Date of Hearing: April 20, 2026

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Isaac G. Bryan, Chair
AB 2647 (Calderon) – As Amended April 16, 2026

SUBJECT: Energy: nuclear powerplants: assessment

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.

EXISTING LAW prohibits any new nuclear fission power plant until the CEC has determined that technologies exist for the reprocessing of nuclear fuel rods and the disposal of high-level nuclear waste. (Public Resources Code 25524.1 and 25524.2)

THIS BILL:

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.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Background**. 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.

2) **Author's statement**:

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. The assessment will consider the potential for new, in-state nuclear powerplants to cost-effectively meet statewide needs for new electricity resources. Additionally, AB 2647 authorizes the Energy Commission, the Public Utilities Commission, the Independent System Operator, and other public agencies to evaluate the potential of nuclear energy to meet long-term resource needs.

3) **Related legislation**:

AB 1757 (Gallagher) exempts nuclear "microreactors" from both moratoria. AB 1757 failed in this committee on April 6.

AB 305 (Arambula) exempted "small modular reactors" (SMR, a nuclear reactor up to 300 megawatts per unit) from the conditional moratorium and required the Public Utilities Commission (PUC) to adopt a plan to increase the procurement of electricity generated from nuclear facilities and to phase out the procurement of electricity generated from natural gas facilities. In 2025, AB 305 died in this committee without a hearing.

AB 65 (Mathis) was identical to AB 305. AB 65 failed in this committee on April 10, 2023.

AB 1035 (DeVore) exempted from the CEC power plant certification laws the first nuclear power plant to obtain an early site permit from the NRC. AB 1035 failed in this committee on April 20, 2009.

AB 1776 (DeVore) repealed the moratorium and established new conditions on siting new nuclear plants related to seismic hazard, cooling water outflow and waste storage. AB 1776 failed in this committee on April 7, 2008.

AB 2788 (DeVore) was identical to AB 1035. AB 2788 failed in this committee on April 7, 2008.

AB 719 (DeVore) repealed the moratorium. AB 719 failed in this committee on April 16, 2007.

4) **Double referral**. This bill is double-referred to the Utilities and Energy Committee.

REGISTERED SUPPORT / OPPOSITION:

Support

Californians for Green Nuclear Power
County of San Luis Obispo

Prior version:
Bay Area Council
Bay Area New Liberals (center for New Liberalism)
California Council for Environmental & Economic Balance
California Fresh Fruit Association
California State Association of Electrical Workers
California State Pipe Trades Council
Edison International and Affiliates, Including Southern California Edison
Generation Atomic
Mothers for Nuclear
Native Nuclear
New California Coalition
Northern California Power Agency
Nuclear Is Clean Energy Club

Nucleation Capital
Radiant Industries
Southern California Association of Scaffold Contractors
Southern California Contractors Association
Southern California Public Power Authority (SCPPA)
Stand Up for Nuclear
State Building & Construction Trades Council of California
The Breakthrough Institute
Third Way
Upland Chamber of Commerce

Opposition

Prior version:
Alliance for Nuclear Responsibility
California Land Watch
Cleanearth4kids.org
Climate Action California
Climate Resolve
Coalition for Nuclear Safety
Committee to Bridge the Gap
Ecological Options Network
Environment California
Environmental Working Group
Fresnans Against Fracking
Green Party of Marin County
Green Party of Orange County
Long Beach Alliance for Clean Energy
Parents Against Santa Susana Field Lab
Physicians for Social Responsibility - Los Angeles
Protect Rural Escondido
Resource Renewal Institute
Samuel Lawrence Foundation
San Clemente Green
San Francisco Bay Area Physicians for Social Responsibility
San Luis Obispo Mothers for Peace
Santa Cruz Climate Action Network
Sierra Club California
So Cal 350 Climate Action
Sunflower Alliance
The Utility Reform Network (TURN)
Union of Concerned Scientists
West Berkeley Alliance for Clean Air and Safe Jobs
Western Electrical Contractors Association

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