SENATE COMMITTEE ON ENERGY, UTILITIES AND COMMUNICATIONS
Senator Josh Becker, Chair
2025 - 2026 Regular

Bill No:	AB 44	**Hearing Date:**	7/15/2025
Author:	Schultz		
Version:	4/7/2025 Amended		
Urgency:	No	**Fiscal:**	Yes
Consultant:	Nidia Bautista		

SUBJECT: Energy: electrical demand forecasts

DIGEST: This bill requires the California Energy Commission (CEC) on or before December 1, 2026, and in consultation with load-serving entities (LSEs) and resource aggregators, to define and publicize methodologies for load modification protocols by which a LSE may reduce or modify its electrical demand forecast.

ANALYSIS:

Existing law:

1) Requires the State Energy Resources Conservation and Development Commission (known as the California Energy Commission (CEC)), at least every two years, to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. Authorizes the CEC to require the submission of demand forecasts from electrical utilities, among other entities, to perform its assessments and forecasts. (Public Resources Code §25301)

2) Requires the CEC to adopt an integrated energy policy report (IEPR) every two years, which must contain an overview of major energy trends and issues facing the state, including, but not limited to, supply, demand, pricing, reliability, efficiency, and impacts on public health and safety, the economy, resources, and the environment. (Public Resources Code §25302)

3) Requires the CEC to adopt a goal for load shifting by June 1, 2023, to reduce net peak electrical demand, and requires biennial updates to the targets. Requires the CEC to make recommendations to increase load shifting that does not increase greenhouse gas (GHG) emissions or increase electric rates. (Public Resources Code §25302.7)

4) Defines "load-serving entities" as investor-owned utilities (IOUs), electric service providers (ESPs), and community choice aggregators (CCAs). (Public Utilities Code §380 (k))

5) Requires the California Public Utilities Commission (CPUC) to work with the California Independent System Operator (CAISO) to establish resource adequacy (RA) requirements for LSEs. Existing law specifies the criteria the CPUC must consider when establishing RA requirements and specifies that an electrical corporation's reasonable costs for meeting RA are recoverable from customers through non-bypassable charges. (Public Utilities Code §380)

6) Requires the CEC to adopt standards for appliances to facilitate the deployment of flexible demand technologies. These regulations may include labeling provisions to promote the use of appliances with flexible demand capabilities. The flexible demand appliance standards must be based on the ability of the appliance's functions to be scheduled, shifted, or curtailed to reduce GHG emissions associated with electricity generation. The standards shall become effective no sooner than one year after the date of their adoption or updating. (Public Resources Code §25402(f))

This bill:

1) Makes several findings and declarations concerning the need to provide electricity demand flexibility and the intent to implement appropriate transparency measures regarding the methodologies for load modification protocols.

2) Requires the CEC on or before December 1, 2026, and in consultation with LSEs and resource aggregators, to define and publicize methodologies for load modification protocols by which a LSE may reduce or modify its electrical demand forecast upon aggregated system operation.

3) Requires the CEC to evaluate new and existing mechanisms that can support or expand opportunities for LSEs to modify their hourly RA obligations through load management, and would authorize the CEC to include its findings and recommendations in its IEPR.

Background

Load Modifiers, Demand Response, and Distributed Energy Resources (DER). In the context of electric service, "load," is anything that uses electricity. LSEs, therefore, are the entities that provide the electricity to meet the electrical demand

created by load. DER is a catch-all term used for a variety of generation, storage, or load modifying resources that are usually connected to the utility distribution system. DERs include both generation technologies that reduce customer load when consumed on-site (e.g., customer-sited rooftop solar) and load modifying technologies that reduce customer load by actively shifting or reducing customer energy usage (e.g., demand response programs). In other words, DERs can affect either the supply or demand of energy, but are usually located behind the customer meter; and thus to the larger grid may be viewed solely as modifying customer load.

