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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 533 **Hearing Date:** 4/19/2021  
**Author:** Stern  
**Version:** 3/5/2021 Amended  
**Urgency:** No **Fiscal:** Yes  
**Consultant:** Nidia Bautista

**SUBJECT:** Electrical corporations: wildfire mitigation plans: deenergization events: microgrids

**DIGEST:** This bill proposes several measures to address proactive electric power shutoffs by electric utilities, including requiring specified actions for utility equipment that experiences a specified number of recurring deenergization events, establishment of a statewide database of critical facilities and infrastructure, and information and valuation of microgrid projects, as proposed.

**ANALYSIS:**

Existing law:

- 1) Establishes the California Public Utilities Commission (CPUC) with regulatory authority over public utilities, including electrical corporations. (California Constitution, Article 12)
- 2) Requires that a statute that limits the right of access to the meetings of public bodies or the writings of public officials and agencies be adopted with findings demonstrating the interest protected by the limitation and the need for protecting that interest. (California Constitution, Article 1, §3 (b)(2))
- 3) Existing law requires an electrical corporation to construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by those electrical lines and equipment. Requires each electrical corporation to annually prepare a wildfire mitigation plan and to submit its plan to the CPUC for review and approval, as specified. Following approval, the CPUC is required to oversee an electrical corporation's compliance with the plans. (Public Utilities Code §8386)
- 4) Requires that the wildfire mitigation plans (WMP) include, among other things, appropriate and feasible procedures for notifying a customer who may be impacted by the deenergizing of electrical lines and requires that the procedures

consider the need to notify, as a priority, critical first responders, health care facilities, and operators of telecommunications infrastructure. (Public Utilities Code §§8386 and 8387)

- 5) Requires the CPUC, in consultation with the State Energy Resources Conservation and Development Commission 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)
- 6) Requires the CPUC, in consultation with the CAISO, to establish resource adequacy requirements for electrical corporations, community choice aggregators (CCAs), and electric service providers (ESPs). (Public Utilities Code §380)
- 7) Requires that all charges demanded or received by any public utility for any product, commodity or service be just and reasonable, and that every unjust or unreasonable charge is unlawful. (Public Utilities Code §451)

This bill:

- 1) Requires an electrical corporation to ensure its electrical transmission and distribution system achieves the highest level of safety, reliability, and resiliency by modernizing, upgrading, including by installing one or more microgrids, replacing, hardening, or undergrounding, any portion of its transmission and distribution wires or poles that experiences a specified number of recurring deenergization events, as defined.
- 2) Requires that these measures be completed within 12 months of reaching the specified number of recurring deenergization events.
- 3) Requires that an electrical corporation's WMP include a description of measures implemented pursuant to this requirement and the number of transmission and distribution wires and poles affected.
- 4) Requires the CPUC, in consultation with the Office of Emergency Services, to create a database of critical facilities and critical infrastructure, and related critical circuits, that are located in tier 2 or tier 3 high fire-threat districts served

by electrical corporations, and identify with respect to each whether it serves low-income households or low-income communities, as defined.

- 5) Requires an electrical corporation, upon request, to collaborate with local governments or CCAs within its service area to identify critical circuits and microgrid projects.
- 6) Authorizes electrical corporations, ESPs, CCAs, and local publicly owned electric utilities to use capacity resulting from a microgrid project to satisfy specified resource adequacy requirements.
- 7) Requires electrical corporations to provide local governments, tribal governments, and CCAs with electrical distribution equipment data, transmission and distribution circuit data, grid hardening plans, and other information requested by those entities to ensure that they are able to plan and develop microgrid projects collaboratively with the electrical corporations.
- 8) Authorizes the electrical corporations to require the use of a commission-approved nondisclosure agreement before providing the requested information.
- 9) Requires the CPUC and the CAISO to develop a methodology, as provided, to account for the resource adequacy value of distributed storage no later than July 31, 2022.

## **Background**

*California wildfire and electric utility infrastructure.* Electrical equipment, including downed power lines, arcing, and conductor contact with trees and grass, can act as an ignition source. Risks for wildfires also increased with the extended drought and bark beetle infestation that has increased tree mortalities and, as a result, increased the fuel, and risk for wildfires. In recent years, California has experienced a number of catastrophic wildfires, including several that ignited by electrical utility infrastructure.

*Deenergizing electric lines.* Generally, electric utilities attempt to maintain power and ensure continued reliability of the flow of electricity. However, as recent catastrophic fires have demonstrated, the risk of fire caused by electric utility infrastructure can pose a great damage and loss of life, perhaps greater than the risks of turning off the power to certain circuits. As a safety consideration, electric utilities have the ability and authority to deenergize electric lines in order to prevent harm or threats of harm. However, deenergizing electric lines can result in the loss of electricity to households, businesses, traffic signals, communication

systems, critical facilities, water treatment facilities, emergency services and others which can also cause harm. Therefore, efforts to deenergize electric lines must consider the potential harm of the energized lines causing a wildfire against the safety hazards associated with eliminating electricity to the areas served by the line(s).

*Recent history with power shutoffs.* Utilities have increasingly utilized proactive power shutoffs as a tool to prevent sparking. The practice of proactively deenergizing electric circuits to prevent catastrophic wildfire began by San Diego Gas & Electric (SDG&E) after several electric utility infrastructure-ignited catastrophic fires in 2007. Proactive power shutoffs were one of the many measures SDG&E implemented to reduce the risk of fire ignited by its infrastructure (other measures included installing steel poles and expanding ground and aerial inspections). Although the use of proactive power shutoffs were met with opposition and concerns about its use by communities, ultimately the CPUC acknowledged SDG&E's authority to deenergize lines in order to protect public safety, noting this authority in Public Utilities Code §451 and §399.2. Since then the practice has also been adopted by the state's two largest electric utilities – Pacific Gas & Electric (PG&E) and Southern California Edison (SCE).

