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**SENATE COMMITTEE ON ENERGY, UTILITIES AND  
COMMUNICATIONS**  
**Senator Ben Hueso, Chair**  
**2021 - 2022 Regular**

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**Bill No:** SB 1376 **Hearing Date:** 4/26/2022  
**Author:** Stern  
**Version:** 2/18/2022 Introduced  
**Urgency:** No **Fiscal:** Yes  
**Consultant:** Nidia Bautista

**SUBJECT:** State Energy Resources Conservation and Development Commission:  
strategic plan: zero-carbon resources

**DIGEST:** This bill requires the California Energy Commission (CEC) to adopt a strategic plan, by November 1, 2023, to enable no less than six gigawatts (GW) per year of zero-carbon resources to be interconnected to the electrical grid, beginning January 1, 2025.

**ANALYSIS:**

Existing law:

- 1) Requires the State Energy Resources Conservation and Development Commission (also known as, CEC) to conduct biennial assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. Requires the CEC 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)
- 2) Requires the CEC to adopt an integrated energy policy report (IEPR) on or before November 1<sup>st</sup> of each odd-numbered year that contains an overview of major energy trends and issues facing the state and presents policy recommendations, as specified. (Public Resources Code §25302)

This bill:

- 1) Requires the CEC to adopt a strategic plan on or before November 1, 2023, to enable no less than six GW per year of zero-carbon resources to be interconnected to the state's electrical grid, beginning on January 1, 2025.

- 2) Requires the plan to identify and recommend actions required to streamline interconnection into the state's electrical grid and implement investments needed to ensure reliability and meet future growth in electrical load and generation.
- 3) Requires the strategic plan to be included in the IEPR adopted on or before November 1, 2023.

## Background

*SB 100 (De León, Chapter 312, Statutes of 2018).* SB 100 establishes the 100 Percent Clean Energy Act of 2017 which increases the Renewables Portfolio Standard (RPS) requirement from 50 percent by 2030 to 60 percent, and creates 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. SB 100 also requires California Air Resources Board (CARB), CEC, and California Public Utilities Commission (CPUC) to issue a joint report by January 1, 2021, and at least every four years, that describes technologies, forecasts, affordability, and system and local reliability. The report is required to include an evaluation of costs and benefits to customer rate impacts, as well as, barriers to achieving the SB 100 policy. In January 2021, the first SB 100 Joint Agency report was released

*Renewable Portfolio Standard (RPS).* California's ambitious RPS program is jointly implemented and administered by the CPUC and the CEC. The RPS program requires the state's energy load-serving entities (LSEs), including investor-owned utilities (IOUs), Community Choice Aggregators (CCAs), Energy Service Providers (ESPs) and publicly owned utilities (POUs) to procure 60 percent of their total electricity retail sales from eligible renewable energy resources by 2030, and a mix of RPS-eligible and zero-carbon resources by December 31, 2045, for a total of 100 percent clean energy. The RPS requires milestones on the path to 2030, including interim goals of 25 percent by 2016, 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. The state is well on its way to achieving its existing RPS targets. Most POUs are on track to meet their 2020 goals and working towards their 2030 goals. The state's three largest electric utilities generally have met current procurement goals and anticipate exceeding future procurement goals, with each having procured over 40 percent eligible renewable energy resources.

*Integrated Resources Plan (IRP).* As required in SB 350 (De León, Chapter 547, Statutes of 2015), the IRP process requires the CPUC to identify a portfolio of resources for electricity procurement that provides optimal integration of renewable energy in a cost-effective manner, and minimize impacts on ratepayer's

