

Date of Hearing: June 22, 2022

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY

Eduardo Garcia, Chair

SB 887 (Becker) – As Amended May 19, 2022

**SENATE VOTE:** 29-6

**SUBJECT:** Electricity: transmission facility planning

**SUMMARY:** Adjusts the planning horizon for the annual electricity transmission plan from 10-years to 15-years, and requires the California Independent System Operator (CAISO) to consider approval for specified transmission projects as part of the 2022-23 transmission planning process. Specifically, **this bill:**

- 1) Requires, by March 31, 2024, the California Public Utilities Commission (CPUC), in consultation with the California Energy Commission (CEC), to provide transmission-focused guidance to the CAISO about resource portfolios of expected future renewable energy resources and zero-carbon resources, as specified, to allow the CAISO to identify and approve transmission facilities needed to interconnect resources and reliably serve the needs of load centers.
- 2) In providing the transmission-focused guidance, requires the CPUC and CEC to provide:
  - a. resource portfolio and regional electricity demand projections out at least 15 years into the future;
  - b. load growth projections consistent with economywide greenhouse gas (GHG) reductions;
  - c. projections of new renewable and zero-carbon resources needed to achieve the Renewables Portfolio Standard;
  - d. resource projections that combined with transmission capacity expansions would reduce—no later than by 2035—the need for nonpreferred resources, as defined, for reliability in locally constrained regions;
  - e. projections for offshore wind generation, as specified; and
  - f. projections for increases in imports of electricity into the state that reflect expected development of clean resources in the west.
- 3) Requires the CPUC, on or before January 15, 2023, to request the CAISO identify the highest priority transmission facilities that are needed to allow for reduced reliance on nonpreferred resources in transmission-constrained urban areas, and to consider whether to approve the identified transmission projects as part of the CAISO's 2022–23 transmission planning process.
- 4) Requires the CPUC to request that the CAISO approve transmission projects identified from a planning period of not less than 15 years
- 5) Expresses the policy of the state that new transmission facilities incorporate into their planning the goals of minimizing the risk of wildfire and increased system-wide reliability and cost efficiency, among other goals.

- 6) Defines “nonpreferred resources” as electrical generation resources that are not renewable energy resources or zero-carbon resources.
- 7) Makes various findings and declarations relating to the need for new transmission facilities to support the state’s GHG reduction goals.

**EXISTING LAW:**

- 1) Establishes that FERC has exclusive jurisdiction over the transmission of electric energy in interstate commerce. Also establishes the process and procedures for establishing transmission of electric energy in interstate commerce by public utilities, i.e., the rates, terms, and conditions of interstate electric transmission by public utilities. (Federal Power Act §§ 201, 205, 206 (16 USC 824, 824d, 824e))
- 2) Prohibits any construction by an electrical corporation<sup>1</sup> of a line, plant, or system, or their extensions, without first obtaining from the CPUC a certificate that the present or future public convenience and necessity require or will require such construction. This is known as a CPCN. For electric transmission facilities, the CPUC shall consider cost-effective alternatives, including demand-side alternatives during their consideration of a CPCN. (Public Utilities Code §§ 1001-1103)
- 3) Requires retail sellers and publicly owned utilities to increase purchases of renewable energy such that at least 60% of retail sales are procured from eligible renewable energy resources by December 31, 2030. This is known as the Renewables Portfolio Standard (RPS). (Public Utilities Code § 399.11 et seq.)
- 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 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))
- 6) 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 in a cost-effective manner. (Public Utilities Code §§ 454.51 and 454.55)
- 7) Establishes the policy that all of the state's retail electricity be supplied with a mix of RPS-eligible and zero-carbon resources by December 31, 2045, for a total of 100% clean energy. This is called throughout this analysis the “SB 100 policy.” (Public Utilities Code § 454.53)

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<sup>1</sup> Or other corporations, as specified, including railroad, gas, water, telephone, and sewer.

**FISCAL EFFECT:** According to the Senate Committee on Appropriations, this bill would result in unknown costs, likely in the hundreds of thousands of dollars annually for the CPUC to implement.

**BACKGROUND:**

*CAISO* – The CAISO is a nonprofit public benefit corporation created by California statute as part of the effort to deregulate the electricity market in the late 1990s. The CAISO manages the flow of electricity across the high-voltage bulk power system that makes up 80 percent of California’s, and a small part of Nevada’s, electric grid. CAISO is registered as both a transmission operator and balancing authority (BA) under federal reliability requirements. Transmission operators direct the operations of transmission facilities and are responsible for their reliability. BAs ensure electric reliability over an area that includes the generation, transmission, and loads, balancing electricity supply and demand at every moment. As with other BAs, the CAISO is regulated by federal statute, with oversight by FERC and the North American Energy Reliability Corporation.