The IEPR (demand forecast). Alongside other planning guidance focusing on energy generation needs in both the mid- and long-term, the CEC conducts an energy demand forecast on all aspects of energy industry supply, production, transportation, delivery, distribution, demand, and pricing. The demand forecast the CEC adopts in its IEPR informs the generation planning processes at the CPUC, as the supply provided by the CPUC analysis (IRP and RA) must match the customer demand (IEPR) provided by the CEC. The CEC is responsible for producing both statewide and LSE-specific demand forecasts to inform both policy and grid operations. LSEs annually submit their own year ahead peak demand forecast to the CEC, including any relevant DER load modifiers that lower their peak demand. The CEC reviews LSE forecasts, compares them to their own forecasts, and makes adjustments to resolve discrepancies between the two. The load reductions from a LSE program are then incorporated into the CEC's final adjusted forecast. The CPUC uses the CEC's forecasts to determine individual LSE RA obligations.

Resource adequacy (RA). Following the California energy crisis of 2000-01, the California Legislature enacted legislation to prevent future incidents of widespread blackouts and rolling brownouts due to lack of electric generating capacity. Among the reforms adopted in response to the crisis was the adoption of Public Utilities Code §380 as an effort to better ensure reliability of electricity generation supply. The statute directs the CPUC, in consultation with the CAISO, to establish RA requirements for all LSEs, including electric IOUs, ESPs, and now includes CCAs, which did not exist at the time of the crisis. The current RA program consists of system, local, and flexible requirements for each month of a compliance year. In October of each year, LSEs must demonstrate that they have procured 90% of their system RA obligations for the five summer months (May-September) of the following year, as well as 100% of their local requirements, and 90% of their flexible requirements for each month of the coming compliance year. In recent years, the CPUC has adopted changes to the RA program, including increasing the planning reserve margin for all LSEs. The CPUC also assesses penalties on the LSEs who fail to satisfy their RA obligations, including limiting the expansion of

CCAs if they are deficient in their RA requirements. The CPUC has recently adopted a significant change to the RA program by implementing a slice-of-day framework that assesses the hourly use of resources. The CPUC has been developing the slice-of-day structure for a few years and is now rolling out the new framework for 2025's RA program. The CPUC also adopted a 17% planning reserve margin for the slice-of-day framework, consistent with previous planning reserve margins.

CEC SB 846 Load-Shift Goal Report. In May 2023, the CEC issued the report required in SB 846 on establishing a load-shifting goal and informed by the 2020 Lawrence Berkeley National Laboratory report on the Shift Resource through 2030, and other relevant research, as required by the statute. The CEC developed a statewide load-shift goal for 2030 of 7,000 megawatts (MW), including 3,400-3,900 MW of incremental resources. The goal encompasses three categories of load flexibility resources:

- Load-modifying demand flexibility resources (3,000 MW) directly impact the load forecast and resource procurement requirements of LSEs. The most common category is time-varying rates, such as time-of-use or hourly dynamic rates that reflect actual grid conditions.
- Resource planning and procurement load flexibility resources (1,620-1,775 MW) either contributes to meeting RA requirements or reduces RA requirements as a credit. This category includes supply-side demand response that participates in the CAISO as economic or reliability demand response.
- Incremental and emergency load-flexibility resource programs (1,175 MW) intended to increase resource availability during extreme events and do not contribute to meeting RA requirements. These include the Emergency Load Reduction Program and the Demand Side Grid Support program which can be activated during emergency grid events.

The CEC report cautions the statewide goal is based on economic potential.

> Further analysis is needed to determine the cost-effectiveness of specific load flexibility resources and programs. …The proposed goal is not intended to suggest that the state should pursue these targets without the evaluation of the cost-effectiveness of specific resources or programs that would contribute to the goal.

The report also includes 18 policy recommendations to support deployment of the three categories of resources.

Load-modifiers and RA. LSEs have two venues to meet or adjust their RA requirements, utilizing either supply- or demand-side resources. The supply-side involves generation resources that are shown to the CPUC during the LSE's annual and monthly RA reports. The demand-side involves load modifying resources that are annually shown to the CEC as a reduction in the LSE's peak demand forecast, which the CEC then uses to adjust its final demand forecast of that LSE – and thus reducing that LSE's RA obligation. Both the CEC and the CPUC provide instructions to LSEs on how to include load modifiers in RA forecasts, including what types of modifications are eligible. These instructions are posted annually on the CPUC RA compliance website. To be eligible as a load modifier for purposes of the CPUC RA demand forecast, load modification must be daily, consistent, predictable and verifiable. Event-based load modifications are not eligible.