bills. The identification of this portfolio is intended to guide LSEs' IRPs, which help ensure that utilities meet greenhouse gas (GHG) reduction targets for the electricity sector. As part of the IRP planning cycle, the CPUC adopts a reference system plan, which identifies the energy procurements needed to help the LSEs meet specific GHG reduction goals. In the most recent IRP decision (D.22-02-004), in February of this year, the CPUC adopted a 38 million metric ton (MMT) 2030 electric sector GHG planning target for the 2021 Preferred System Plan (PSP) portfolio. The PSP portfolio includes approximately 25,500 megawatts (MW) (nameplate capacity) of new supply-side renewables, and 15,000 MW of new storage and demand response resources, by 2032, in addition to existing resources. The PSP portfolio includes long-lead time resources, including out-of-state renewables and offshore wind—two resource types the CPUC will continue evaluating moving forward. The PSP orders procurement of two storage resources that were identified by the CAISO as alternatives to transmission upgrades in the previous TPP cycle.

*Integrated Energy Policy Report (IEPR).* The IEPR provides a cohesive approach to identifying and solving the state's pressing energy needs and issues. The report, which is crafted in collaboration with a range of stakeholders, develops and implements energy plans and policies. SB 1389 (Bowen and Sher, Chapter 568, Statutes of 2002) required the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The CEC is then required to use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety." The CEC adopts an IEPR every two years and an update every other year.

*SB 100 Joint Agency Report.* The first Joint Agency Report, released in January 2021, is intended to be a first step in an iterative and ongoing effort to assess barriers and opportunities to implementing the 100 percent clean electricity policy from SB 100. The report includes system modeling to inform what a 2045 portfolio of renewable and zero-carbon resources may look like, as well as the associated costs and resource build rates (the average amount of new generation required each year) required to achieve such a portfolio. The analysis builds on the modeling and assumptions used for CPUC's IRP and considers California's overarching priorities on energy, climate, equity, and public health. Initial findings suggest that the goals of SB 100 are achievable, though opportunities remain to reduce overall system costs. The report presents various scenarios to meet the 100 percent clean electricity target with existing technologies, as well as, alternative scenarios that explore additional factors. The report notes that sustained record-setting build rates for generation may be needed in one scenario about six GW per

year. However, as noted in the report: "...the report acknowledges that all the scenarios require more studies. The preliminary findings are intended to inform state planning and are not intended as a comprehensive nor prescriptive roadmap to 2045."

*SB 423 (Stern, Chapter 243, Statutes of 2021).* SB 423 requires the CEC to submit to the Legislature an assessment by December 31, 2023, of firm zero-carbon resources that support a clean, reliable, and resilient electrical grid and will help achieve the existing statutory goal of ensuring renewable energy and zero-carbon resources supply 100 percent of all retail sales of electricity to California customers by December 31, 2045.

*Forecasting by CEC and supply-side inputs by CPUC.* The CEC conducts demand forecast that is used to inform several planning processes, including the California Independent System Operator's (CAISO's) transmission planning process. The demand forecast is often a 10-year outlook for electricity and natural gas sales, consumption, and peak and hourly electricity demand. The most recent demand forecast published in January of this year was a 15 year forecast. Additionally, the CPUC provides energy resource supply-side inputs, including an annual resource portfolio, to inform the transmission planning by the CAISO.

*Transmission Development Forum.* The Transmission Development Forum is a recent joint effort between the CAISO and the CPUC to discuss and track Participating Transmission Owners expansion and network upgrade projects and schedules. The Transmission Development Forum creates a single forum to track the status of transmission network upgrade projects that affect generators and all other transmission projects approved in the CAISO's transmission planning process. The effort allows for increased transparency for all stakeholders about transmission projects and enhances accountability of transmission owners by having them explain schedule changes, delays, and address stakeholders' questions.

*Tracking Energy Development (TED) Task Force.* The TED Taskforce is also 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.

## Comments

*SB 1376.* This bill would require the CEC to adopt a strategic plan, by November 1, 2023, to enable no less than six GW per year of zero-carbon resources to be interconnected to the electrical grid, beginning January 1, 2025. This bill requires the plan to identify and recommend actions required to streamline interconnection into the state's electrical grid and implement investments needed to ensure reliability and meet future growth in electrical load and generation. SB 1376 also requires the strategic plan to be included in the IEPR adopted on or before November 1, 2023.

