
OLR Bill Analysis

sHB 7017

AN ACT CONCERNING GRID-ENHANCING TECHNOLOGIES.

SUMMARY

This bill requires electric distribution companies (EDCs, i.e. Eversource and United Illuminating) and incumbent transmission owners to submit project alternatives to the Siting Council when seeking to construct or modify transmission lines, substations, and switchyards that are subject to the council's jurisdiction (see BACKGROUND). Under the bill, an incumbent transmission owner is anyone that owns, operates, and maintains an electric transmission facility in the state and is not an EDC.

EDCs and incumbent transmission owners must submit at least one project alternative that uses advanced conductors and one project alternative that uses grid-enhancing technologies (GETs) or nontransmission alternative technologies. The bill requires the Siting Council, when deciding on an application, to give preference to project alternatives if they are at least as cost effective as the project preferred by the EDC or transmission owner.

The bill also requires EDCs and incumbent transmission owners to file information on planned projects annually with the Public Utilities Regulatory Authority (PURA). The bill establishes a process for the Department of Energy and Environmental Protection (DEEP) commissioner to evaluate planned projects and seek proposals to implement any nontransmission alternatives. Under the bill, in any base rate or capital improvement proceeding EDCs must report to PURA information on GETs, advanced conductors, and energy storage deployment.

Under the bill, EDCs and incumbent transmission owners must file a report with PURA on their compliance with the bill's requirements

every five years, starting by January 1, 2027. PURA must submit a copy to the Independent System Operator of New England (ISO-New England) and the Energy and Technology Committee.

Lastly, the bill broadens the authority for DEEP, PURA, and the Office of Consumer Council to retain consultants.

EFFECTIVE DATE: October 1, 2025

SITING COUNCIL DETERMINATIONS

The bill requires EDCs and incumbent transmission owners to submit at least two project alternatives to the Siting Council when seeking to construct or materially modify transmission lines, electric substations, and switchyards. A proposed modification is subject to this requirement if its estimated cost is at least \$5 million. The bill exempts from this requirement any proposed construction or modification resulting from ISO-New England's transmission planning process.

Project Alternatives

One project alternative must use advanced conductors to benefit electric ratepayers, mitigate environmental concerns, and promote electric grid efficiency, through ratepayer cost savings, increased efficiency, and mitigation of long-term wildfire risk. Under the bill, an advanced conductor is one that has a similar diameter as conductors operated by an EDC on October 1, 2025, but has a direct current electrical resistance at least 10% lower and simultaneously increases the conductor's capacity by at least 75%. These project alternatives include rebuilding conductor support structures or other associated facilities.

The other project alternative must use GETs or nontransmission alternative technology (see below), applicable in whole or in part, to facility construction or material modification. GETs are any hardware or software technology that increases the electric distribution or transmission system's capacity or enables enhanced or more efficient performance from the system. GETs include the following:

1. dynamic line rating, which is any hardware or software technologies used to update the calculated thermal limits of

existing distribution or transmission lines in the state based on real-time and forecasted weather conditions;

2. advanced power flow control, which is any hardware or software technologies used to push or pull electric power in a way that balances electric lines that are either exceeding capacity or are underutilized within the distribution or transmission system;
3. topology optimization, which is any hardware or software technology that identifies reconfigurations of the distribution or transmission grid in the state to enable the routing of power flows around congested or overloaded electric grid elements; and
4. energy storage when used as a distribution or transmission resource (e.g., a battery).

A “nontransmission alternative” is an electric grid investment or project that uses nontraditional transmission and distribution solutions (e.g., distributed generation, energy storage, energy efficiency, demand response, and grid software and controls) to defer or replace the need for specific equipment upgrades by reducing electric load at a substation or circuit level.

Application Materials and Council Decisions

The bill requires EDCs and incumbent transmission owners to submit each project alternative with any application the company submits to the Siting Council to construct or materially modify transmission lines, electric substations, and switchyards. If the EDC or transmission owner does not prefer the project alternatives, the application must include a detailed, written explanation comparing the project alternative’s cost-effectiveness and appropriateness with the preferred construction or modification.

