OLR Bill Analysis

sSB 4

AN ACT CONCERNING ENERGY AFFORDABILITY, ACCESS AND ACCOUNTABILITY.

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SUMMARY

This bill makes various changes in energy-related laws on nuclear energy, energy site readiness funding, energy procurements, renewable

thermal energy networks, and restoration crew safety, as described in the section-by-section analysis below.

EFFECTIVE DATE: Various, see below.

§§ 1 & 4 — NEW NUCLEAR CONSTRUCTION

Nuclear Moratorium Exceptions (§ 1)

Creates a second exception from the nuclear moratorium for advanced nuclear reactors that meet certain requirements and expands DEEP's duties related to atomic development activity

Current law generally prohibits construction from starting on a new nuclear facility unless and until the Department of Energy and Environmental Protection (DEEP) commissioner finds that the federal government identified and approved a demonstrable technology or way to dispose of high-level nuclear waste, with an exception for construction at a nuclear power generating facility currently operating in the state (i.e. Millstone Power Station in Waterford).

The bill creates a second exemption from the moratorium for advanced nuclear reactor facilities. Under federal law, advanced nuclear reactors are:

1. nuclear fission reactors, including prototype plants, with significant improvements compared to reactors operating in 2020 (e.g., additional safety features, lower waste yields, and improved fuel and material performance);

2. fusion reactors; and

3. radioisotope power systems that generate energy using heat from radioactive decay.

The moratorium exception for advanced nuclear reactors applies to facilities that get consent, either by a referendum or a vote of the legislative body, from (1) the municipality where the proposed facility is sited and (2) any other municipality in the proposed facility's emergency planning zone, as the federal Nuclear Regulatory Commission (NRC) determines.

For both exceptions (construction at Millstone and advanced nuclear reactors), the bill requires the entity proposing a new facility to get all permits, licenses, and permissions or approvals for the facility's construction, operation, and decommissioning funding required under any applicable federal laws, NRC regulations, and any other federal or state law, rule, or regulation on the facility's permitting, licensing, construction, operation, or decommissioning.

DEEP's Atomic Development Activity Coordination Duties (§ 4)

Existing law requires the DEEP commissioner to coordinate all atomic development activities in the state, including advising the governor and coordinating the state's development and regulatory activities on atomic energy's industrial and commercial uses, among other things. The bill additionally requires the commissioner to be a point of contact for public and private stakeholders to help them comply with federal, state, and local requirements related to atomic development (e.g., siting considerations and permitting).

EFFECTIVE DATE: October 1, 2025

§§ 2 & 3 — ADVANCED NUCLEAR REACTOR AND OFFSHORE WIND ENERGY SITE READINESS FUNDING PROGRAM

Requires DEEP to establish an advanced nuclear reactor and offshore wind site readiness funding program; authorizes up to $5 million in state bonds to fund it

The bill requires the DEEP commissioner to establish a competitive advanced nuclear reactor and offshore wind energy site readiness funding program. It allows the commissioner to give "eligible recipients" grants or loans to support the following activities related to advanced nuclear reactor facilities and offshore wind facilities:

1. environmental and technical studies required for early site permitting,

2. local and regional infrastructure assessments to support facility development,

3. community engagement and planning initiatives for hosting facilities, and

4. other necessary expenses the commissioner identifies to advance site readiness.

Under the bill, eligible recipients for the program's grants and loans are:

1. regional governmental entities, municipalities, regional councils of government, public authorities, state or federally recognized tribes, or municipal electric utilities or cooperatives, with a demonstrated interest in hosting advanced nuclear reactors or offshore wind facilities as the commissioner determines;

2. private entities partnering with or interested in doing so with the entities described above to develop these facilities; and

3. higher education institutions in the state.

The bill authorizes up to $5 million in state bonding for the DEEP commissioner to award the program's grants and loans. It also allows the commissioner to (1) use federal funds allocated to the state to support the program, (2) revise its program criteria to be consistent with federal funding program criteria, and (3) use the federal funds to hire a technical consultant to implement the bill's provisions on the program.

