SENATE COMMITTEE ON ENERGY, UTILITIES AND COMMUNICATIONS
Senator Benjamin Allen, Chair
2025 - 2026 Regular

Bill No:	AB 2111	**Hearing Date:**	6/16/2026
Author:	Papan		
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Urgency:	No	**Fiscal:**	Yes
Consultant:	Nidia Bautista		

SUBJECT: Electricity: transmission planning and transmission facilities

DIGEST: This bill requires various actions to better incorporate uncertainty and risk in resource portfolio planning to inform transmission planning. This bill requires the California Energy Commission (CEC) and the California Public Utilities Commission (CPUC), in coordination with the California Independent System Operator (CAISO), on or before January 1, 2028, to incorporate specified requirements into an update to the Memorandum of Understanding (MOU) regarding transmission and resource planning adopted by the CEC, CPUC, and CAISO on December 23, 2022, and any related workplan.

ANALYSIS:

Existing law:

1) Establishes that U.S. Federal Energy Regulatory Commission (FERC) has exclusive jurisdiction over the transmission of electric energy in interstate commerce. (Federal Power Act §§§201, 205, 206 (16 USC 824, 824d, 824e))

2) Establishes the CPUC with jurisdiction over all public utilities, including electrical corporations. (Article XII of the California Constitution)

3) Establishes the State Energy Resources Conservation and Development Commission (also known as the CEC) to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices and to use these assessments and forecasts to develop and evaluate energy policies and programs that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. (Public Resources Code §25301(a))

4) Establishes the CAISO as a nonprofit public benefit corporation and requires the CAISO to ensure the efficient use and reliable operation of the electrical transmission grid consistent with the achievement of planning and operating reserve criteria, as specified. (Public Utilities Code §345.5)

5) Requires the CPUC to identify a diverse and balanced portfolio of resources needed to ensure a reliable electricity supply that provides optimal integration of renewable energy and resource diversity in a cost-effective manner, as specified. (Public Utilities Code §454.51)

6) Requires the CPUC, in consultation with the CEC on or before March 31, 2024, to provide transmission-focused guidance to the CAISO about resource portfolios of expected future renewable energy resources and zero-carbon resources, including the allocation of those resources by region based on technical feasibility and commercial interest in each region to allow the CAISO to identify and approve transmission facilities needed to interconnect resources and reliably serve the needs of load centers. (Public Utilities Code §454.57)

7) Requires that the guidance include projections each year to support planning and approvals by the CAISO in its annual transmission planning process, including projections of resource portfolios and electricity demand by region for at least 15 years into the future, as specified. Expresses the state policy that planning for new transmission facilities include consideration of the goal of increasing systemwide reliability and cost efficiency, among other state policy goals. (Public Utilities Code §454.57 (e))

8) Requires the CEC and the CPUC, in coordination with the CAISO, every five years, to review the 2022 MOU regarding transmission planning and a related workplan to ensure the MOU and workplan reflect the coordination that is needed to help meet the state's energy goals. (Public Resources Code §25308)

This bill:

1) Requires the CEC, CPUC, and CAISO, on or before January 1, 2028, to update the MOU and workplan to, among other things, ensure that the MOU and workplan reflect the requirements of FERC Order 1920-A.

2) Defines "risk prudent" to mean reflective of two characteristics:

    a) Achieving the state objectives, including ensuring a reliable electricity supply that provides optimal integration of renewable energy and resource diversity in a cost-effective manner, across a range of plausible futures informed by planning uncertainties.
        i) The ability of a risk-prudent plan to achieve state objectives is not dependent on an assumption of perfect foresight reflective of predictions or forecasts that assign one specific value to planning uncertainties.

b) Accounting for and including characterization of the ability of near-term decisions to improve adaptability in response to planning uncertainties. Defines "improving adaptability" to include planning sufficient resources and transmission facilities to accommodate planning uncertainties, maintaining a competitive market for resource procurement, accounting for development and interconnection delays, and improving preparations for other contingencies.

3) Requires that the portfolio to resources required by Public Utilities Code §454.51 provide optimal integration in a cost-effective and risk-prudent manner.

4) Requires that the guidance also include both sufficient infrastructure capacity to facilitate cost-effective procurement of certain resources and improvements to resource diversity and competition by increasing interconnection capacity to specific locations that reflect resource availability.

5) Requires the CPUC to separately provide additional transmission-focused guidance to the CAISO that is risk prudent and supports compliance with FERC Order 1920-A, as specified.

