
THIRD READING

Bill No: AB 1408
Author: Irwin (D), et al.
Amended: 7/18/25 in Senate
Vote: 21

SENATE ENERGY, U. & C. COMMITTEE: 16-0, 7/15/25

AYES: Becker, Ochoa Bogh, Allen, Archuleta, Arreguín, Caballero, Dahle,
Gonzalez, Grove, Hurtado, Limón, McNerney, Rubio, Stern, Strickland, Wahab
NO VOTE RECORDED: Ashby

SENATE APPROPRIATIONS COMMITTEE: Senate Rule 28.8

ASSEMBLY FLOOR: 79-0, 6/2/25 - See last page for vote

SUBJECT: Electricity: interconnections

SOURCE: Environment California

DIGEST: This bill requires specified actions of electrical corporations, local publicly owned electric utilities (POUs), and the California Independent System Operator (CAISO) to evaluate, consider, and integrate surplus interconnection service (SIS), generally understood as additional available capacity where an existing generating resource interconnects on the transmission system.

ANALYSIS:

Existing law:

- 1) Establishes the Federal Energy Regulatory Commission (FERC) has exclusive jurisdiction over the transmission of electricity in interstate commerce and over all facilities for the transmission or sale of electricity in interstate commerce. (Federal Power Act §§201, 205, 206 (16 United States Code 824, 824d, 824e))

- 2) Establishes and vests the California Public Utilities Commission (CPUC) with regulatory authority over public utilities, including electrical corporations. (California Constitution, Article XII)
- 3) Establishes the CAISO as a nonprofit, public benefit corporation and requires the CAISO, among other duties, to ensure the efficient use and reliable operation of the transmission grid consistent with the achievement of planning and operating reserve criteria, as provided. (Public Utilities Code §345.5)
- 4) Requires the CPUC to adopt a process for each load-serving entity (LSE) to file an integrated resource plan (IRP), adopt a schedule for periodic updates to the IRP, and ensure each LSE take specified actions, as specified. (Public Utilities Code §454.52)
- 5) Requires the governing board of each local publicly owned electric utility (POU) with an annual electrical demand exceeding 700 gigawatt hours (GWh) to adopt an IRP and a process for updating the plan at least once every five years to ensure the utility achieves certain goals, as specified. (Public Utilities Code §9621)
- 6) Establishes the policy of the state that eligible renewable energy resources and zero-carbon resources supply 90% of all retail sales of electricity to California end-use customers by December 31, 2035, 95% of all retail sales of electricity to California end-use customers by December 31, 2040, 100% of all retail sales of electricity to California end-use customers by December 31, 2045, and 100% of electricity procured to serve all state agencies by December 31, 2035, as provided. (Public Utilities Code § 454.53)

This bill:

- 1) Requires the CAISO to integrate surplus interconnection service considerations into its long-term transmission planning and enhance transparency around surplus interconnection service opportunities in order to maximize opportunities for federal investment and production tax credits.
- 2) Requires each electrical corporation, and each local POU with an annual electrical demand exceeding 700 GWh, to require the evaluation of surplus interconnection service options and to consider surplus interconnection service options, for purposes of its IRP.

- 3) Requires each electrical corporation or local POU to use available grid infrastructure through surplus interconnection service to use any available interconnection capacity, such as the addition of renewable energy resources or battery energy storage.

Background

Surplus Interconnection Service (SIS). SIS refers to the unused portion of energy capacity authorized at an existing electric generator's point of interconnection to the transmission system. SIS allows new generating facilities – such as solar arrays, wind turbines, or battery storage systems – to co-locate to an existing generating resource and connect to the electric grid using the existing infrastructure. Under a SIS arrangement the new generating asset connects to the transmission system by utilizing the existing point of interconnection for an existing generating resource, provided that the combined output between the new resource and the existing generating resource does not exceed the originally approved transmission interconnection capacity. The primary advantage of SIS is that it enables additional resources to bypass the often lengthy and complex standard transmission interconnection queue, facilitating faster deployment of clean energy projects.