*Is another plan needed?* As noted above, the state has embarked on numerous planning processes related to energy portfolio and achieving the state's clean energy and climate goals. This bill would add to the list of plans and processes by requiring a strategic plan to be adopted by the CEC to enable six GW per year of zero-carbon resources. However, as noted above, the *SB 100 Joint Agency Report* was clear in that further studies are needed and that in no way are the findings of the report intended to be a prescriptive roadmap. As such, this bill may be premature in requiring a strategic plan for no less than six GW per year, as well as, the inclusion of streamlining interconnection of these resources into the state's electrical grid. As an alternative, *the author and committee may wish to amend the bill to focus on resources identified through approved IRPs and remove reference to an annual build out rate.*

## Prior/Related Legislation

SB 887 (Becker, 2022) adjusts the planning horizon for the annual electricity transmission plan from 10-years to 15-years, and requires approval of at least two transmission projects as part of the CAISO 2022-23 transmission planning process. The bill is pending in the Senate Committee on Appropriations.

SB 1032 (Becker, 2022) establishes a new Clean Energy Infrastructure Authority as a public instrumentality of the state for the purpose of leading the state's efforts to build critical electrical transmission infrastructure necessary to enable the state to transition to 100 percent clean energy, as specified. The bill is pending amendments in the Committee on Governance and Finance.

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 and advance all interconnections or transmission approvals necessary, as specified. The bill is pending in the Senate Committee on Appropriations.

SB 423 (Stern, Chapter 243, Statutes of 2021) required the CEC to submit to the Legislature an assessment by December 31, 2023, of firm zero-carbon resources that support a clean, reliable, and resilient electrical grid and will help achieve the existing statutory goal of ensuring renewable energy and zero-carbon resources supply 100 percent of all retail sales of electricity to California customers by December 31, 2045.

SB 100 (De León, Chapter 312, Statutes of 2018) established the 100 Percent Clean Energy Act of 2017 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.

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

**SUPPORT:**

350 Humboldt: Grass Roots Climate Action  
Bloom Energy  
California Biomass Energy Alliance  
California Energy Storage Alliance  
Clean Power Campaign  
Environment California  
Form Energy

**OPPOSITION:**

San Diego Gas & Electric, unless amended

**ARGUMENTS IN SUPPORT:** According to the author:

SB 1376 responds to the 2021 SB 100 Joint Agency Report to ensure that the state is on path to meet the goals of SB 100 as quickly and cost-effectively as possible, while bolstering grid reliability...The clear takeaways from the report are that we need to rapidly accelerate our ability to interconnect zero carbon resources to the electricity grid, and if we want to get off natural gas and achieve a reliable, truly 100 percent clean energy grid, we must accelerate development and deployment of firm zero carbon resources, including long duration and multi-day storage, offshore wind, green hydrogen, geothermal and others. This bill will address those findings in the SB 100 Report and complement and build on my SB 423 signed into law last year, by requiring the CEC in consultation with the PUC and CAISO to adopt a strategic plan on or

before November 1, 2023, to enable no less than 6 gigawatts per year of zero-carbon resources to be interconnected to the state's electrical grid, beginning on January 1, 2025, and to implement investments to reliably meet load growth in the electricity sector with zero carbon resources, including firm zero-carbon resources, offshore wind and other renewable energy generation, and energy storage

**ARGUMENTS IN OPPOSITION:** In opposition to this bill, San Diego Gas & Electric (SDG&E) states the CEC can already develop a strategic plan, therefore, legislation is not needed. SDG&E opposes the bill as it could conflict with existing plans and the narrow focus of six GW annual build rate ignores the IRP and actual data related to procurement.

**-- END --**