6) Removes the requirement that the projections be provided annually and would require the projections of resource portfolios and electricity demand by region to be for at least 20, rather than 15, years into the future. Adds to those state policy goals reducing resource interconnection timelines and supporting achievement of the state's energy, climate change, and air quality goals.

7) Requires the CPUC, beginning on or before January 1, 2028, to make available on its internet website all nonconfidential input and output data used in the integrated resource planning and transmission planning processes.

Background

SB 100 (De León, Chapter 312, Statutes of 2018). SB 100 established the state's target to meet 100% of the state's electricity retail load with renewable and zero-carbon resources by 2045. SB 1020 (Laird, Chapter 361, Statutes of 2022) established interim goals to meeting the SB 100 target, specifically requiring 90% of retail sales by 2035, 95% by 2040 to be met with renewable and zero-carbon energy resources. SB 100 Joint Agency Report evaluates the challenges and opportunities in implementing SB 100. It includes an initial assessment of the additional energy resources and the resource building rates needed to achieve 100% clean electricity, along with the associated costs. It uses a computer model to

analyze these factors under various conditions and technologies. The report is scheduled to be updated every four years. The first report issued on March 2021 identified that on average the state may need six gigawatts (GW) of new renewable and energy storage annually to meet the SB 100 goals.

Integrated Resources Plan (IRP) process. SB 350 (De León, Chapter 547, Statutes of 2015) required each load-serving entity (LSE) to file a biennial IRP for approval or certification by the CPUC. The CPUC combines all LSEs' IRPs to ensure the state is on its path to meet its clean energy procurement goals. Publicly owned utilities (POUs) are required to file their own IRPs with the CEC. The goal of the IRP is a two-year planning process to ensure that LSEs are meeting targets that allow the electricity sector to contribute to California's economy-wide greenhouse gas (GHG) emissions reductions goals and that helps to reduce overall costs. The effort is intended to forecast needs on a 10-year horizon. In this regard, the IRP is a forward-looking activity. Whereas the requirements to meet renewable energy standards is a compliance activity to review whether LSEs and POUs have satisfied their three-year compliance obligation under the Renewable Portfolio Standard (RPS) requirements to meet an increasing share of its retail load with eligible renewable energy resources, until achieving 60% by 2035. As part of the IRP process, the CPUC has issued several procurement orders on LSEs to address near-term and mid-term procurement needs, including the need for energy storage resources. SB 887 (Becker, Chapter 358, Statutes of 2022) adjusts the planning horizon for resource portfolios to inform transmission planning from 10 years to 15 years.

Transmission Planning Process (TPP). Each year, the CAISO conducts its TPP to identify system limitations and determine where transmission upgrades or new infrastructure are needed to improve reliability and support the integration of clean new resources. The TPP relies on the CPUC's IRP process to identify the optimal mix of resources capable of meeting the state's GHG planning targets and reliability needs, with IRP results serving as key inputs into the TPP. In addition, the CAISO also incorporates the CEC's demand forecasts for electricity and natural gas sales, consumption patterns, and peak and hourly electricity demand to ensure that transmission plans are aligned with anticipated future load conditions.

The TPP is built around an annual public stakeholder process under the CAISO tariff approved by the FERC. Each year, the process concludes with the CAISO Board of Governors approving a transmission plan that identifies projects needed to support the electric grid. There are three main categories of CAISO-approved transmission projects:

1) Reliability projects to meet federal reliability standards;

2) Policy projects to support state policy goals; and
3) Economic projects that reduce congestion, production costs, transmission losses, capacity requirements, or other electric supply costs.

Following the CAISO Board's approval of a TPP, new projects identified as necessary go through a competitive solicitation process. Transmission developers, including public utilities, investor-owned utilities, and private entities, may apply for project solicitations, with applications evaluated against qualifying criteria such as cost and prior experience. The selected transmission sponsor is then responsible for financing, constructing, owning, operating, and maintaining the transmission line.

CAISO 20-year Transmission Outlook. The CAISO created a 20-Year Transmission Outlook for the electric grid, in collaboration with the CPUC and the CEC, with the goal of exploring the longer-term grid requirements and options for meeting the State's SB 100 clean energy objectives reliably and cost-effectively. The 20-year Outlook was released in September 2021, and the CAISO intends for the expanded planning horizon to provide valuable input for resource planning processes conducted by the CPUC and CEC, and to provide a longer-term context and framing of pertinent issues in the CAISO's ongoing annual 10-Year Transmission Plan.