Comments

Need for this bill. The author states:

> Current processes at the California Energy Commission lack clear and standardized protocols for load-serving entities (LSEs) to reduce their forecasted electricity demand using demand-side resources like batteries and smart thermostats. As a result, many cost-effective demand flexibility solutions are excluded from resource adequacy (RA) planning and procurement, missing opportunities to reduce ratepayer costs and improve grid reliability. Existing processes are opaque, inconsistent, and inaccessible to almost all distributed energy resource (DER) aggregators, which limits participation and effectiveness.

Seeking greater transparency on load modification methodologies. The supporters of this bill contend that additional transparency about the CEC's load modification protocols at the upstream will help increase opportunities for aggregators to work with LSEs to help reduce downstream RA requirements. They contend that the goals of this bill are twofold: (1) provide downward pressure in the state's wholesale capacity (i.e. resource adequacy or "RA") market by allowing behind-the-meter load-shaping technologies to help reduce individual LSEs' demand forecast, and lower their respective RA procurement requirements, and (2) align demand response and distributed energy technology deployment and operation to provide grid reliability and cost saving value. The supporters suggest the lack of information on the methodology for the load modifications is an important gap in information that if better understood can help catalyze greater deployment of aggregators to modify loads for LSEs that can provide real value in RA requirement reductions. It is unclear whether the CEC (or CPUC) agree. The CEC does note it does not currently provide this type of information. The author may

wish to consider whether to have the CEC work in consultation with the CPUC, given its critical role in developing RA requirements, not solely the LSEs and aggregators as this bill requires. While this level of consultation may increase costs for both agencies, it can also help ensure alignment on critical electricity reliability policy.

Amendments. The author and committee may wish to amend the bill to clarify that the aggregators and DERS envisioned by the bill are behind-the-meter.

Prior/Related Legislation

AB 1117 (Schultz) of 2025, creates optional, dynamic electricity rates for electrical corporation customers. These rates would change based on real-time conditions of the electricity grid and market prices. The bill is pending in this committee.

SB 541 (Becker) of 2025, requires a number of actions towards achieving a goal for electric load shifting, the concept of shifting or shedding electric load or demand away from times when electricity is expensive, polluting, and scarce. The bill is pending the Assembly Utilities and Energy Committee.

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

SUPPORT:

Advanced Energy United (Sponsor)
350 Bay Area Action
California Energy Storage Alliance
California Solar & Storage Association
Mainspring Energy
Natural Resources Defense Council
Renew Home
Sierra Club California
Solar Energy Industries Association
Sunrun
The Clean Coalition
The Climate Center
The Climate Reality Project, Bay Area Chapter
The Climate Reality Project, California State Coalition
The Climate Reality Project, Los Angeles Chapter
The Climate Reality Project, Orange County Chapter
The Climate Reality Project, Riverside County Chapter
The Climate Reality Project, Sacramento Chapter

The Climate Reality Project, San Diego Chapter
The Climate Reality Project, San Fernando Valley CA Chapter
Union of Concerned Scientists

OPPOSITION:

None received

ARGUMENTS IN SUPPORT: Advanced Energy United, the sponsor of this bill, states:

> Behind-the-meter energy technologies—such as batteries, smart thermostats, and flexible EV chargers—offer a key solution. When aggregated and dispatched during peak hours, these resources can reduce an LSE's demand forecast and associated RA procurement needs. In fact, because of California's planning reserve margin, 1 MW of demand reduction can reduce RA obligations by up to 1.17 MW, multiplying the savings potential. Yet despite this opportunity, participation in the CEC's existing load modification process has been limited. While the CEC does allow LSEs to propose load forecast adjustments based on distributed energy resources, the current process lacks transparency and predictability. There are no publicly available criteria detailing how technologies are evaluated or what performance data is required, creating uncertainty for both LSEs and technology providers. This opacity, combined with long time lags between deployment and forecast modification, discourages uptake of load-modifying strategies that could reduce grid costs and bolster reliability. Further, the process is only accessible to LSEs—not aggregators or technology providers— making it difficult for providers to align product functionality with the needs of utilities or ratepayers

-- END --