
SENATE COMMITTEE ON APPROPRIATIONS

Senator Sabrina Cervantes, Chair
2025 - 2026 Regular Session

SB 925 (McNerney) - Fusion energy: State Energy Resources Conservation and Development Commission: strategic plan: certification and environmental review

Version: April 28, 2026

Urgency: No

Hearing Date: May 11, 2026

Policy Vote: E., U. & C. 17 - 0, E.Q. 7 - 0

Mandate: No

Consultant: Ashley Ames

Bill Summary: This bill would require the California Energy Commission (CEC) to develop a strategic plan for the development of nuclear fusion facilities, and would expand the types of facilities eligible to be certified by the CEC as environmental leadership development projects (ELDPs) to include discretionary projects for the manufacture, production, or assembly of specialized products, components, or systems integral to fusion energy.

Fiscal Impact:

- The CEC estimates one-time costs of \$3.3 million spread over two years and ongoing costs of \$2.2 million annually (Energy Facility Licensing and Compliance Fund [EFLCF] and either Energy Resources Programs Account [ERPA] or General Fund) to implement the provisions of this bill. Of this amount, up to \$1.8 million may be offset by fee revenue from Opt-In program applicant deposits. (Additional details in staff comments.)
- The Governor's Office of Land Use and Climate Innovation (LCI) estimates one-time costs of about \$101,000 spread over two years (General Fund) to support updates to guidelines, facilitate development of communications materials, and support coordination and engagement.
- Unknown but likely very significant ongoing cost pressure, perhaps over \$10 million annually (various funds), to fund elements of the strategic plan once it is developed pursuant to this bill.

Background: Fusion energy is formed through the combination of two hydrogen atoms to form a helium atom. The resulting helium atom has a lower mass than the two hydrogen atoms; the excess mass is converted into energy. While a simple reaction, fusion energy harnesses the very reaction which powers the sun.

Fusion was first achieved in 1934 but was not energy-positive (output energy greater than the input energy) until 2022. The most common method to achieve fusion is to heat the atoms to temperature hotter than the sun, which requires substantial energy input. Newer methods are less energy intensive, depending on strong lasers or magnets to start the reaction. When the Department of Energy's Lawrence Livermore National Lab (LLNL) created a sustained energy positive fusion reaction in 2022, it was a breakthrough. As of 2025, LLNL created a fusion reaction which netted 1.74 megajoules (MJ), approximately enough energy to power a house for 30 minutes or drive an electric

sedan for 1.5 miles. Fusion labs internationally have sustained a fusion reaction for over 15 minutes, longer than LLNL.

Fusion in California. California leads the fusion industry. One third of all US-based fusion companies are in the state. SB 80 (Caballero, Chapter 334, Statutes of 2025) dedicated \$5 million to fusion research and development. The sector currently employs 4,700 people.

The Perpetual Energy of the Future. Fusion energy researchers joke that fusion is always 15, 30, or 50 years away. A headline from 2018 reads “Nuclear Fusion is 15 years from reality, say MIT engineers.” Eight years later, a research physicist at LLNL said that a viable fusion power plant is 15 to 30 years away.

However, several companies are making million-dollar bets that fusion will reach utility scale in the next two to ten years. Commonwealth Fusion Systems, backed by Bill Gates, plans to open a 400-megawatts (MW; 100 megawatt-hours (MWh) over 15 minutes of operation) plant, enough to power 300,000 homes, in the early 2030s. Helion, backed by OpenAI’s Sam Altman, plans to bring a 50-MW (approximately 12 MWh over 15 minutes) fusion power plant online by 2028. The International Thermonuclear Experimental Reactor, located in France and intended to demonstrate the feasibility of fusion power, is \$5 billion over budget and 9 years delayed (with an opening date of 2034).

Presently, fusion energy can generate 1.74 megajoules for 15 minutes (approximately 500 Wh), a far cry from reliable, utility scale energy. The fusion power plants currently planned are 24,000 to 200,000 larger and must function consistently for hours, if not days, at a time.

Proposed Law: This bill would require the CEC to develop a strategic plan for the development of nuclear fusion facilities, and would expand the types of facilities eligible to be certified as ELDPs. Specifically, it would:

1. Allow CEQA judicial streamlining for nuclear fusion energy generation projects, research facilities, and manufacturing components necessary for nuclear fusion.
2. Make nuclear fusion energy generation, research, and manufacturing projects eligible to be ELDPs.
3. Preclude powerplants using nuclear fission fuels from eligibility for CEQA streamlining and ELDP.
4. Require the CEC, in coordination with any relevant federal, state, or local agency, to develop a strategic plan for fusion energy including:
 - i. Proposed actions to address the needs of fusion energy identified in the 2027 edition of the Integrated Energy Policy Report;
 - ii. Emphasis and priority placed on near-term actions to expand research and development on the California fusion ecosystem and supply chain;