*Transmission Planning Process (TPP)* – Each year, the CAISO conducts its TPP to identify potential system limitations as well as transmission projects in need of upgrades or new infrastructure in need of construction to improve reliability and efficiency.<sup>2</sup> The TPP fulfills the CAISO’s core responsibility to identify and develop solutions to meet the future needs of the electricity grid. The TPP relies on the CPUC’s integrated resource plan (IRP) process<sup>3</sup> to identify the optimal mix of system-wide resources capable of meeting greenhouse gas planning targets for the electric sector.<sup>4</sup> CAISO receives the IRP results as inputs into its TPP. In February 2021, the CPUC transferred the electric resource portfolios to the CAISO to begin the CAISO’s 2021-2022 TPP.<sup>5</sup> The CAISO also receives the CEC’s demand forecast of electricity and natural gas sales, consumption, and peak and hourly electricity demand. The most recent CEC demand forecast published in January 2022 was a 15-year forecast.

The development of the TPP entails an annual public stakeholder process that is conducted pursuant to the CAISO’s FERC-approved tariff. It includes a three-phase process that leads to annual CAISO Board of Governors’ approval of a transmission plan and associated transmission projects. There are three main categories of CAISO approved transmission projects:

- Reliability projects to meet federal standards;
- Policy projects to meet state policy goals (i.e., RPS-needed projects);

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<sup>2</sup> There are other transmission planning efforts, including local capacity requirements, special studies, interregional transmission project, and others that are not mentioned here for sake of clarity.

<sup>3</sup> Called for under SB 350 (De León, Chapter 547, Statutes of 2015)

<sup>4</sup> Via the Reference System Plan (RSP) and Preferred System Plan (PSP). The CPUC creates the Reference System Plan (RSP) to meet the electric sector target informed by the California Air Resources Board Climate Change Scoping Plan. The CPUC uses this RSP to establish filing requirements for the load-serving entities. The second year considers the procurement each load-serving entity proposes to meet these GHG targets. As each load-serving entity has its own local constraints to consider, each files its own plan. The CPUC reviews, modifies, and aggregates these individual load-serving entities’ plans into a preferred system plan (PSP). Based on the approved PSP, the CPUC considers authorizing load-serving entities to procure resources within the next 1-3 years to meet GHG planning targets.

<sup>5</sup> D. 21-02-008 *Decision Transferring Electric Resource Portfolios to California Independent System Operator for 2021-2022 Transmission Planning Process*; R. 20-05-003; issued February 17, 2021.

- 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 that are identified as necessary go through a competitive solicitation process. Transmission developers—which may be public or investor-owned utilities or private, for-profit entities—apply for the project solicitation and those applications are evaluated on a number of qualifying criteria, including cost. The CAISO Board recently approved its 2021-2022 TPP on March 17, 2022,<sup>6</sup> and identified 23 projects—at an estimated \$2.9 billion—needed for reliability and to meet state policy goals; four of these projects are eligible for competitive solicitation.<sup>7</sup>

*What Happens After Winning the Solicitation* – Once a transmission developer’s project proposal is selected in the competitive solicitation, it undergoes two application processes at the CPUC: a California Environmental Quality Act (CEQA) review and a CPCN review. The CEQA review requires the examination of particular environmental issues such as water and air quality, noise, land uses, and agricultural, biological, mineral, and cultural resources, among others. As part of the CEQA review, alternatives to the proposed transmission project must be evaluated. The CPCN review considers the need for the project based on economic, reliability, and/or renewable goals. The CPCN review also requires the examination of alternatives, with a focus on cost-reduction. CAISO is often a party to these CPCN proceedings, making the case for why a particular transmission project is necessary, per their TPP.

*CAISO 20-year Transmission Outlook* – The CAISO embarked on creating a 20-Year Transmission Outlook for the electric grid, in collaboration with the CPUC and the CEC, in order to explore the longer-term grid requirements and options for meeting the State’s GHG reduction and renewable energy objectives reliably and cost-effectively. Released in January 2022, the Outlook estimated total costs needed to meet 2045 goals arising from upgrades and new construction of the high-voltage transmission system would be roughly \$30 billion dollars.<sup>8</sup> The CAISO intends for the expanded planning horizon of the Outlook 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 TPP.

*Tracking Energy Development (TED) Task Force* – The TED Taskforce is a recent joint effort of the CPUC, CEC, CAISO, and Office of Business and Economic Development (GO-Biz) to track new energy projects under development. According to the CPUC, the objective is to build on the success of ad hoc 2021 efforts to provide energy resource project development support, as appropriate, and identify barriers and mitigation strategies to accelerate energy project development. Currently, the TED Taskforce is focused on near-term projects, roughly 200 contracted projects needed for summer reliability in 2022 and 2023.

