
SENATE COMMITTEE ON APPROPRIATIONS

Senator Sabrina Cervantes, Chair
2025 - 2026 Regular Session

AB 2647 (Calderon) - Energy: nuclear powerplants: assessment

Version: June 30, 2026

Urgency: No

Hearing Date: August 3, 2026

Policy Vote: E., U. & C. 15 - 0

Mandate: No

Consultant: Ashley Ames

Bill Summary: This bill would require the California Energy Commission (CEC), on or before January 1, 2028, to prepare a comprehensive assessment of the potential role for advanced nuclear technologies in supporting critical infrastructure in California, and of the potential for new, in-state nuclear power plants to cost-effectively meet the expressed policy of 100% zero-carbon and renewable energy resources by 2045.

Fiscal Impact:

- CEC estimates limited-term costs of \$990,000 annually through 2028 (Energy Resources Program Account [ERPA] or General Fund) to implement the provisions of this bill.

Background: In 1976, the Legislature passed AB 2820 (Goggin, Chapter 194, Statutes of 1976) and AB 2822 (Nestande, Chapter 196, Statutes of 1976) as amendments to the previously enacted 1974 Warren-Alquist Act which authorized the CEC to site nuclear powerplants in the state. The amendments to the Act by the two bills established a moratorium on permitting new nuclear powerplants, specifically they require moratorium until the CEC finds there has been developed a means for permanent disposal of high-level nuclear wastes and provides that before a nuclear powerplant is built, the CEC, must determine that there will be adequate capacity for interim storage of the plant's spent fuel. The California moratorium was challenged by PG&E and ultimately reviewed by the U.S. Supreme Court. In *PG&E v. State Energy Resources Conservation and Development Commission*, 461 U.S. 190 (1983), the Supreme Court upheld California's moratorium law. A key basis of the Court's decision was a division of authority to make safety determinations (federal) and economic determinations (state). The Court found that the absence of a permanent waste disposal site could lead to unknown negative economic consequences. Since that time, the CEC has not found that a high-level waste disposal technology has been demonstrated or approved. Likewise, the Nuclear Regulatory Commission, which regulates commercial nuclear power plants and other uses of nuclear materials, has never made a finding that a demonstrated technology exists for either nuclear fuel rod preprocessing plants or the disposal of high-level nuclear waste.

Proposed Law: This bill would:

1. State it is the intent of the Legislature to ensure the use of a skilled and trained workforce which is required to perform work on other dangerous industrial facilities and also applies to the initial construction and maintenance of any new advanced nuclear reactors that may be permitted and constructed in the future.

2. Require the CEC, on or before January 1, 2028, to prepare as part of the IEPR or a separate report, a comprehensive assessment of the potential role for advanced nuclear technologies in supporting critical infrastructure in California, and of the potential for new, in-state nuclear powerplants to cost-effectively meet statewide needs for new electricity resources, and to meet the expressed policy of 100% zero-carbon and renewable energy resources by 2045.
3. Require the CEC to consider specified analysis and evaluations, including:
 - a. System costs, reliability benefits, emission impacts, deployment timelines, waste management and disposal pathways, environmental and public health impacts, and potential siting considerations.
 - b. Potential of nuclear energy using high-renewable grid scenarios that require firm, dispatchable, zero-carbon resources to complement renewable resources, grid reliability, and reduce overall system costs.
 - c. Ratepayer, taxpayer, and private costs associated with spent nuclear fuel management, including onsite, interim, and long-term storage pathways in comparison with other electricity generation technologies.
 - d. Potential for employment of a skilled and trained workforce.
 - e. Security-related costs and considerations to store, handle, and transport nuclear fuel for each nuclear energy technology.
 - f. Comparative outcomes relative to existing and projected energy pathways in California.
4. Authorize the CEC to update the assessment as appropriate.
5. Authorize the CEC, the California Public Utilities Commission (CPUC), the California Independent System Operator (CAISO), and other public agencies to evaluate the potential of nuclear energy to meet long-term resource needs, notwithstanding the prohibitions on siting new nuclear powerplants.

