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

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**Bill No:** AB 2587 **Hearing Date:** 6/21/2022  
**Author:** Eduardo Garcia  
**Version:** 5/19/2022 Amended  
**Urgency:** No **Fiscal:** Yes  
**Consultant:** Nidia Bautista

**SUBJECT:** Energy: firm renewable energy resources and firm zero-carbon resources: procurement

**DIGEST:** Requires the California Energy Commission (CEC) to incorporate renewable energy into a required assessment and requires the California Public Utilities Commission (CPUC) to include the findings of the assessment into the Integrated Resources Plan (IRP).

**ANALYSIS:**

Existing law:

- 1) Requires the State Energy Resources Conservation and Development Commission (also known as the CEC), in consultation with the CPUC, the California Independent System Operator (CAISO), and the California Air Resources Board (CARB), on or before December 31, 2023, to submit to the Legislature an assessment of the firm zero-carbon resources that support a clean, reliable, and resilient electrical grid in California and will achieve the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. (Public Resources Code §25216.7)
- 2) Requires the CEC to prepare an integrated energy policy report (IEPR) every two years and to timely incorporate firm zero-carbon resources into the IEPR. (Public Resources Code §25302)
- 3) Requires the CPUC to adopt a process for each load-serving entity (LSE) to file an IRP and a schedule for periodic updates to the plan to ensure that it meets the state's targets for reducing emissions of greenhouse gases (GHGs) and the requirement to procure at least 60 percent of its electricity from eligible renewable energy resources by December 31, 2030. (Public Utilities Code §454.52)

- 4) Requires that the IRP contribute to a diverse and balanced portfolio of resources needed to ensure a reliable supply of electricity that provides optimal integration of renewable energy resources in a cost-effective manner and prevents cost shifting among LSEs. (Public Utilities Code §454.54)

This bill:

- 1) Requires the CEC to additionally include firm renewable energy resources in the assessment pursuant to Public Resources Code §25216.7 and to incorporate firm renewable energy resources into the integrated energy policy report.
- 2) Requires the CPUC to include the findings and recommendations related to the availability and need for procurement of firm renewable energy resources and firm zero-carbon resources made in the above-described assessment in the IRP process no later than six months from the time the assessment is presented to the Legislature.
- 3) Authorizes the CPUC, as part of including the findings and recommendations of the assessment, to consider whether to adopt additional programs, measures, and requirements to increase the procurement and deployment of firm renewable energy resources and firm zero-carbon resources, and to consider emerging technologies.

## Background

*SB 100 (De León, Chapter 312, Statutes of 2018).* SB 100 established 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 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. SB 100 also required CARB, CEC, and 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. The first Joint Agency report was issued in January 2021. The Joint Agencies' SB 100 report found that California may need "record breaking" renewable and zero carbon capacity additions for 25 years, averaging six gigawatts (GW) per year /year.

*Integrated Energy Policy Report (IEPR).* The IEPR provides a cohesive approach to identifying and solving the states' pressing energy needs and issues. The report,

which is crafted by the CEC 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 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.

*Firm energy resources.* “Firm energy resources” (also referred to as “firm power”) refers to electricity-generating resources that can deliver electricity at any time, even under adverse conditions. Much of the firm power California's electric grid currently relies on are fossil fuels, in particular, natural gas. As California moves towards a decarbonized future and away from fossil fuels, other sources of firm power are necessary. “Other firm zero-carbon resources include: geothermal, offshore wind, green electrolytic hydrogen, long-duration energy storage, and multi-day energy storage. Though they differ in capacity, expense, and geographic feasibility, these sources are all carbon-free power sources that can be relied on whenever needed, for as long as they are needed.

*SB 423 (Stern, Chapter 243, Statutes of 2021) assessment firm zero-carbon resources.* SB 423 seeks to promote, via an assessment due to the Legislature by December 31, 2023, the use of firm zero-carbon resources that can be used in place of fossil fuel firm resources and requires the CEC to incorporate firm zero-carbon resources in the IEPR. California today has 48 GW of total firm power capacity, most of which (42 GW) come from natural gas-fired power plants. The remaining GW come from nuclear power, geothermal, and a small amount from coal. Solar and wind have become mature technologies and enjoy substantial public support. However, these resources present challenges because they depend on the weather, which varies in predictable and unpredictable ways, and results in intermittent generation. Batteries have been improving, and can help make up for fluctuations that last for multiple hours, but they cannot make up for the longer fluctuations.

## Comments

*AB 2587.* This bill adds renewable energy to the SB 423 assessment, in order to incorporate certain energy resources, such as: biomass, digester gas, and municipal solid waste conversion. These resources emit GHGs when combusted to generate electricity, but that nonetheless meet the statutory definition of renewable.

*Incorporation of assessment in IRP.* Additionally, AB 2587 proposes to require the CPUC to include in its IRP proceeding the findings of the CEC's yet-to-be-

completed SB 423 assessment. The CPUC has acknowledged the need for additional firm renewable resources to ensure reliability of the electric grid while advancing the State's clean energy policy. In a recent decision, the CPUC ordered 1,000 megawatts (MW) of firm resources as part of an 11,500 MW order of resources to come online by 2026. The CEC and CPUC closely coordinate, with the CEC providing forecasts that inform CPUC procurement activity. However, the proponents of this bill wish to explicitly require that the CEC's findings be included in the IRP proceeding.

*Timing.* While incorporating the findings of the assessment into the IRP seems reasonable, the author may wish to consider whether the six months deadline is intended and whether it is constructive to the timing of the IRP. It is possible the assessment may be completed at the tail end of the current IRP 2022-23 cycle when preferred system plan and the individual LSEs IRPs will be close to being finalized. Attempting to incorporate the findings of the assessment at that juncture may prove challenging, and likely disruptive. As such, the author may wish to consider whether incorporation of the assessment's findings may be better timed in the following IRP cycle or sooner, if the CPUC, determines it would be constructive to the existing IRP cycle.

### **Prior/Related Legislation**

SB 1158 (Becker, 2022) requires every retail supplier of electricity to annually report hourly GHG emissions data, as specified, to the CEC. The bill is pending in the Assembly Committee on Utilities and Energy.

SB 1020 (Laird, *et al*, 2022), among its many provisions, establishes interim targets to achieve the SB 100 policy of 100 percent renewable energy and zero-carbon resources by 2045. The bill is pending in the Assembly Committee on Utilities and Energy.

SB 881 (Min, 2022) requires the CPUC to require each energy LSE to undertake sufficient procurement to achieve a diverse, balanced, and reliable statewide portfolio and realize specified electricity sector GHG emissions reductions. The bill was held 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: Yes

**SUPPORT:**

Clean Air Task Force  
Clean Power Campaign  
Form Energy  
Independent Energy Producers Association  
Mainspring Energy  
Microgrid Resources Coalition

**OPPOSITION:**

None received

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

California has made significant strides towards a clean energy future but more work is ahead as we face the threat of climate change. The SB 100 joint agencies report highlighted the need for more substantial investments in new and existing technologies, and included scenarios with up to 15 GW of firm renewable energy and zero carbon resources. This report also underscores the importance of these resources that can significantly reduce energy resource needs, costs, and emissions associated with meeting SB 100 goals. Other reports have also found that increasing a diverse portfolio of firm renewable and zero carbon resources will reduce overall system costs by as much as two-thirds compared to scenarios without them.

AB 2587 encourages the continued operation and development of new firm renewable energy and zero carbon resources that are known to add reliability and diversity to our electrical grid while also providing co-benefits to the environment and economies of some of our state's most disadvantaged communities.

**-- END --**