Transmission interconnection queue stymied by growing backlog. The standard transmission interconnection queue has experienced growing backlogs (across the country) in recent years as the development of new generating resources have significantly increased, especially as state policies require renewable and zero-carbon resources. Standard transmission interconnection queue can take four-five years within the CAISO footprint before a generating asset connects to the transmission system. With a growing need for significant increase in new renewable and zero-carbon resources, there are growing efforts to help streamline and address the transmission interconnection backlog both at the federal level and at the CAISO.

Efforts to modernize transmission interconnection. FERC Orders 2003, 845, and 2023 created a method to expedite interconnection requests by allowing customers to use existing transmission capacity to connect renewable energy projects to the grid. FERC Order 845 (issued in 2018) included several reforms of the interconnection process and specifically requires transmission providers to create a process for interconnection customers to use SIS at existing points of interconnection. A co-located resource using SIS can be connected within months, or under a year. However, SIS is typically limited to scenarios where no new transmission network upgrades are required, and its availability is contingent upon

the continued operation of the original generating facility. The SIS approach not only optimizes the use of existing grid infrastructure but also supports the integration of renewable energy sources by reducing interconnection delays and associated costs to connect these resources.

CAISO offers SIS in alignment with FERC Order No. 845. Under CAISO's Generator Interconnection and Deliverability Allocation Procedures, the original interconnection customer can transfer surplus capacity to another entity. The assignee must submit an interconnection request through the Independent Study Process, during which CAISO and the Participating Transmission Owner (TO) assess the proposal to ensure system reliability and identify any necessary upgrades. Importantly, the aggregate interconnection service capacity of both the original and new facilities cannot exceed the capacity specified in the original agreement. Additionally, unless the assignee secures its own Transmission Plan Deliverability allocation, the transferred capacity is designated as Energy-Only, meaning it does not contribute to resource adequacy (RA) requirements.

Comments

Need for this bill. According to the author: "California's ambitious electrification goals will require the addition of a myriad of clean energy resources to serve load by 2035. The CPUC estimates that California will need to add 56 gigawatts (GW) of clean power to serve load by 2035. Those clean energy projects must be connected to the grid after undergoing rigorous studies and impact reports. Only after an average 4-year study timeline for interconnection, these projects are added to a lengthening interconnection queue. The FERC and the U.S. Department of Energy have identified SIS as a savvy, medium-term solution to delays in the interconnection process. SIS allows for clean energy projects to be sited near or at existing fossil power plants and share power grid access. Many fossil power plants do not utilize their allotted operating capacity, allowing for other energy users to connect to the grid using the existing interconnection at the fossil power plant. This method expedites clean energy projects, and saves ratepayers money from the reduction in necessary transmission and distribution infrastructure."

Report suggests SIS is promising solution to accelerate deployment of needed clean energy. A February report by GridLab noted the national potential of SIS capacity. The report noted that 1,500 GW of solar and wind and over 1,000 GW battery storage remain stalled in interconnection transmission queues, with median wait times increasing from less than two years in 2000-2007 to five year for projects built in 2023. These bottlenecks are further compounded by extended lead times for critical grid equipment (including transformers and breakers). The

GridLab report suggests that a promising solution is leveraging existing grid infrastructure through interconnection sharing, specifically the addition of renewable energy or battery storage capacity at, or near, existing fossil fuel plants to utilize their existing interconnection transmission capacity. The report noted a number of potential benefits to this approach, including alignment with a least-cost power system in many states, the potential for \$85 billion in interconnection costs compared to developing projects at new points of interconnection, and immediate opportunities to with underutilized assets (such as natural gas combustion turbine peaker plants that operate infrequently). The report includes several recommendations to realize the opportunity with the grid access sharing strategy, including many that relate to this bill. These include: recommending public utility commissions should require evaluation of SIS options in integrated resource planning, state legislators should mandate consideration of SIS in IRP, and LSEs should prioritize existing points of interconnection for renewable development.

A recent (2025) Working Paper by researchers at the University of California at Berkeley examined the potential for SIS in California and found that California can add 76 GW of clean energy capacity through SIS, including 36 GW solar, 17 GW wind, and 23 GW storage at existing plants. The study found 15.7 GWs of California's 34 GWs of thermal capacity operates below 15% capacity factor, indicating severe underutilization of their interconnections. The paper makes recommendations similar to those in the GridLab report, but specific to California, including: requiring SIS consideration within the CPUC's IRP and the CAISO's transmission planning process. The paper goes further to also recommend streamlining projects that share grid access via SIS. The paper notes such policy changes could save "Californians \$7 billion in interconnection costs while dramatically accelerating renewable deployment timelines from 5 years to 1-2 years."

