

Date of Hearing: June 29, 2022

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY

Eduardo Garcia, Chair

SB 1432 (Hueso) – As Amended June 15, 2022

SENATE VOTE: 36-0

SUBJECT: Electricity: resource adequacy requirements: electric service providers and distributed energy resources

SUMMARY: Authorizes the California Public Utilities Commission (CPUC), upon the completion of a California Independent System Operator (CAISO) assessment, to adopt a “capacity valuation methodology” for distributed energy resources (DER) in order for the DERs to be eligible to participate in the resource adequacy (RA) program. Additionally makes changes to the RA program statutes, including striking the requirement that demand response RA products facilitate economic dispatch, incorporating electric service providers (ESPs) explicitly into the program’s objectives, adding a requirement that the costs of backstop procurement and associated greenhouse gases are equitably allocated, and codifying a report routinely published of the program.

EXISTING LAW:

- 1) Requires the CPUC, in consultation with the CAISO, to establish RA requirements for all load-serving entities (LSEs). Requires the RA program to achieve certain objectives, including maximizing the ability of community choice aggregators (CCAs) to determine the generation resources used to serve their customers. Requires the CPUC to determine and authorize the most efficient and equitable means for achieving certain goals, including meeting the RA requirement objectives, and minimizing the need for backstop procurement by the CAISO. (Public Utilities Code § 380)
- 2) Defines “load-serving entity” as an electrical corporation (IOU), electric service provider (ESP) or CCA. Explicitly does not include a local publicly owned electric utility, the State Water Project, or certain customer generation, as specified. (Public Utilities Code § 380 [k])
- 3) Defines “distributed energy resource” as an electric generation or storage technology that complies with air emissions standards, as specified. This definition does not include demand response. (Public Utilities Code § 8370)

FISCAL EFFECT: According to the Senate Committee on Appropriations, a previous version of this bill would result in negligible costs to the state. As a result, it was sent directly to the Senate Floor without a hearing pursuant to Senate Rule 28.8. However, this bill has since been amended to include additional work for the CPUC, potentially establishing a new rulemaking, which may result in costs. This bill is keyed fiscal and upon passage in this committee will be referred to the Assembly Committee on Appropriations for its review.

BACKGROUND:

Resource adequacy (RA) – In the simplest terms, RA is just a regulatory requirement developed to ensure that there will be sufficient electric resources available to serve demand under all but the most extreme conditions. In the wake of the California Electricity Crisis of 2000-01, the state determined that it was necessary to develop a system that would prevent the kind of power shortages, extreme price spikes, and rolling blackouts that occurred during that turbulent period. The Legislature adopted the requirement for RA which requires the CPUC, in cooperation with the CAISO, to adopt a program that would require all retail LSEs (which includes electric IOUs, ESPs and CCAs) to meet their peak load with a 15% (recently adjusted to 22%)¹ reserve margin. Today, this is known as system RA. The current RA program now consists of system, local, and flexible RA requirements for each month of a compliance year. Local RA refers to resources the CPUC requires an LSE to have available in certain resource-constrained areas to meet demand in those areas. Finally, flexible RA refers to the need of LSE to have available a certain amount of electricity generation available to quickly increase or decrease generation, usually in response to variations in output from renewable resources like wind and solar.

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. The CPUC issues citations and initiates enforcement actions when LSEs do not fully comply with RA program rules. LSEs have the opportunity to appeal these citations.

RA Compensation – Resources used to meet an LSE’s RA requirement are compensated for the ability to call on the resource when needed; a condition known as a “must-offer obligation.” A resource that commits to providing RA undertakes the “must-offer obligation” to bid or self-schedule its capacity into the CAISO market. The actual dispatch of resources to meet load in real-time is performed on an economic basis, with the lowest cost resources committed first. Thus, an RA resource must be offered into the market, but it may not be dispatched to serve load if there are cheaper non-RA resource bids available.

For resource owners, the RA program provides an additional source of revenue beyond just actual energy sales. To qualify to sell RA, a resource type must first be assigned a qualifying capacity (QC) from the CPUC, which represents a resource’s maximum capacity eligible to be counted towards meeting its RA. The resource must then register with the CAISO and be tested to determine if it is “deliverable” to load when the transmission system is stressed by high demand. Following the deliverability assessment, each resource is assigned a net qualifying capacity (“NQC”) value, which defines the amount of RA that it can sell. For intermittent

¹ A recent decision by the CPUC increased the PRM to 17.5% for 2021 and 2022 in response to the outages experienced last summer. The action is reflected in D.21-03-056, adopted March 25, 2021 and available at <https://docs.cpuc.ca.gov/publisheddocs/published/g000/m373/k745/373745051.pdf>

resources like wind and solar, the NQC value is typically well below the nameplate capacity of the facility, reflecting the likelihood that those resources will be ramping down during system net peak (~4-9 pm year-round²). Demand response and storage resources are eligible to provide RA, while energy efficiency is generally subtracted from the load forecast.