The bill requires the Siting Council, when making a decision on an application, to give preference to any project proposing to use GETs or nontransmission alternatives, so long as it is at least as cost effective as the project preferred by the EDC or incumbent transmission owner.

DEEP EVALUATION AND PROCUREMENT

Annual PURA Filing Requirement

The bill requires EDCs and incumbent transmission owners to file the following information with PURA, annually starting by January 15, 2026:

1. a schedule of any planned construction or material modification of transmission lines, electric substations, and switchyards for the next five years, including cost estimates and project details;
2. a plain-language description, up to two pages long, of each planned construction or material modification project; and
3. data on any construction or material modification of any transmission lines, electric substations, and switchyards completed by the company or owner on or after January 1, 2020, including estimated costs during planning and final costs.

DEEP Evaluation and Procurement Process

Within 180 days after the EDC or transmission owner files the schedule and other information with PURA, the bill requires the commissioner (presumably, the DEEP commissioner), in consultation with the Office of Consumer Counsel (OCC), to determine whether any facility listed for construction or material modification requires further evaluation, considering factors that include the following:

1. project justification, scope, and cost-effectiveness;
2. transmission planning;
3. environmental impacts;
4. infrastructure necessity; and
5. alternative solution feasibility, including any nontransmission alternative.

The bill requires EDCs and transmission owners to provide data and information requested by DEEP or OCC for this evaluation. The bill

allows (1) the commissioner and OCC to hire consultants to help with the evaluation and (2) DEEP and OCC to recover costs for consultant services through the non-bypassable federally mandated congestion charge.

If this evaluation identifies a feasible nontransmission alternative, the bill requires the commissioner to start a procurement process to seek proposals to implement the nontransmission alternative. The bill requires PURA to review and approve any agreement to implement the alternative if PURA determines it ensures reliability, is cost effective, and is technically feasible.

PURA RATE PROCEEDINGS

The bill requires EDCs and transmission owners to submit a report to PURA in any base rate or capital improvement proceeding. The report must analyze cost-effectiveness of, and projected timetables for, deploying GETs, advanced conductors, or energy storage relevant to the company's operations. The report may include proposed performance incentive mechanisms for the cost-effective deployment of GETs, advanced conductors, or energy storage. The bill authorizes PURA to approve this deployment, with or without a performance incentive mechanism, if it deems the GETs, advanced conductors, or energy storage cost effective.

CONSULTANTS

The bill broadens authorizations for DEEP, PURA, and OCC to retain consultants. Current law allows (1) DEEP, in consultation with PURA and the OCC, to retain consultants for proceedings or negotiations with various federal agencies and (2) PURA, in consultation with OCC, to retain consultants for proceedings or negotiations with the Federal Communications Commission (FCC).

The bill instead (1) allows DEEP, PURA, and the OCC to retain consultants for proceedings or negotiations with various federal agencies and (2) removes any requirement that they consult with each other to do so. The provision applies for proceedings and negotiations with the same federal agencies that DEEP may retain consultants for

under current law: the Federal Energy Regulatory Commission; U.S. Department of Energy; U.S. Nuclear Regulatory Commission; U.S. Securities and Exchange Commission; Federal Trade Commission; FCC; or U.S. Department of Justice.

Existing law requires reasonable and proper expenses for consultants to be paid by the regulated companies affected by the proceeding (e.g., EDCs, telecommunication providers, and electric suppliers), as determined by PURA. The law caps these expenses at \$2.5 million per calendar year, unless PURA finds good cause to exceed the limit. PURA must recognize these expenses as proper business expenses for purposes of ratemaking.

BACKGROUND

Siting Council Jurisdiction

By law, the siting council has jurisdiction over various types of facilities, including (1) electric transmission lines of at least 69 kilovolts and associated equipment and (2) any electric substation or switchyard designed to change or regulate voltage of at least 69 kilovolts to connect two or more electric circuits and other facilities that the council may prescribe by regulation (CGS § 16-50i(a)). The law excludes transmission line taps from the council's jurisdiction, which are electrical transmission lines that do not have a substantial adverse environmental effect as determined by the council (CGS § 16-50i(e)).

COMMITTEE ACTION

Energy and Technology Committee

Joint Favorable Substitute

Yea 17 Nay 8 (03/18/2025)