**SENATE COMMITTEE ON ENERGY, UTILITIES AND COMMUNICATIONS**
**Senator Steven Bradford, Chair**
**2023 - 2024 Regular**

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| **Bill No:** | AB 3111 | **Hearing Date:** | 7/2/2024 |
| **Author:** | Calderon | | |
| **Version:** | 4/29/2024 Amended | | |
| **Urgency:** | No | **Fiscal:** | Yes |
| **Consultant:** | Nidia Bautista | | |

**SUBJECT:** Distributed energy resources and aggregated distributed energy resources: reporting

**DIGEST:** This bill would require as part of an application submitted for a permit to install or interconnect a distributed energy resource (DER) or an aggregated DER notice to the California Energy Commission (CEC) that contains specified information.

**ANALYSIS:**

Existing law:

1) Establishes and vests the California Public Utilities Commission (CPUC) with regulatory authority over public utilities, including electrical corporations. (Article XII of the California Constitution)

2) Establishes and vests the State Energy Resources Conservation and Development Commission (also known as the CEC) with various responsibilities with respect to developing and implementing the state's energy policies. (Public Resources Code §25200 et seq.)

3) Defines "distributed energy resource" as an electric generation or storage technology that complies with the emissions standards adopted by the California Air Resources Board pursuant to the distributed generation certification program. (Public Utilities Code §8370)

4) Requires the CPUC, in consultation with the CEC and the California Independent System Operator (CAISO), to take specified actions by December 1, 2020, to facilitate the commercialization of microgrids for distribution customers of large electrical corporations, including developing microgrid service standards necessary to meet state and local permitting requirements and developing methods to reduce barriers for microgrid deployment without shifting costs between ratepayers. (Public Utilities Code §8371)

5) Requires local publicly owned electric utilities (POUs) to develop and make available a standardized process for the interconnection of microgrids, including separate rates and tariffs, as necessary. Specifies the microgrid rate design shall result in no cost shifts from a microgrid customer to a nonmicrogrid customer. (Public Utilities Code §8372)

This bill:

1) Makes findings and declarations concerning the deployment of distributed energy resources (DER).

2) Defines "aggregated distributed energy resource" to mean DER that may be controlled to act as a coordinated unit and, when combined, have a generating capacity above 100 kilowatts (kW) or a storage capacity above 80 kilowatt-hours (kWh).

3) Defines "distributed energy resource" to mean a customer-sited solar energy system with a generating capacity above 100 kW, or a customer-sited battery energy storage system with a storage capacity above 80 kWh.

4) Requires, as part of an application submitted for a permit to install or interconnect a DER or an aggregated DER, or at the time an aggregator enrolls an aggregated DER in an aggregation program, the applicant or aggregator to provide notice to the CEC that contains specified information about the DER or aggregated DER.

5) Requires the CEC to share the information in those notices with the CPUC, the California Independent System Operator (CAISO), and electrical corporations or local publicly owned electric utilities (POUs), as provided.

**Background**

*Growth of customer-sited DERs.* 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 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 majority of DERs in California are customer-sited rooftop solar arrays.

Today, California has over 16 gigawatts (GW) of customer-sited (also called "behind-the-meter") solar resources (California Distributed Generation Statistics, https://www.californiadgstats.ca.gov). These resources represent a large fraction of generation on California's grid, which in 2018 was roughly 80 GWs. By 2045, the CEC predicts rooftop-solar to contribute 39 GWs, as stated in the 2021 SB 100 Joint Agency Report. However, DERs have traditionally been "visible" to the electric grid, and CAISO, as load reduction resources, where their deployment reduces the overall system demand from a utility'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 DERs 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 tariff does allow aggregations of DERs to participate in its markets. However, CAISO's most recent deliverability assessment for distributed generation showed scant amounts of DER selected in load-serving enetities' resource portfolios, and thus hardly any was studied. The recently established Emergency Load Reduction Program at the CPUC creates a test case for some of these DER challenges, by compensating customer-sited generation for exported energy under emergency conditions. DERs also can also comprise microgrid configurations, which are generally self-contained, small (relative to the electric grid), electricity system with the ability to manage customer resources, disconnect from the electric grid (island) when needed. Microgrids are often made of a combination of DER, energy storage, and demand response capabilities, though configurations will vary.