What exactly is a DER? – DER is a catch-all term used for a variety of generation, storage, or load modifying resources that, at their most basic level, are connected to, or most closely interacting with, the utility distribution system. DERs can include anything from customer-sited rooftop solar to aggregated demand response programs. They have traditionally been “visible” to CAISO as load reduction resources, where their deployment reduces the overall system demand from an LSE’s territory. For example, when behind-the-meter (BTM) rooftop solar reduces the need for alternative resources during the sunniest parts of the day and year. As growth in DER continues, these resources seek greater participation in the CAISO market by not only modifying load but also seeking to export their power—often in aggregate—to be compensated for that export. The CAISO tariffs does allow aggregations of DERs to participate in its markets.³ However, CAISO’s most recent deliverability assessment for distributed generation showed scant amounts of DER selected in LSE resource portfolios, and thus hardly any was studied.⁴ The recently established Emergency Load Reduction Program at the CPUC creates a test case for some of these DER challenges, by compensating BTM generation for exported energy under emergency conditions.⁵

CAISO backstop procurement – If California RA rules fail to provide sufficient resources, the CAISO is compelled to utilize centralized backstop procurement mechanisms in order to maintain electric system reliability. Under federal rules, the CAISO, like all other balancing authorities, must ensure system reliability or face penalties. The CAISO has two mechanisms for centralized backstop procurement: Reliability Must Run (RMR) and Capacity Procurement Mechanism (CPM). Under both mechanisms, the CAISO contracts with a generator to address a shortfall. A resource receiving RMR designation must continue to operate and is compensated by a rate set by the CAISO, per Federal Energy Regulatory Commission-approved tariffs. RMR contracts can be expensive relative to procurement through the CPUC process, especially considering their limited operating parameters. CPM can be used for resources that may be needed in the following year and where the resource is at risk of retirement. Like RMR contracts, CPM contracts are also often at a higher price relative to generation procured through

² CAISO’s “availability assessment hours” are intended to correspond with the hours in which high demand conditions typically occur, and thus when RA is most critical. Pg. 13 PD of May 20, 2022 in CPUC R. 21-10-002.

³ ISO Tariff updated for Distributed energy resource provider, <http://www.caiso.com/participate/Pages/DistributedEnergyResourceProvider/Default.aspx>

⁴ CAISO, “2021-2022 DG Deliverability Assessment Results” *Resource Adequacy Deliverability for Distributed Generation*, February 28, 2022.

⁵ Customers with DERs that can generate energy (BTM solar+storage, EVs, cogeneration, etc) that have permission to export are eligible to participate. <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/demand-response-dr/emergency-load-reduction-program#:~:text=What%20is%20the%20Emergency%20Load,periods%20of%20electrical%20grid%20emergencies>

the CPUC process. These costs are generally shouldered by ratepayers in the insufficient Local Capacity Area or by all ratepayers of the LSE(s) lacking the adequate RA. According to the CPUC, the CAISO does not typically need to engage in backstop procurement for LSE procurement deficiencies.

COMMENTS:

- 1) *Author's Statement.* According to the author, "As California faces near term reliability challenges, the state should assess and explore the feasible reliability value from distributed energy resources in a manner to better align the use of these resources with the existing resource adequacy program. With appropriate valuation of the reliability contribution of more types of resources, the state can increase wholesale market competition, lower costs for ratepayers, and help focus the state's transmission planning efforts. This in turn would help position load-serving entities to meet resource adequacy compliance and minimize the need for backstop procurement of fossil generation. To the extent the State must still rely on backstop procurement of fossil generation units as a last resort to maintain reliability, this measure would also ensure the costs and greenhouse gas (GHG) emissions from such are recognized and accounted for."
- 2) *Who's Doing the Allocating?* As mentioned above, when LSE-procured resources are insufficient to meet overall reliability needs, the CAISO relies on backstop procurement mechanisms (RMR, CPM) to ensure demand can be served. This bill aims to ensure that—to the extent backstop procurement of fossil generation resources is necessary—the costs and GHG emissions of these resources are appropriately allocated. This bill's proponents, NRG Energy, support this provision as providing clear guidance to ensure these emissions are better accounted for in future planning. However, as written, this directive to ensure cost and emissions are equitably allocated is a requirement of the CPUC. This is counter to current practice. The CPUC does not direct CAISO on how to allocate its backstop procurement costs, as these costs are specified in the CAISO's FERC-approved tariff. CAISO's CPM tariff⁶ and RMR tariff⁷ govern how backstop costs are allocated to LSEs.⁸ *Given this distinction, the author and committee may wish to strike the addition in Section 380(h)(7) and instead create a new subdivision that requests CAISO ensure the costs and GHG emissions of its backstop mechanisms are equitably allocated.*
- 3) *Alphabet Soup – QC for the BTM.* This bill requires the CPUC, in consultation with CAISO, to adopt a capacity valuation methodology for DERs; in other words, for the CPUC to assign QCs to these distributed resources. This adoption of DER-QCs is