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<sup>6</sup> Kavya Balaraman, “CAISO approves nearly \$3B of transmission projects to prepare for California’s clean energy goals,” *Utility Dive*, March 18, 2022.

<sup>7</sup> See CAISO Notice from March 22, 2022, “2021-2022 Transmission Planning Process: Competitive Solicitation Key Selection Factors Posted,” <http://www.caiso.com/Documents/2021-2022-Transmission-Planning-Process-Competitive-Solicitation-Key-Selection-Factors-Posted.html>

<sup>8</sup> Approximate \$11 billion for upgrades; \$8 billion for offshore wind integration; and \$11 billion for out-of-state wind integration; pg. 3, CAISO, *20-Year Transmission Outlook*, January 31, 2022. DRAFT. Note: just focused on high-voltage bulk transmission; local transmission needs will be addressed subsequently.

**COMMENTS:**

- 1) *Author's Statement.* According to the author, "We cannot meet the goals of SB 100 – reaching 100% renewable or zero-carbon electricity by 2045 – without building the transmission necessary to deliver that clean power to our cities. SB 887 will accelerate planning and approval of new transmission to help us get to 100% clean energy. It is urgent that we get started on this transmission build out now because major new transmission projects often take 10 years or more to build. The recent effort by CAISO, in partnership with the PUC and the CEC, to develop a 20-Year Transmission Outlook was an important step in the right direction. SB 887 will ensure these practices continue and improve. The bill requires the PUC and CEC to provide long-term forecasts to CAISO that extend at least 15 years into the future. The forecasts must include plans to reduce our reliance on gas plants caused by transmission bottlenecks and align with the state's strategy for developing offshore wind. And to make sure we get started right away, SB 887 directs the PUC to ask CAISO to consider whether any high priority, long lead time projects should be approved right away during its 2022-23 transmission planning process based on what we already know."
- 2) *What a Difference Five Years Makes.* The author and supporters note the desire of this bill is to better plan *today* for the transmission needed to achieve the SB 100 goals, given the long lead times for building new transmission. The CAISO's recently released 20-year Transmission Outlook demonstrates the need for new transmission is likely to be great over the next two decades. The CAISO intends for the expanded planning horizon of the 20-year Outlook to provide a longer-term context for pertinent issues in the CAISO's annual TPPs. This 20-year effort in transmission planning mirrors the longer-term planning undertaken for procurement in the Joint Agency SB 100 Report. Such long-term planning efforts are essential to prepare for the electric grid's transition to a clean energy future, but also are not without risks. Projections of future demand and supply are just that – projections. The outputs of modeling are greatly dependent on the inputs, such as forecasted customer demand and energy resource deliverability. These projections grow more uncertain the further a planning target date is from the present. We must be mindful of the limitations of the models, and constantly update them against empirical evidence; otherwise major, costly decisions may be made based on uncertain needs projected decades into the future.

A 15-year outlook, as mandated in this bill, may prove to be more certain than a 20-year outlook, though less certain than the current 10-year horizon. Nonetheless, the author is correct to note the need to better plan for long lead time for new transmission. The CPUC has noted in recent FERC filings, it would support a longer planning horizon. However, such a change may not happen quickly and would entail transforming many, yet to be fully identified, data collection inputs to accommodate this transformation. This bill provided for the transformation to happen as soon as possible, but no later than March 31, 2024.

- 3) *Feasible Timelines?* This bill requires the CPUC, CEC, and CAISO to take actions by January 15, 2023, roughly two weeks from the date this bill would be enacted should it be chaptered. The author notes this date may seem ambitious, but a signature on this bill could occur as early as September 2022, and the author believes this may be sufficient time before the January date. While this bill only requires the CPUC to *request* CAISO begin work by January 15; the bill asks CAISO to incorporate projections from the CPUC

and CEC, identify which transmission facilities are needed to reduce reliance on nonpreferred resources, and then consider whether to approve those transmission projects in its 2022-2023 TPP. CAISO's TPPs are typically released early each year; 2021-2022's came out in January 2022. It is unclear how CAISO is meant to complete such work in time, especially if the author's intent is for the data shared by the CPUC and CEC to be over a new 15-year horizon.

- 4) *What's a Nonpreference?* As proposed in this bill, the CPUC and CEC would need to provide inputs to the CAISO that reduce reliance on resources that are not renewable energy or zero-carbon resources; in other words, reducing reliance on fossil fuel powered resources. While this bill does not, in and of itself, eliminate the use of carbon emitting energy resources, it would require the state to forecast and plan transmission projects in a manner that would expand transmission into areas that currently are limited in providing greater access to renewable energy and zero-carbon resources meant to come online by 2035. The presumption in this bill is that new transmission is not built to bring more renewables into these areas because fossil fueled resources are located there and satisfy local need. While some of these nonpreferred resources may serve local reliability, many serve system reliability. In other words, even if additional transmission were brought in to serve the local area where the fossil fuel plant was located the plant may still be needed to meet statewide reliability.

