ASSEMBLY THIRD READING
AB 2647 (Calderon)
As Amended April 16, 2026
Majority vote

## SUMMARY

Requires the California Energy Commission (CEC) 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 powerplants to cost-effectively meet statewide needs for new electricity resources, and to meet the expressed policy of the state to achieve 100 percent zero-carbon electricity by 2045.

**Major Provisions**

1) Requires the CEC, on or before July 1, 2027, as part of the integrated energy policy report or as a separate report, 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 powerplants to cost-effectively meet statewide needs for new electricity resources, and to meet the expressed policy of the state to achieve 100 percent zero-carbon electricity by 2045.

2) Requires the CEC to consider all of the following:

   a) An analysis of system costs, reliability benefits, emission impacts, deployment timelines, waste management and disposal pathways to include advanced fuel cycle technologies, environmental and public health impacts, and potential siting considerations.

   b) An evaluation assessing the potential of nuclear energy using high-renewable grid scenarios that require firm, dispatchable, zero-carbon resources to complement renewable resources, enhance grid reliability, and reduce overall system costs.

   c) An assessment of the ratepayer, taxpayer, and private costs associated with spent nuclear fuel management, including onsite, interim, and long-term storage pathways, in comparison with systemwide costs of waste, storage, and byproduct management across other electricity generation technologies.

   d) The potential for employment of a skilled and trained workforce, as defined, in construction, operation, and maintenance of nuclear powerplants.

   e) The potential need for procurement of electricity from nuclear powerplants after 2045.

   f) The comparative outcomes relative to existing and projected energy pathways in California.

   g) A comparative analysis of environmental, public health, and waste impacts across all electricity generation technologies.

   h) Recommended revisions to state law and regulations, including the conditional prohibitions on siting new nuclear powerplants in Sections 25524.1 and 25524.2.

i) Additional factors, as appropriate.

3) Requires the CEC consult with the Public Utilities Commission (PUC), the Independent System Operator (ISO), and other state agencies, as appropriate.

4) Requires the CEC to hold workshops and solicit participation and comments from a broad range of stakeholders, including academic experts in nuclear science and technology and in public health, potential developers, investors, electric corporations, labor, ratepayer advocates, and environmentalists.

5) Authorizes the CEC to update the initial comprehensive assessment as appropriate.

6) Authorizes the CEC, PUC, ISO, and other public agencies to evaluate the potential of nuclear energy to meet long-term resource needs, notwithstanding the conditional prohibitions on siting new nuclear powerplants.

## COMMENTS

Since 2012, only one of the four nuclear power plants developed in California by electric utilities has continued to operate: PG&E′s Diablo Canyon powerplant. Two other nuclear powerplants, PG&E′s Humboldt Bay plant and SMUD′s Rancho Seco plant, have been decommissioned. Developed in the early 1960′s, Humboldt Bay was shut down in 1976 for refueling and never restarted due to seismic and cost issues. Developed in the early 1970′s, Rancho Seco was shut down in 1989 in response to voter referendum. The fourth, the San Onofre Nuclear Generating Station (SONGS) jointly owned by Southern California Edison and San Diego Gas and Electric, was closed in 2012 for repairs, permanently retired in 2013, and is in the process of decommissioning, at a forecasted cost of more than $4.5 billion. High-level radioactive waste from these plants′ operation remains stored on site. Diablo Canyon operates at nine-figure annual deficits, borne by PG&E customers, despite massive public subsidies.

In 1976, the Legislature passed AB 2820 (Goggin) and AB 2822 (Nestande) to establish a moratorium on permitting new nuclear powerplants. 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 (NRC), 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 reprocessing plants or the disposal of high-level nuclear waste.

The California moratorium was challenged by PG&E and ultimately reviewed by the U.S. Supreme Court. In *PG&E v. Energy 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. So the moratorium has remained in effect and no new nuclear plant has been proposed in California since the Diablo Canyon and SONGS units that were in the permitting pipeline at the time the moratorium was enacted.

The federal government is responsible for providing for the permanent disposal of high-level radioactive waste and spent nuclear fuel and was required to begin accepting spent nuclear fuel from nuclear power plants by 1998. However, although Congress selected the Yucca Mountain site in Nevada for a permanent deep geologic repository for the disposal of spent nuclear fuel,

the federal waste disposal program has been plagued with technical and legal challenges, managerial problems, licensing delays, persistent weaknesses in quality assurance for the program, and increasing costs.

