make available to the General Assembly all relevant material. The requirements of this subsection shall be in addition to the findings set forth in subsection (b) of this section.~~

~~(2) No nuclear energy generating plant within this State may be operated beyond the date permitted in any certificate of public good granted pursuant to this title, including any certificate in force as of January 1, 2006, unless the General Assembly approves and determines that the operation will promote the general welfare, and until the Public Utility Commission issues a certificate of public good under this section. If the General Assembly has not acted under this subsection by July 1, 2008, the Commission may commence proceedings under this section and under 10 V.S.A. chapter 157, relating to the storage of radioactive material, but may not issue a final order or certificate of public~~

~~good until the General Assembly determines that operation will promote the general welfare and grants approval for that operation.~~ [Repealed.]

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(m) ~~In any matter with respect to which the Commission considers the operation of a nuclear energy generating plant beyond the date permitted in any certificate of public good granted under this title, including any certificate in effect as of January 1, 2006, the Commission shall evaluate the application under current assumptions and analyses and not an extension of the cost benefit assumptions and analyses forming the basis of the previous certificate of public good for the operation of the facility.~~ [Repealed.]

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Sec. 11. EFFECTIVE DATE

This act shall take effect on July 1, 2026.