CONCURRENCE IN SENATE AMENDMENTS
AB 2647 (Calderon)
As Amended June 30, 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% zero-carbon electricity by 2045.

Senate Amendments
1) Extend the CEC's deadline for the assessment from July 1, 2027 to January 1, 2028.

2) Require the CEC to consider an assessment of the security-related costs and considerations to store, handle, and transport nuclear fuel for each nuclear energy technology.

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) Chapter 194, Statutes of 1976 and AB 2822 (Nestande) Chapter 196, Statutes of 1976 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
California's own energy agencies confirmed in their 2021 Joint Agency Report that nuclear meets SB 100's definition of clean energy — yet because of the 1976 moratorium, they refrained from including it in their modeling scenarios, depriving the state of a clear understanding of its role in achieving SB 100. AB 2647 marks an important and historic step. In addition to mandating the CEC study, it authorizes the CEC, the Public Utilities Commission, the Independent System Operator, and other public agencies to evaluate advanced nuclear energy's potential to meet statewide needs for new electricity resources…AB 2647 gives us the information to make a new choice, based on the technologies and needs of our century.

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 Senate Appropriations Committee, 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.

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

ASSEMBLY FLOOR: 73-0-7
YES: Aguiar-Curry, Ahrens, Alanis, Alvarez, Arambula, Ávila Farías, Bains, Bauer-Kahan, Bennett, Berman, Bonta, Bryan, Calderon, Caloza, Carrillo, Castillo, Chen, Davies, DeMaio, Dixon, Elhawary, Ellis, Flora, Fong, Gabriel, Gallagher, Gipson, Jeff Gonzalez, Mark González, Hadwick, Haney, Harabedian, Hart, Hoover, Irwin, Jackson, Johnson, Kalra, Krell, Lackey, Lee, Lowenthal, Macedo, McKinnor, Nguyen, Ortega, Pacheco, Papan, Patel, Patterson, Pellerin, Petrie-Norris, Quirk-Silva, Ramos, Ransom, Michelle Rodriguez, Rogers, Blanca Rubio, Sanchez, Schiavo, Schultz, Solache, Soria, Stefani, Ta, Tangipa, Valencia, Wallis, Ward, Wicks, Wilson, Zbur, Rivas
ABS, ABST OR NV: Addis, Boerner, Connolly, Garcia, Muratsuchi, Celeste Rodriguez, Sharp-Collins

UPDATED

VERSION: June 30, 2026

CONSULTANT: Lawrence Lingbloom / NAT. RES. / (916) 319-2092 FN: 0004063