No repository or reprocessing facility for spent nuclear fuel has been licensed in the U.S. The federal waste disposal program is paid for by the nuclear electricity generators and waste owners. Under the provisions of the federal Nuclear Waste Policy Act, utilities pay regular fees to the Nuclear Waste Fund to pay for siting, construction and operating a federal waste repository. California ratepayers have paid billions to fund a repository that has never been built. Reprocessing (the separation of spent fuel into high-level wastes and reusable fuel) remains substantially more expensive than waste storage and disposal and has adverse implications for the U.S. effort to halt the proliferation of nuclear weapons.

While CEC does not have a recent independent evaluation, NRC, Department of Energy (DOE), and Congressional reports confirm that the U.S. does not have a permanent repository or reprocessing facility for commercial spent nuclear fuel. While the U.S. has a disposal facility for defense-generated nuclear waste from DOE sites, it does not accept commercial spent nuclear fuel. Commercial spent nuclear fuel is stored at reactor sites.

**According to the Author**
I′m pleased to author AB 2647, a companion measure to SB 100, which was signed in 2018 to mandate 100% clean electricity by 2045 using sources defined as those with zero net greenhouse gas emissions. Since then, California has adopted the most progressive clean energy policies to reduce greenhouse gas emissions and combat climate change. AB 2647 requires the California Energy Commission, on or before July 1, 2027, to prepare a comprehensive assessment of the potential role for advanced nuclear technologies in supporting critical infrastructure in California.

**Arguments in Support**
According to the County of San Luis Obispo, the County recognizes the importance of ensuring long-term clean energy reliability and supporting thoughtful, data-driven evaluation of emerging technologies that will enhance safety and efficiency. The County appreciates the bill′s comprehensive and analytical approach to informing future state energy policy decisions. The assessment includes analysis of system costs, reliability benefits, environmental and public health impacts, waste management considerations, and potential siting, as well as evaluation of how nuclear technologies may complement a high-renewable energy grid scenario. The bill notably provides for coordination with other state energy agencies and requires engagement with a broad range of stakeholders.

**Arguments in Opposition**
According to San Luis Obispo Mothers for Peace, such a study is unnecessary and would come at significant cost. The fundamental issues with nuclear power remain unresolved: there is still no permanent solution for highly radioactive waste that remains hazardous for hundreds of thousands of years; nuclear energy remains among the most expensive forms of electricity generation; and serious safety and environmental risks persist. Just two years ago, the Legislature declined to advance AB 2092, which proposed a $4.7 million study of small modular reactors. The broader study envisioned under AB 2647 would likely cost even more. At a time when California faces a multi-billion-dollar structural deficit, allocating scarce public funds for this purpose is not a prudent use of resources. We are also concerned that this study could be used to

justify future efforts to expand nuclear power in California, despite the significant unresolved challenges associated with cost, safety, and radioactive waste. California can meet its energy and reliability needs more quickly, safely, and cost-effectively through clean renewable energy, energy storage, demand response, and targeted grid improvements.

## FISCAL COMMENTS

According to the Assembly Appropriations Committee:

1) CEC estimates annual costs of approximately $990,000 (Energy Resources Programs Account (ERPA)) for two years for four limited-term staff. CEC notes this bill necessitates significant coordination across its technical, analytical, legal, and environmental disciplines and that the July 2027 deadline is infeasible given CEC′s current staffing levels and existing commitments. Workload created by this bill includes, among other things, nuclear technology, waste, and safety analyses; grid modeling and reliability impact analyses; economic and cost assessments; environmental and public health impact evaluations; and regulatory reviews (including laws governing nuclear power plant siting). According to CEC, ERPA is in a structural deficit.

2) Costs of an unknown, likely minor, amount to PUC, ISO, and other state agencies to consult with CEC on the assessment (various funds).

## VOTES

**ASM NATURAL RESOURCES: 11-1-2**
**YES:** Bryan, Ellis, Alanis, Haney, Hoover, Kalra, Macedo, Pellerin, Schultz, Wicks, Zbur
**NO:** Garcia
**ABS, ABST OR NV:** Connolly, Muratsuchi

**ASM UTILITIES AND ENERGY: 16-0-2**
**YES:** Petrie-Norris, Patterson, Calderon, Chen, Davies, Mark González, Harabedian, Irwin, Kalra, Papan, Rogers, Schiavo, Schultz, Ta, Wallis, Zbur
**ABS, ABST OR NV:** Boerner, Hart

**ASM APPROPRIATIONS: 15-0-0**
**YES:** Wicks, Hoover, Aguiar-Curry, Calderon, Caloza, Dixon, Fong, Mark González, Krell, Pacheco, Pellerin, Sharp-Collins, Solache, Ta, Tangipa

## UPDATED

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