**Comments**

*Need for this bill.* The proponents of this bill contend the electric industry is undergoing a transformation from vertically integrated utilities to independent generators on the wholesale side, with the next phase of the transformation being generation and storage on the customer side. As part of the Integrated Energy Policy Report (IEPR), the CEC forecasts and reports on the projected impact of new customer-sited DERs. In the latest IEPR, the CEC forecasts significant growth in customer-sited DERs. They estimate that BTM solar will grow at an average rate of 14 percent and BTM storage will grow at an average rate of 32 percent over the next decade. This equates to approximately 18,000 and 4,500 megawatts, respectively. Proponents suggest that projections are a helpful starting point but for planning purposes, it is important that the CEC is aware of the precise amount of customer-sited generation and storage. This data informs the state's electric system

and reliability planning efforts, such as the CPUC's Integrated Resource Plan and resource adequacy requirements, as well as the CAISO's Transmission Planning Process.

*Need for specified reporting?* This bill seeks to provide visibility into DERs by requiring type, location, capacity, and contract information of these DERs to be shared with the CEC. This bill limits the DERs to only large systems, those greater than 100 kW for solar or greater than 80 kWh for batteries. These sized systems are likely installed for large industrial customers that could afford to install such systems on their parking lots, warehouses, or other open spaces. DERs play a significant role in shaping the energy profile of California's grid. However, as these resources are on the customer-side of the meter, there may be limited information regarding their location, profile, and desire or ability to shape the load or isolate during emergencies. Visibility into the behavior of DERs interconnecting to California's grid could significantly alter how the energy agencies and CAISO value the attributes – either electricity or capacity – of these resources.

The sponsors of this bill note the growth in DER, and emphasize state agencies need to be aware of the amount and location of these resources as they impact short- and long-term system planning. The CEC has shared they collect data related to DERs and other generation resources as shared by utilities with the CEC. The CEC publishes a quarterly report on these resources as Quarterly Fuel and Energy Reports regulations available on their website. The CEC has less information about aggregated DERs. Opponents of this bill state that much of the information proposed to be collected by this bill is already collected via the utility's interconnection process or the CAISO's database of participating Demand Response locations through their Demand Response Registration System. They contend that the requirements of this bill are duplicative, and create additional burdens for customers (including potential customers) of DERs. They are particularly concerned about the need to notify the CEC, via pdf as required by this bill, each time a customer enrolls in an aggregation program.

*Amendments needed.* To alleviate some of the concerns regarding the requirement to have aggregators provide notices every time a subscriber participates and some of the specifics about the notices, *the author and committee may wish to amend the bill to:*

- *Require the notices are filed at the time of the permit to install or interconnect the DER, whichever comes first.*
- *Require the aggregators to provide notices when programs are initiated and twice a year thereafter.*
- *Require the notices are submitted in an electronic format determined by the CEC, instead of a pdf.*

**Prior/Related Legislation**

SB 1339 (Stern, Chapter 566, Statutes of 2018) required the CPUC, in consultation with the CEC, and the CAISO, to take specified actions by December 1, 2020, to facilitate the commercialization of microgrids for distribution customers of large electrical corporations. Required the governing board of an electric POU to develop and make available a standardized process for the interconnection of a customer-supported microgrid, including separate electrical rates and tariffs, as necessary.

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

**SUPPORT:**

California State Association of Electrical Workers, Co-Sponsor
Coalition of California Utility Employees, Co-Sponsor
Pacific Gas and Electric Company
San Diego Gas and Electric Company
Southern California Edison
State Building and Construction Trades Council

**OPPOSITION:**

198 Methods
350s: Bay Area Action, Sacramento, Ventura County Climate Hub
A1 Sun, Inc.
ACIP Energy
ACR Solar
Advanced Energy United
Affordable Developments: 2002, 380 LLC, 5616 LLC, and 818 LLC
Aguillon Enterprises
Alameda County Democratic Party
Alaska Microgrid Group
Albany Climate Action Coalition
Amy's Roofing and Solar
Aztec Solar Inc.
Bay Area Clean Air Coalition
Berkeley Electrification Working Group
BPi
Calaveras County Water District
California Democratic Renters Council
California Energy Storage Alliance
California Interfaith Power & Light
California Solar & Storage Association
Kire Builders Inc.
Local Clean Energy Alliance
Long Beach Gray Panthers
M.Cubed
Microgrid Resources Coalition
Mutual Housing California
Napa Climate Now!
North County Climate Change Alliance
NV5
Oakland Education Association
Pathion Holdings, Inc.
Pearlx Infrastructure, LLC
Peninsula Clean Energy
People Power Solar Cooperative
PowerFlex
QuitCarbon
Reclaim Our Power
Recolte Energy
Regenerative Forest Solution
Resilient Palisades
Rhoades Planning Group
Sacramento Climate Coalition
San Francisco League of Conservation Voters