⁶ Section 43A.8 <https://www.caiso.com/Documents/Section43A-CapacityProcurementMechanism-asof-Jun1-2021.pdf>

⁷ Section 41.9 <http://www.caiso.com/Documents/Section41-Procurement-RMRResources-asof-Sep28-2019.pdf>

⁸ Currently on a pro-rata basis unless an LSE is deficient in meeting its RA obligations. LSEs then pass these costs on to customers through rates.

contingent upon CAISO completing a deliverability assessment of the DERs. However, the order presented in this bill is confusing. As noted above, the CPUC determines a QC first and then the resource undergoes a deliverability study at the CAISO before being assigned an NQC. Moreover, the CPUC already assigns QCs for some DERs. Demand response resources and distribution-connected battery storage already receive QC assignments; other BTM resources do not. Recently, the CPUC issued a proposed decision in the RA proceeding that declined to establish a QC for other BTM resources unless outstanding issues were resolved.⁹ These outstanding issues include deliverability determinations (will the resource show up when it is scheduled), the ability to discount resources participating in other CPUC incentive programs (no double-dipping), and understanding the wholesale market behavior of these resources (ability for CAISO to “see” them; i.e. how dispatchable they are). As a result, the CPUC declined to adopt a QC for other BTM resources, until the threshold issues are addressed.

This bill either attempts to supersede the deliberative process at the CPUC to determine DER QC values by directing CAISO to study the deliverability of a resource currently without a QC, or it unnecessarily restates existing practice in declaring the CPUC *may* adopt DER QCs. Which option this bill seeks to address is unclear. Given the complexities inherent in allowing DERs, in their many forms, to participate in the CAISO market—including the need for DERs to rigorously demonstrate they would be available when CAISO calls on them—having a formalized study of these unique resources may be warranted. *As such, the author and committee may wish to consider striking the authorization in § 380 (k), and instead directing the CPUC and CAISO to undertake a pilot study analyzing the outstanding questions related to DERs providing reliability value.*

- 4) *Need for additional amendments.* This bill uses the broad term DER, when—according to the author—they mean only distributed generation or battery systems. Additionally, recent amendments struck a provision requiring DER products to be dispatched economically, seemingly counter to the author’s goals of this bill. *As such, the author and committee may wish to make clarifying amendments to 1) restore existing statute in § 380(b)(2) so that facilitation of economic dispatch is maintained and 2) specify that DER, for purposes of the pilot study, refers to generation and battery resources, per the statutory definition in PU Code § 8370.*

- 5) *Related Legislation.*

SB 1158 (Becker) proposes changes to the GHG accounting of procurement with the Integrated Resources Planning process, RA program, and Power Source Disclosure

⁹ PD of ALJs Chiv and O’Rourke, *Decision Adopting Local Capacity Obligations for 2023-2025, Flexible Capacity Obligations for 2023, and Reform Track Framework*, R. 21-10-002; May 20, 2022.

program. Status: *set for hearing* in the Assembly Committee on Natural Resources on June 27, 2022.

SB 529 (Hertzberg, 2022) an earlier version of the bill authorized the CPUC to consider changes within the RA program, including the use of a multiyear centralized RA mechanism, among other options. Status; the bill has since been amended outside this topic, and is *set for hearing* in this committee on June 29th, 2022.

6) *Previous Legislation.*

AB 427 (Bauer-Kahan, 2021) required the CPUC, by July 1, 2022, as part of its 2023 RA requirements to establish, in consultation with the CAISO and the CEC, a “capacity valuation methodology” for customer-sited (also known as behind-the-meter, or BTM) energy storage resources and customer-sited hybrid resources. Additionally, directed the CPUC, in determining this value, to consider the full electrical output of the resource, including all electricity delivered to the grid. Status: Died – Assembly Committee on Appropriations.

SB 1136 (Hertzberg) required the CPUC, in establishing RA requirements, to ensure the reliability of electrical service in California while advancing the state’s goals for clean energy, reducing air pollution, and reducing emissions of GHGs. The bill also added a specified purpose minimizing the need for backstop procurement by the CAISO. Status: Chapter 851, Statutes of 2018.

REGISTERED SUPPORT / OPPOSITION:

Support

NRG Energy

Opposition

None on file.

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