EFFECTIVE DATE: July 1, 2025

§ 5 — GAS EFFICIENCY AND ACTIVE DEMAND RESPONSE

Expands an existing procurement authorization to include active demand response projects and gas demand response projects

Current law authorizes DEEP to solicit proposals for passive demand response measures to reduce demand and improve reliability, and then direct electric distribution companies (EDCs, i.e. Eversource and United Illuminating) to enter into 20-year contracts for selected projects. The bill expands this authorization (1) to include active demand response measures and (2) by allowing DEEP to solicit and direct gas companies into 20-year contracts for active or demand response proposals. (Generally, "demand response" refers to measures designed to save energy. Passive measures reduce energy demand at all times, while

active measures can be activated when needed.)

The bill correspondingly (1) removes a requirement that demand response projects reduce electric demand by at least one megawatt (MW) and (2) requires gas companies, in addition to EDCs, to consult with the Energy Conservation Management Board to assess the feasibility of demand response proposals. Existing law and the bill limit these proposals to projects that are additive to existing and projected demand reduction achieved through the conservation and load management programs.

The bill requires the DEEP commissioner to consider the same factors as under current law when selecting proposals, including whether benefits to ratepayers outweigh costs, fuel diversity, and contributions to meeting state greenhouse gas (GHG) reduction requirements, among other things.

Current law caps the proposals DEEP may select at 10% of EDC load, with the cap applying to the aggregate amount of proposals for demand response measures as well as proposals existing law authorizes for (1) Class I renewable energy sources (e.g., wind and solar) and Class III resources (e.g., combined heat and power) of up to two MW in capacity; (2) energy storage systems; (3) Class I renewable energy sources of 20 MW or larger; and (4) verifiable large-scale hydropower. The bill additionally caps the aggregate amount of these proposals at 10% of the state's gas utility load.

Current law allows the DEEP commissioner to direct the EDCs into long-term contracts for selected passive demand response measures, among other things. The bill additionally allows DEEP to direct them to enter into long-term contracts for active demand response measures and electricity time-of-use shifts, and requires that active or passive demand response measures yield electric savings. It also allows the DEEP commissioner to direct the gas companies to enter into long-term contracts for active or passive demand response measures that yield gas savings or time-of-use shifts from proposals submitted under the bill, so long as the contract's benefits outweigh its costs to gas customers.

Current law requires EDCs to submit any agreement to the Public Utilities Regulatory Authority (PURA) for approval and PURA to approve it if it is cost effective and in ratepayers' best interests. If PURA does not issue a decision within 90 days after the submission, the agreement is deemed approved. By law, EDCs must recover the net costs of agreements on a timely basis through a fully reconciling component of electric rates. The bill similarly requires gas companies to submit agreements to PURA for approval and recover net costs the same way. Under the bill, if an EDC and gas company both apply to recover net costs for the same agreement, PURA must determine which costs are attributable to each company.

EFFECTIVE DATE: October 1, 2025

Background — Related Bill

sHB 5004, § 18, favorably reported by the Environment Committee, similarly expands this procurement authority for gas companies and active demand response.

§ 6 — MILLSTONE POWER PURCHASE AGREEMENT AND STANDARD SERVICE PROCUREMENT

Creates a process for EDCs to use power and related products purchased from nuclear facilities to meet standard service requirements

The bill creates a process for EDCs to use any portion or combination of the energy, capacity, or other energy products purchased from an eligible nuclear power generating facility as a result of DEEP's procurements for zero-carbon resources.