Californians for Energy Choice
Californians for Western Wilderness
Center for Biological Diversity
Center for Community Energy
Center for Sustainable Energy
Chino Valley Democratic Club
Citadel Roofing and Solar
CivicWell
CleanEarth4Kids.org
Climate Action California
Climate Action Mendocino
Climate Hawks Vote
Climate Solutions Advocacy Institute
Collective Resilience
Consumer Watchdog
Contra Costa MoveOn
Courageous Resistance of the Desert
Custom Power Solar
Democrats of SW Riverside County
EC Institute
Ecology Center
Energy Toolbase
Engie North America
Environmental Justice Coalition for Water
Equity Transit Association
ForOurChildren.Love
Fresnans Against Fracking
Glendale Environmental Coalition
GoGetIt
Grasroots Institute
Green Solutions & Technologies
GRID Alternatives
Hammond Climate Solutions Foundation
Homefed Corporation
Humboldt Coalition for Clean Energy
Immobilier Funds
Indivisible
Indivisible San Jose
San Francisco Physicians for Social Responsibility
Santa Cruz Climate Action Network
Santa Cruz Democratic Party
School Energy Coalition
Sequoia Forest Keeper
Silicon Valley Youth Climate Action
SMA America
Solar Energy Industries Association
Solar Technologies
Solar Works
Solcha
Sonoma County Democratic Party
Stand.earth
Stellar Solar
Sun Light & Power
Sunflower Alliance
Sunrun, unless amended
Sunnova Energy Corporation
Sustainable Marin
Symbium
Tenants Together
TerraVerde Energy
Tesla
The Climate Alliance of Santa Cruz County
The Climate Center
The Climate Reality Project San Diego Chapter
The Energy Coalition
Town of Fairfax
Undaunted K12
Valta Energy
Vote Solar
Wellstone Democratic Renewal Club
Wildflower Revolution
Winston Oak LTD
World Business Academy
Your SolarMate
55 Individuals

**ARGUMENTS IN SUPPORT:** The California State Association of Electrical Workers and the Coalition of California Utility Employees state:

> For planning purposes, California's energy agencies need to be aware of the amount of customer-sited generation and storage. The CEC has a duty as part of the Integrated Energy Policy Report to forecast and report on the impact of these resources. This data informs the state's electric system and reliability planning efforts, such as the California Public Utilities

Commission's Integrated Resource Plan and resource adequacy requirements, and the California Independent System Operator's Transmission Planning Process. But the CEC has had difficulty accurately reporting historical customer-sited solar and storage capacity, impacting the IEPR and planning flowing from the IEPR. The electric industry cannot be blindly transformed; the transformation must be based on early and effective planning which requires knowing if projected customer sited generation and storage is being constructed as forecasted. AB 3111 would solve this problem by requiring applicants of large customer-sited solar and storage and aggregated solar and storage facilities to provide early notice to the CEC of the installation and characteristics of these facilities.

**ARGUMENTS IN OPPOSITION:** A coalition of solar and community organizations opposed to this bill state:

Distributed energy resources (DER) represent a crucial opportunity to modernize California's energy system with localized clean energy solutions that enhance electric system reliability and community resilience. DERs can help lower costs and improve energy affordability for all by reducing the state's reliance on inefficient, costly power lines that have been at the heart of record-breaking wildfires, numerous power outages, and endless public safety threats plaguing residents and communities across the state of California. On the contrary, AB 3111 would require any DER with a "generating capacity above 100 kilowatts or a storage capacity above 80 kilowatt-hours" to be subjected to a new set of reporting requirements that are unnecessary, duplicative, and costly to developers and customers. This will take our state even further away from achieving its climate goals. Its requirements are onerous, duplicative, and only serve one purpose – to cement utility monopoly interests and make it even harder for your constituents to access local renewable energy, in contravention to California's climate action and environmental justice goals. AB 3111 will stop all progress in expanding frontline communities' access to clean, affordable, reliable power and limit their ability to develop locally owned projects that can build wealth and spur new investment in historically underserved areas.

**-- END --**