Chasing federal tax credits. This bill would require the CAISO to integrate SIS capacity within the long-term transmission planning in order to maximize federal production and investment tax credits for clean energy. These tax credits were extended and enhanced under the Inflation Reduction Act adopted under the Biden administration to support clean and renewable energy, including solar, wind, and battery energy storage. Under these tax credits, these energy projects benefit from tax credits of 30% of the cost the project for certain projects meeting specified work and wage requirements and nearly three cents per kilowatt hour of a production tax credit. However, as part of the recently adopted Budget Reconciliation Act under the Trump administration, known as the One Big Beautiful Bill Act (OBBBA), these tax credits for solar and wind projects have been limited to requiring construction to begin within a year of the bill being

signed – by July 4, 2026. Just days after the July 4, 2025 signing of the bill, President Trump issued an Executive Order 14315 on July 7th directing the U.S. Treasury to place additional limits to ensure these projects do not circumvent the requirement that construction must begin within a year and to restrict the use of broad safe harbors unless a substantial portion of an applicable wind or solar facility has been built. U.S. Treasury guidance, Notice 2025-42, was issued on August 15th and further limits the eligibility of wind and solar projects for purposes of the tax credits, including removing the Five Percent Safe Harbor previously authorized, which allowed a project to incur five percent or more of the cost of the project to demonstrate beginning of construction requirement, for solar and wind projects. Instead the Treasury guidance requires wind and solar projects must meet the Physical Work Test which requires “work of a significant nature” (both on-site and off-site) to be eligible for the tax credits and does not include preliminary work (including planning or securing financing). However, low-output solar projects, those with output of 1.5 MW or less can continue to use a Five Percent Safe Harbor provision. In the case of battery storage, the tax credits are available for a longer time horizon (a couple of additional years) with limitations based on the OBBBA provisions to limit foreign entity restrictions, including from companies and manufacturing from China. It’s unclear whether there are enough current projects to satisfy these requirements which would also be eligible for SIS and could be included within the limited timeframe for the transmission planning process. However, the author and supporters intend to help realize the value of the tax credit savings by requiring the CAISO to fold this effort into the transmission plans.

Related/Prior Legislation

AB 2779 (Petrie-Norris, Chapter 741, Statutes of 2024) required the CAISO to report to the CPUC and to relevant policy committees in the Legislature any new use of any grid-enhancing technologies (GETs) and their associated cost and efficiency savings.

SB 1006 (Padilla, Chapter 597, Statutes of 2024) required electrical transmission utilities, by January 1, 2026, to develop studies on the feasibility of using GETs and advanced reconductors, and specifies the content and cadence of those studies.

FISCAL EFFECT: Appropriation: No Fiscal Com.: Yes Local: Yes

SUPPORT: (Verified 8/25/25)

Environment California (Source)

Advanced Energy United
Independent Energy Producers Association
Natural Resources Defense Council
Union of Concerned Scientists

OPPOSITION: (Verified 8/25/25)

None received

ARGUMENTS IN SUPPORT: According to Environment California, the sponsor of this bill: “Leveraging existing interconnection infrastructure offers a significant opportunity to rapidly expand our clean energy and storage capacity. By enabling new renewable generation and storage at sites already connected to the grid, we can bypass the often lengthy and complex process of developing new transmission infrastructure, leading to faster deployment of crucial clean energy resources. Furthermore, supporting surplus interconnection maximizes our ability to capture the expiring federal Investment Tax Credit (ITC) and Production Tax Credit (PTC). These federal incentives are essential for making renewable energy projects economically viable. The ability to quickly build and connect new clean energy and storage at existing sites will help project developers meet deadlines and fully utilize these credits, ensuring California benefits from substantial federal investment in our clean energy infrastructure.”

ASSEMBLY FLOOR: 79-0, 6/2/25

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

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