Existing law authorizes the DEEP commissioner to solicit proposals for up to 12 million MW-hours of energy annually, in the aggregate, from zero-carbon electricity generating resources that meet certain requirements. If she finds one or more proposals to be in the ratepayers' best interests, she must direct the EDCs to enter into agreements to purchase energy, capacity, and environmental attributes under the selected proposals. Agreements are subject to PURA's review and approval, and the EDCs must recover their net costs of the agreements through a nonbypassable, fully reconciling component of ratepayer bills. In practice, DEEP conducted solicitations under these provisions

and the EDCs entered into contracts with selected bidders, including Millstone Power Station in Waterford and Seabrook Station in New Hampshire. For any solicitations DEEP issues after July 1, 2024, for eligible nuclear power generating facilities, existing law requires DEEP to conduct them with at least two other New England states. It also prohibits the commissioner from directing EDCs to enter into contracts unless two other New England states also select a proposal. Eligible nuclear facilities are those in the ISO-New England control area that are licensed to operate through at least January 1, 2030.

The bill allows EDCs to request that PURA's procurement manager authorize the EDC to use any portion of the energy, capacity, or other energy products procured through DEEP's zero-carbon solicitation to provide electric generating services for standard service (the supply purchased for residential customers who do not opt to purchase from a retail electric supplier). It requires the procurement manager to:

1. approve or deny the request, in consultation with the Office of Consumer Counsel, within 15 days after receiving it;

2. only approve requests the procurement manager concludes are in standard service customers' best interests;

3. set the quantity for products the EDC uses for standard service under any approved request and the time period over which they will be used; and

4. set the price standard service customers will pay for products the EDC uses for standard service under any approved request, which the bill caps at the price the company paid under agreements entered into under DEEP's zero carbon procurement.

Under the bill, if the procurement manager approves the request, the cost of the products must be paid solely by standard service customers, in accordance with the quantity and price the procurement manager establishes.

The bill prohibits nuclear power generating facility owners and

operators from paying any administrative costs associated with the procurement manager's actions in making determinations under the bill's provisions on using energy products from nuclear generating facilities for the standard service. The bill also specifies that its provisions do not amend or alter terms or conditions of contracts entered into under DEEP's zero carbon procurements.

EFFECTIVE DATE: October 1, 2025

Background — Related Bill

sSB 1194, favorably reported by the Energy and Technology Committee, allows EDCs to use energy or related products purchased under the zero-carbon procurement or any other approved procurement, to provide standard service.

§ 7 — RENEWABLE THERMAL ENERGY NETWORKS

Requires PURA to establish a utility-scale renewable thermal energy network program, including a pilot component, working group, and study

The bill requires PURA to start a proceeding within 12 months after the bill passes to establish a program for gas companies to develop utility-scale renewable thermal energy networks. Under the bill, a network is distribution infrastructure to provide thermal energy for the following uses:

1. space heating and cooling,
2. domestic hot water production,
3. refrigeration,
4. thermal energy storage, or
5. commercial and industrial processes that require heating or cooling.

These networks are implemented through interconnections between at least one renewable thermal energy resource, that may be owned by multiple parties, and heat pumps in multiple buildings owned by multiple parties. Renewable thermal energy is (1) ambient heating or

cooling provided, absorbed, or stored by geothermal well boreholes or other noncombusting, nonnuclear thermal resources that does not consume fossil fuel or (2) thermal energy otherwise lost to the atmosphere or other environmental compartment as waste heat.

The bill requires PURA to develop parameters and procedures for filing proposals for the networks. PURA must also develop a standardized data collection system that allows it and the public to track a network's status and performance. The bill requires PURA to have data it collects evaluated by a third party to ensure transparency and validity of project outcomes.

The bill specifies that it does not prohibit a municipality from developing, owning, or maintaining a utility-scale renewable thermal energy network.

Ratepayers' Best Interests

The bill requires PURA to structure the utility-scale renewable thermal energy network program in the best interest of utility ratepayers. PURA must base its best-interest determination on the (1) reasonableness of the project's size, scope, scale, and character; (2) related budget; and (3) project's costs and benefits. Under the bill, the costs and benefits PURA must consider include at least the following:

1. avoided long-term energy and infrastructure investments in extending or maintaining gas infrastructure,

2. the project's anticipated contribution to easing seasonal strains on the state's natural gas supply and electric distribution system,

3. consumer protections and benefits for the project's end users,

4. adherence to best practices emerging from thermal energy network programs and project designs developed in other states or elsewhere in the state,

5. a project's potential to accrue capital and operational cost savings through interconnection with other existing or future networks,

6. air quality improvements in the buildings and neighborhood a project serves, and

7. GHG emissions reductions that contribute to meeting the state's goals.

The bill allows PURA to approve a utility-scale renewable thermal energy network proposal that meets PURA's parameters for the program.