Memorandum of Understanding on transmission planning. On December 23, 2022, the CPUC, the CEC, and the CAISO entered into a MOU related to resource and transmission planning, transmission development and permitting, procurement, and interconnections to achieve reliability and policy needs and to coordinate the timely development of resources, resource interconnections, and needed transmission infrastructure. The CPUC, CEC, and CAISO entered an updated MOU, replacing a 2010 MOU, in order to better coordinate their respective and shared efforts for the timely development of resources needed to achieve the state's clean energy goals reliably and economically. The MOU focuses on linkages between forecasting, planning, procurement direction, and the interconnections process, among others, including those related to transmission. SB 319 (McGuire, Chapter 390, Statutes of 2023) codified the MOU and requires the entities to update the MOU every five years.

FERC Order 1920-A. In May 2024, FERC issued a new transmission and cost allocation rule, FERC Order 1920, to ensure a reliable grid by requiring the nation's transmission providers to plan for the transmission system that will be needed in the future. The rule adopts several requirements concerning how transmission providers must conduct long-term planning for regional transmission facilities and determine how to pay for them, to ensure needed transmission is

built. These requirements include: requirement to conduct and periodically update long-term transmission planning to anticipate future needs; requirement to consider a broad set of benefits when planning new facilities; requirement to identify opportunities to modify in-kind replacement of existing transmission facilities to increase their transfer capability; ensuring customers pay only for projects from which they benefit; and expand states' role throughout the process of planning selecting, and determining how to pay for transmission facilities. Subsequently, in November 2024, FERC adopted Order 1920-A that further clarified requirements in FERC Order 1920.

The rule requires each transmission operator to produce a regional transmission plan of at least 20 years to identify long-term needs and facilities to meet them and requires the planning is conducted at least every five years using a plausible and diverse set of at least three scenarios that incorporate specific factors. Several states have challenged FERC's issuance of Order 1920 in federal court, arguing that the Order's requirements privilege states with renewable energy policies over those without. These cases have been consolidated into one case, *Appalachian Voices, et al. v. FERC (4th Cir. No. 24-1650).* The current administration continues to defend FERC's rule in the court and California's Attorney General Bonta has co-led a coalition of 12 states defending the order in an Amicus Brief. The case remains active.

Energy-only resources. Energy-only resources are those that generating resources that are interconnected to the electric grid but are not studied for deliverability. The CAISO has begun exploring pathways through its Interconnection Process Enhancements to allow certain energy-only resources to seek deliverability after coming online, where sufficient transmission capacity exists and no network upgrades are required. Under this concept, some projects may come online earlier as energy-only and later obtain deliverability if conditions permit.

Comments

Need for this bill. According to the author:

> AB 2111 modernizes California's transmission planning process to ensure the state can reliably and affordably meet future electricity demand. The bill requires the California Public Utilities Commission (CPUC) to plan for a range of plausible future scenarios and better align long-term demand projections with infrastructure development timelines and resource planning. Planning for the future requires anticipating change rather than reacting to it. California's energy system must be designed to meet not just today's needs, but the demands of the future. However, the CPUC's current transmission planning process was not

built to adapt to evolving conditions. As the state's climate goals have expanded and electrification has accelerated, the limitations of a system focused primarily on near-term forecasts have become increasingly apparent. Existing planning approaches do not consistently account for long-term load growth, emerging technologies, or the scale of infrastructure needed to support a reliable, affordable, and clean electric grid. AB 2111 addresses this by ensuring that sustained load growth and evolving system requirements are fully incorporated into transmission planning. As such, the changes made by AB 2111 will help California achieve its climate goals, maintain grid reliability, and deliver long-term value for ratepayers.

Bill seeks more certainty to connect generation resources by requiring consideration of uncertainty to be more clearly injected into transmission planning. The proponents of this bill seek greater certainty to connect energy-only resources by requiring risk-prudency and uncertainty to be more formally injected within the existing guidance for transmission planning. They desire additional transmission capacity, particularly for regions of the state that experience ongoing limited transmission capacity, by requiring more analysis and guidance that will account for uncertainties as part of the guidance provided from the CPUC to the CAISO for transmission plans. They argue that transmission constraints in California mean that a very significant number of new clean resources are unable to interconnect to the grid, citing the over 10 GW of real projects have dropped out of the current Cluster 15 interconnection process at the CAISO. They argue that the current approach to transmission planning within the CPUC's IRP only considers the minimum amount of transmission capacity needed. They would like to see more active scenario and uncertainty planning to ensure the state connects the needed resources to achieve the state's clean energy goals. These concerns are valid. Nonetheless, should this bill move forward the author may wish to consider whether the litany of requirements in this bill are necessary to achieve the intended goals and whether the specific reference to the FERC Order, the original of which is currently subject to litigation, may need to be amended.