This distinction between system and local reliability planning seems to bear out in recent modeling efforts. The CPUC, through their IRP Preferred System Plan, has noted the continued need to rely on gas-fueled power plants for reliability likely for the next 10 years and possibly through 2045.<sup>9</sup> The CPUC analysis considers the system need, not local capacity requirements. Moreover, the Governor's 2022-2023 budget currently proposes a little under \$5 billion for a strategic reserve that, if funded, is poised to extend the life of many gas-fired once-through cooling plants in order to provide statewide emergency grid support.<sup>10</sup> In this regard, the focus in this bill on nonpreferred resources limiting renewable development or transmission buildout into constrained areas does not seem aligned with current system activity. However, the author and supporters argue that the need to plan transmission is necessary if we are ever going to retire the use of carbon-emitting resources, regardless of which type of reliability they are serving.

- 5) *Need for Amendments.* *The author and committee may wish to amend this bill to make address the issues raised, as follows:*
  - a. *Update the term describing the areas that are transmission constrained from "locally constrained regions" to "local capacity areas" to align with current industry usage.*
  - b. *Modify language around CPUC resource projections needed to reduce the need for nonpreferred resources to better reflect transmission system planning.*
  - c. *Make technical adjustments to the planning considerations.*

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<sup>9</sup> R. 20-05-003; see D. 22-02-004 which retains all existing gas generation through 2045.

<sup>10</sup> Department of Finance Trailer Bill Language, 2022-2023 Budget; "Energy Reliability, Relief, and Clean Energy Investments;" updated 05/18/2022. <https://esd.dof.ca.gov/trailer-bill/public/trailerBill/pdf/741>

d. *Strike or reword some of the findings and declarations to more accurately reflect existing transmission challenges.*

8) *Related Legislation.*

AB 2696 (E. Garcia, 2022) requires the CEC to conduct a study that reviews lower cost ownership and alternative financing for new transmission facilities. Status: *set for hearing* in the Senate Committee on Energy, Utilities, and Communications on June 21<sup>st</sup>, 2022.

SB 1032 (Becker, 2022) requires the CPUC, on or before January 1, 2024, to submit to the Governor and the Legislature a study identifying proposals to accelerate the development of the state's electrical transmission grid to achieve the state's goals to reduce the emissions of GHGs and to reduce costs to electric utility customers. Status: *set for hearing* in this committee on June 22<sup>nd</sup>, 2022.

SB 1174 (Hertzberg, 2022) requires specified reporting related to electric transmission projects, and also requires the CPUC in coordination with other state agencies to identify interconnection transmission projects and prioritize necessary approvals, as specified. Status: *set for hearing* in this committee on June 22<sup>nd</sup>, 2022.

9) *Prior Legislation.*

SB 100 (De León) established the 100 Percent Clean Energy Act of 2018 which increases the RPS requirement from 50 percent by 2030 to 60 percent, and created the policy of planning to meet all of the state's retail electricity supply with a mix of RPS-eligible and zero-carbon resources by December 31, 2045, for a total of 100 percent clean energy. Status: Chapter 312, Statutes of 2018.

## REGISTERED SUPPORT / OPPOSITION:

### Support

350 Conejo / San Fernando Valley  
 350 Humboldt: Grass Roots Climate Action  
 350 Silicon Valley  
 Acterra  
 California Biomass Energy Alliance  
 California Environmental Voters (formerly Clcv)  
 California State Association of Electrical Workers  
 California State Council of Laborers  
 California Wind Energy Association  
 Carbon Free Palo Alto  
 Carbon Free Silicon Valley  
 Clean Power Campaign  
 Coalition of California Utility Employees  
 Edison International and Affiliates, Including Southern California Edison  
 Edp Renewables North America LLC  
 Engineering Contractors Association

Environment California  
Fernandeño Tataviam Band of Mission Indians  
Indivisible San Jose  
Inland Empire Economic Partnership (IEEP)  
Laborers Local 220  
Laborers Local 585  
Local Union No. 12  
Los Angeles Business Federation  
Menlo Spark  
Natural Resources Defense Council  
Pacoima Beautiful  
Peninsula Clean Energy  
Rebuild SoCal Partnership  
Sempra Energy Utilities  
Silicon Valley Youth Climate Action  
Southern California Leadership Council  
Three Rivers Energy Development LLC

**Opposition**

None on file.

**Neutral**

Independent Energy Producers Association

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