Pilot Component

The bill requires PURA to create a pilot component within the program that requires each gas company to file proposals for one or two pilot projects to develop networks that meet PURA's program parameters. It requires PURA to review proposals based on the program parameters and the project's ability to provide insights into the potential for (1) scaling up future network deployment in the state, (2) improving network performance, and (3) reducing the cost to deploy networks more broadly.

Rate Structures, Cost Recovery, and Other Obligations

Under the bill, PURA must require any network projects submitted to the program to include (1) a proposed rate structure for thermal energy services supplied to network end users and (2) consumer protection plans for end users. The bill allows PURA to approve proposed rate structures if the projected heating and cooling costs for end users is no greater than the costs that would occur had they not participated.

The bill requires PURA to approve a gas company's recovery of prudent costs to develop and build projects under the program through a nonbypassable and fully reconciling component of gas rates for all its customers. It allows a gas company to meet its obligation to furnish adequate service at reasonable rates through an approved project.

Working Group and Study

As part of the program, the bill requires PURA to establish a working group to study thermal energy networks. The working group must

include staff from DEEP, the Connecticut Green Bank, gas and electric companies, and nongovernmental environmental organizations.

The bill requires PURA to do at least one study through the working group to assess the potential breadth of thermal energy network deployment in the state. The study must address (1) technical and economic feasibility; (2) deployment strategies to maximize the scope and minimize and equitably allocate network costs, including systematically identifying significant waste heat sources across the state; (4) deployment considerations; and (5) appropriate parameters for broader deployment in the near and medium term.

The study's economic feasibility analysis must consider the potential for the following:

1. reduced (a) energy costs for customers who are off-takers of the system, (b) network capital costs as deployment scale increases, and (c) capital and operating costs as thermal energy networks are connected;

2. avoided costs of expanding and maintaining the gas distribution system;

3. minimized costs of expanding the electricity distribution system to facilitate increased electrification of thermal loads;

4. reduced per-kilowatt-hour costs to supply electricity as more electricity is sold;

5. available state and federal financial incentives;

6. employing gas utility workers and advancing their skills;

7. providing gas utility companies a business model that is not dependent on continued fossil fuel combustion; and

8. air quality improvement.

The study must consider deployment in low- and moderate-income communities, environmental justice communities, new residential and

commercial buildings versus retrofitting, urban versus rural communities, areas with existing gas services versus areas without, and ownership and business models.

The study's consideration for appropriate parameters for broader deployment must include the following:

1. site selection,
2. network design,
3. interactions with and impacts on the gas and electric distribution system,
4. ratepayer and consumer protections,
5. billing models,
6. data collection, and
7. community engagement and deployment in low- and moderate-income communities and environmental justice communities.

EFFECTIVE DATE: Upon passage

Background — Related Bill

sHB 5004, § 16, favorably reported by the Environment Committee, also requires PURA to establish a utility-scale renewable thermal energy network program, including a pilot component, working group, and study

§ 8 — EMERGENCY SERVICE RESTORATION PLANNING COMMITTEES

Requires utilities and other companies to form emergency service restoration planning committees with line and restoration crew members to prepare their emergency restoration plan and expands the plan's required contents

The bill requires each company, provider, or utility required under existing law to submit a service restoration plan (see *Background – Service Restoration Plans*) to establish an emergency service restoration planning committee to prepare the plan. By law, the plan generally includes ways to communicate and coordinate with officials and participate in training exercises.

The bill requires at least half the committee's members to be line and restoration crew members employed by the company, provider, or utility. The line and crew members must select committee members through a process they determine, unless they belong to a collective bargaining unit, in which case the bargaining unit selects the members. The company, provider, or utility appoints the remaining committee members.