Related Legislation:

SB 925 (McNerney, 2026) would require the CEC to develop a strategic plan for the development of fusion energy in California.

SB 80 (Caballero, Chapter 334, Statutes of 2025) created the Fusion Research and Development Innovation Hub Program within the CEC to accelerate the development and growth of fusion energy with the goal of delivering the world's first fusion energy pilot plant in the state in the 2030s.

SB 86 (McNerney, Chapter 211, Statutes of 2025) authorized the California Alternative Energy and Advanced Transportation Financing Authority to provide financial assistance, in the form of exclusions from sales and use tax, to electrical generation facilities using nuclear fusion technology.

SCR 25 (Blakespear, Chapter 161, Statutes of 2025) celebrates the numerous contributions of public and private sector organizations within California for advancing

nuclear fusion energy research and supports developing the fusion energy ecosystem with the goal of siting a first-of-its-kind fusion pilot plant in California by the 2040s.

AB 1172 (Calderon, Chapter 360, Statutes of 2023) required the CEC as part of its 2025 IEPR to include an assessment of the potential for fusion energy to contribute to California's power supply.

SB 846 (Dodd, Chapter 239, Statutes of 2022) among its provisions, authorizes the extension of operating the Diablo Canyon Nuclear power plant beyond the current expiration dates (of 2024 for Unit 1 and 2025 for Unit 2), to up to five additional years (no later than 2029 and 2030, respectively), under specified conditions.

SB 423 (Stern, Chapter 243, Statutes of 2021) required the CEC to submit to the Legislature an assessment, by December 31, 2023, of "firm zero-carbon resources" that support a clean, reliable, and resilient electrical grid and that will achieve the existing statutory goal of ensuring eligible renewable energy resources and zero-carbon resources supply 100% of all retail sales of electricity to California end-use customers.

SB 100 (De León, Chapter 312, Statutes of 2018) established the 100 Percent Clean Energy Act which increases the RPS requirement from 50% by 2030 to 60% and creates the policy of planning to meet all of the state's retail electricity supply with a mix of RPS-eligible and zero-carbon resources by December 31, 2045, for a total of 100% clean energy.

Staff Comments: According to the CEC, even with the additional funding, the proposed completion date of January 2028 is not achievable given the need to hire and onboard staff. With current staffing levels and existing commitments, the CEC is unable to absorb this workload, even temporarily. The CEC also notes that, because of its ongoing structural deficit, ERPA may not be an appropriate funding source to support the implementation of this bill.

ERPA is the CEC's principal ongoing support fund — the account that pays for most of its core operations, and the fund source bills routinely name when they assign the CEC new duties. ERPA is funded by the energy resources surcharge, a per-kilowatt-hour charge imposed under the Energy Resources Surcharge Law (Revenue and Taxation Code §40001 et seq.) on electricity consumed in California that is purchased from an electric utility. Utilities collect it from customers and remit it to CDTFA, which administers the surcharge. The CEC sets the surcharge rate each November for the following calendar year. The rate is capped by statute at three-tenths of a mill (\$0.0003) per kWh, a cap last raised from \$0.0002 in 2002, and the CEC exercised its remaining authority in late 2018 to raise the rate from \$0.00029 to \$0.0003 effective January 1, 2019. It has stayed at that ceiling ever since, including for calendar year 2026.

Because the fund is now pinned at its statutory maximum while its revenue base shrinks, ERPA has a long-running structural imbalance. According to the CEC, as building and appliance efficiency standards and behind-the-meter solar flatten statewide consumption, ERPA revenues decline while costs fall on fewer customers; behind-the-meter rooftop solar, wind, and non-utility generation are exempt from the surcharge, so revenues fall further as that capacity grows.

Total ERPA expenditures were roughly \$95.7 million in 2024-25, with the fund balance projected to decline steadily. Recent budgets have continued to load new statutory workload onto the account — for example, the Governor's 2026-27 budget requested \$660,000 from ERPA to implement SB 237 (Grayson, 2025) and \$342,000 for AB 368 (Ward, 2025) on passive house standards. Legislation directing new CEC reporting, rulemaking, or oversight work generally draws on a fund with no headroom in its rate and a declining revenue base.

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