- iii. Identification or suitable locations or criteria for suitable locations for new fusion research, demonstration projects, and powerplants;
 - iv. Occupational safety requirements; and
 - v. A regulatory framework for licensing and permitting.
 - b. Develop a strategy for the expansion and development of fusion research and development, including:
 - i. Opportunities for expanding small, medium, and large fusion research and development facilities;
 - ii. Options for siting a national integrated facility;
 - iii. Criteria for suitable locations with consideration of capabilities that best serve the US fusion industry; opportunities for developing or expanding research on public and private land, including University of California campuses, other colleges, and vocational schools; and opportunities for siting a large integrated fusion research and development facilities in partnership with government and industry.
 - c. Develop a strategy for supporting the commercialization of fusion energy in California, including:
 - i. Identifying suitable locations or criteria for suitable locations, considering existing data on fusion energy commercial viability, transmission infrastructure, and the protection of cultural and biological resources;
 - ii. Recommendations on potential significant adverse environmental impacts consistent with California's long-term renewable energy; greenhouse gas emissions reduction, and biodiversity goals
 - iii. Solicited interest from local governments, economic development organizations, nongovernmental organizations, and the fusion energy industry to identify locations with existing fusion assets; and understand incentives and proposed cost-sharing opportunities.
 - d. Develop a regulatory framework for fusion energy and a roadmap for licensing and permitting, as provided.
 - e. Assess the level at which fusion energy at scale would best support California's long-term renewable energy and greenhouse gas emissions reduction goals.
 - f. Ensure policy tools are available to fusion developers.
- 5. Allow the CEC to:
 - a. Refer to the Fusion Energy Science Advisory Committee (FESAC) and US Department of Energy (DOE) materials;

- b. Engage with the DOE;
 - c. Solicit interest from local governments, colleges, universities, the fusion industry, and other organizations to identify existing fusion assets; and
 - d. Recommend establishing designated geographic areas to accelerate the development of fusion technologies.
6. Make findings and declarations.

Related Legislation:

SB 887 (Padilla, 2026) would expand ELDP eligibility to data centers certified to meet specified environmental standards.

SB 80 (Caballero, Chapter 334, Statutes of 2025) establishes the Fusion Research and Development Innovation Initiative within the CEC.

SB 1172 (Calderon, Chapter 360, Statutes of 2023) requires the CEC to produce an assessment of the potential for fusion energy to contribute to California's power supply.

AB 525 (Chiu, Chapter 231, Statutes of 2021) requires the CEC in collaboration with relevant stakeholders to create a roadmap for the development of the offshore wind industry.

Staff Comments: The CEC estimates one-time costs of \$3.2 million spread over two years as well as ongoing costs of \$2.2 million annually. Of this amount:

- The CEC estimates ongoing costs of \$1.8 million annually (EFLCF) and 9 positions for the addition of fusion energy, demonstration, and research and development facilities to the CEC's Opt-In permitting program. Permitting these facilities as eligible for the Opt-In program, would introduce a new energy type and technology. The CEC Siting and Environmental Protection Division would need to set up a unit with qualified technical staff experienced in the science of nuclear fusion and energy creation. The expanded scope of work would require 9 additional positions and ongoing contract funding of \$360,000 per year for contracts with technical and subject matter experts necessary to complete engineering studies and environmental and safety assessments. The CEC cannot absorb the proposed Opt-in program workload with existing staff and contract resources. Funding would come from application deposits which are deposited in ELFCF; per SB 127 (Committee on Budget, Chapter 15, Statutes of 2025), CEC would invoice for all application processing costs that exceed the initial deposit.
- The CEC estimates one-time funding of \$3.2 million spread over two years (ERPA, General Fund, or other funding source) for 5 limited-term positions for the development of the Strategic Plan and related requirements. This effort would require additional staff to provide overall project management for the development of the strategic plan, lead writing of the plan, coordinate and oversee consultant resources, coordinate with other agencies, lead public engagement and process, and provide technical expertise and oversight. This amount also includes \$1 million for contract costs to obtain consultant resources.

Staff notes that ERPA is in a structural deficit, an issue that's been recurrent and long-standing. The state uses ERPA funds to support various energy programs and projects, including CEC's operations. ERPA is funded primarily by a surcharge on retail electricity sales, which is currently set to the statutory maximum of \$0.0003 per kWh. This surcharge generated \$71.6 million in 2022-23. On average, a California ratepayer pays about 16 cents per month for the surcharge—or about \$2 annually. The CEC sought authority to increase this tax via a budget trailer bill in 2024 but was unsuccessful. Any increased expenditures from this account would exacerbate this deficit and expedite the insolvency of the fund.

-- END --