Under the bill, the planning committee has two co-chairpersons: one who is a line and crew member elected by line and crew members on the committee and one who is elected by the other members. A majority of members constitutes a quorum to transact committee business, and decisions are made by a majority vote of members present at any meeting.

The bill requires the planning committee to (1) take minutes at each meeting; (2) make them available to any company, utility, or provider employee upon request; and (3) submit them upon request to PURA and the Department of Emergency Services and Public Protection (DESPP).

The bill also expands the required contents of a service restoration plan to include measures to protect the health and safety of (1) line and restoration crews during an emergency and when restoring service, including providing appropriate personal protective equipment, and (2) household and community members during an emergency and during service restoration. The plan must also have a training and skills plan

for line and restoration workers.

If the company, provider, or utility's line and restoration crew members belong to a collective bargaining unit, the bill requires the company, provider, or utility and the collective bargaining unit to jointly develop the training and skills plan.

Background — Service Restoration Plans

Existing law requires utilities and certain other companies to file and update plans to restore service interrupted by an emergency (e.g., hurricane, storm, flood, and enemy attack) with PURA, DESPP, and each municipality in the company's service area. Specifically, this requirement applies to:

1. EDCs, gas, telephone, pipeline, sewage, and water companies that own, lease, maintain, operate, manage, or control plants or equipment;

2. telecommunications companies that install, maintain, operate, or control poles, wires, conduits, or other fixtures under or over a public highway to provide telecommunications services;

3. voice over internet protocol service providers; and

4. municipal utilities that provide electric, gas, or water service.

Certain water companies are exempt from the requirement if they submit a water supply plan under a separate law.

EFFECTIVE DATE: October 1, 2025

§§ 9 & 10 — LINEWORKER AND RESTORATION CREW MEMBER SAFETY

Prohibits EDCs from requiring line and restoration crew members to work in unsafe conditions or retaliating against them for not restoring service within 96 hours

Existing law (1) requires EDCs to make certain payments to residential customers for prolonged outages after an emergency (e.g., a storm, flood, or earthquake) and (2) prohibits them from recovering these costs through rates. Specifically, it requires EDCs to give a (1) $25

credit for each day an outage occurs for more than 96 consecutive hours after an emergency and (2) $250 payment for food or medication that spoils due to an outage lasting more than 96 consecutive hours after an emergency.

The bill prohibits EDCs from requiring line and restoration crew members to work in unsafe conditions to avoid making these credits and payments. It further prohibits them from disciplining, terminating, withholding wages from, or otherwise retaliating against line and restoration crew members for failing to restore service within the 96-hour period.

EFFECTIVE DATE: October 1, 2025

§ 11 — PURA PROCEEDING ON MEDICAL HARDSHIP CUSTOMERS

Requires PURA to evaluate service termination protections for medical hardship customers and report to the Energy and Technology Committee by February 4, 2026

The bill requires PURA to evaluate the criteria and standards related to appropriate service termination protections for gas company or EDC customers with a serious illness or life-threatening medical condition.

Under the bill, PURA must, by July 1, 2025, open an uncontested proceeding or amend the notice of an active proceeding to do this evaluation to review protections for these customers and make recommendations on the appropriate standards for conditioning protections to them on their ability to pay. The evaluation must also assess the following:

1. whether additional notice requirements before shutoff would be appropriate for the customers,
2. the current procedures and practices and the relevant information collected to verify hardship status,
3. ratepayer impacts, and
4. the requirement for these customers to enroll in a payment plan.

The bill requires PURA to submit a report to the Energy and Technology Committee by February 4, 2026, with a summary of the proceeding's results, recommendations on service termination policies, and procedures evaluated in the proceeding.

EFFECTIVE DATE: Upon passage

COMMITTEE ACTION

Energy and Technology Committee

Joint Favorable Substitute
Yea 17 Nay 8 (03/13/2025)