Costs to ratepayers. Building additional transmission capacity may result in additional costs to ratepayers. This bill includes explicit language that would require ensuring costs are guided by just and reasonable rates in order to help protect utility ratepayers from unnecessary costs.

Prior/Related Legislation

SB 254 (Becker, Chapter 119, Statutes of 2025) established the Transmission Infrastructure Accelerator and requires the Governor's Office of Business and Economic Development Energy Unit, in coordination with specified entities, to

develop a financing and development strategy for eligible transmission projects, select projects that may receive public financing, and take steps to accelerate transmission development.

AB 2779 (Petrie-Norris, Chapter 741, Statutes of 2024) required the CAISO, upon approval of each transmission plan, to report to the CPUC and the relevant policy committees of the Legislature any new use of grid-enhancing technology deemed reasonable in that plan, and the costs and efficiency savings associated with that technology.

SB 1006 (Padilla, Chapter 597, Statutes of 2024) required electrical corporations to evaluate the use of advanced conductors and grid-enhancing technologies to increase transmission capacity and to report those evaluations to the CAISO.

SB 319 (McGuire, Chapter 390, Statutes of 2023) required specified actions related to electric transmission planning, including: requires a review and update to a December 2022 MOU and related workplan among California energy agencies and CAISO the development of an electrical transmission infrastructure guidebook; and a report to the Legislature regarding the status of transmission projects.

SB 887 (Becker, Chapter 358, Statutes of 2022) directed, among other provisions, the CPUC, on or before January 15, 2023, to request CAISO to identify the highest priority anticipated transmission facilities that are needed to deliver renewable energy resources or zero-carbon resources and adjusts the planning horizon for the annual electricity transmission plan from 10 years to 15 years.

SB 1174 (Herzberg, Chapter 229, Statutes of 2022) required certain CPUC reports and assessments, including to identify interconnection transmission projects and prioritize necessary approvals.

SB 100 (De León, Chapter 312, Statutes of 2018) established the 100 Percent Clean Energy Act of 2018, which increased the RPS requirement from 50% by 2030 to 60% and established a state policy that eligible renewable and zero-carbon resources supply 100% of retail electricity sales by December 31, 2045.

SB 350 (De León, Chapter 547, Statutes of 2015) established the Clean Energy and Pollution Reduction Act of 2015, which increased the RPS requirement from 33% to 50% by 2030 and created the IRP process at the CPUC to ensure long-term electricity planning aligns with the state's GHG reduction targets while maintaining reliability and controlling costs.

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

SUPPORT:

Abundance Network (Co-Sponsor)
Peninsula Clean Energy (Co-Sponsor)
Sonoma Clean Power (Co-Sponsor)
California Community Choice Association
California Wind Energy Association
City of Redwood City
Environmental Defense Fund, Incorporated
Fervo Energy
Marin Clean Energy
Natural Resources Defense Council
Net-zero California
Redwood Coast Energy Authority
San Diego Community Power
Town of Hillsborough

OPPOSITION:

None received

ARGUMENTS IN SUPPORT: According to California Community Choice Association:

> Today, California does not have enough transmission lines in the right places. Consequently, many new clean energy projects cannot connect to the grid: more than 10 GW of active projects have dropped out of the most recent round of interconnection in the past few months alone.
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> This limits power providers' ability to secure cheaper, newer resources that could save customers money and drives up overall system costs significantly. One major reason is that the state currently plans under a single best-guess about what the future will look like, even though those highly specific assumptions often turn out to be incorrect in the rapidly evolving energy landscape. When that happens, we can end up with too little transmission, higher costs, and roadblocks for clean energy. To address this, AB 2111 will require planning agencies to examine a wider range of plausible futures and evaluate the full cost implications of different alternatives so that the state can design a resource portfolio and transmission plan that is robust at limiting total system costs while supporting our climate and reliability goals.

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