*Oversight of proactive power shutoffs.* The CPUC adopted protocols for deenergizing electric lines with a focus on who should receive notice and when; who should be responsible for notification; how different customer groups should be identified; the information that should be included in notifications in advance of and directly preceding a deenergizing event; the methods of communication; and how the investor-owned utilities (IOUs) should communicate and coordinate with public safety partners before and during an event. The CPUC is working with the Office of Emergency Services, Cal FIRE, and first-responders to address potential impacts of utility deenergization practices on emergency response activities, including evacuations. The CPUC is also monitoring the development and continuously assessing implementation of deenergization programs by utilities, including performing a review of deenergization events. In adopting the initial protocols, the CPUC commissioners expressed a desire that the power shutoffs would only be used as a “last resort” by the utilities. However, the use of proactive power shutoffs by electric utilities became widespread and increased concerns that the practice is being used as a first resort. In some instances, deenergization events overlapped and resulted in customers experiencing extended days with loss of power. The CPUC and Legislature have continued oversight of the utilities' practices with the goal of minimizing the use of power shutoffs and accelerating wildfire mitigation.

However, today, proactive power shutoffs continue to be a tool to reduce wildfire risks.

*Wildfire Mitigation Plan (WMP).* As a result of SB 1028 (Hill, Chapter 598, Statutes of 2016), and further expanded by SB 901 (Dodd, Chapter 626, Statutes of 2018) and AB 1054 (Holden, Chapter 79, Statutes of 2019), electric IOUs are required to file WMPs with guidance by the CPUC, specifically the Wildfire Safety Division (WSD). The CPUC also reviews and determines whether to approve these plans and ensures compliance with guidance and statute. The electric IOUs' WMPs detail, describe and summarize electric IOU responsibilities, actions, and resources to mitigate wildfires. These actions include plans to harden their system to prevent wildfire ignitions caused by utility infrastructure, such as widespread electric line replacement with covered conductors designed to lower wildfire ignition, pole replacement, and other actions. The plans also include information regarding the electric IOUs' efforts to conduct extensive vegetation management to reduce the risk of tree branches, grasses, and other vegetation from coming into contact with utility infrastructure. The WMPs also require electric utilities to incorporate their protocols and procedures for proactive power shutoffs.

*Microgrids.* Microgrids tend to be a group of interconnected loads and distributed energy resources that act as a single controllable entity with respect to the electric grid and can connect and disconnect from the electric grid to enable it to operate grid-connected or in island mode. A microgrid can be as simple as a diesel-fuel generator located near a building, such as a hospital, that is able to provide needed power during an electric power outage or a more complicated system of interconnected resources. Customers tend to seek reliability and resiliency services from microgrids. In particular, customers may value the desire for sufficient resources for critical services both at the utility scale, but also at the local level in order to better manage challenges, such as power outages due to wildfire, flooding, etc. In addition to the increased reliability, microgrids with properly configured controllers can provide lower electricity bills for the customer and cleaner air. The microgrid can control the rate and schedule of distributed energy generation resources, coordinate the use of energy storage, and implement demand response. However, the technology is usually tailored for each given project and can be a sizeable investment

*State efforts to commercialize microgrids.* The California Energy Commission (CEC), CPUC, and CAISO were working with stakeholders to develop a road map for actions needed to commercialize microgrids in California. However, recent activities in implementing SB 1339 (Stern, Chapter 566, Statutes of 2018) have taken precedence. Additionally, the CEC has funded research through the Electric Power Investment Charge (EPIC) program for projects that use microgrids to

support high penetrations of renewables and the operations of critical facilities, including hospitals, fire stations, and regional command centers. These demonstration projects are used to collect data to demonstrate how they are working to reduce greenhouse gas emissions, improve reliability, and increase resiliency and flexibility to critical services in emergencies. The demonstrations are helping to increase the knowledge regarding the operations of microgrids. In 2017, the CEC issued EPIC funding solicitation to promote research of commercialization of microgrids with the intention to inform opportunities where microgrids can be developed into standardized configurations that are easily repeatable to provide benefits to the grid and customers.

*SB 1339 (Stern, Chapter 566, Statutes of 2018).* In 2018, the Legislature passed SB 1339 which requires 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. In response to SB 1339, the CPUC initiated Rulemaking 19-09-009 to facilitate the commercialization and deployment of microgrids while prioritizing system, public, and worker safety and avoiding shifting costs between ratepayers. The proceeding is organized into three tracks, with the first track focused on deploying resiliency planning in areas that are prone to outage events and wildfires with the goal of putting some microgrid and other resiliency strategies in place by spring or summer 2020. The CPUC adopted a decision in Track 1 which addresses solutions to accelerate interconnection of resiliency projects in advance of the upcoming wildfire season, including requiring the electric IOUs to prioritize and streamline interconnection of resiliency projects in key locations, facilities, and/or customers. The proposed decision adopts solutions that modernize tariffs to maximize social resiliency benefits, including requiring electric IOUs to modify their net-energy metering tariffs to allow energy storage devices to charge from the grid during the pre-public safety power shutoff window and remove storage sizing limits, as specified. Third, the proposed decision adopts solutions that promote collaborative engagement between large IOUs and local and tribal governments, including requiring the creation of a separate access-restricted data portal for local and tribal governments to review data essential for microgrid and resiliency project development. Lastly, the decision conditionally approves an array of resiliency proposals set forth by PG&E and SDG&E, including community-proposed microgrid projects. Additionally, the CPUC has active proceedings that are relevant to the deployment of microgrids, including a specific proceeding on distributed energy resources (DERs) (R. 14-08-013) and another on smart grids (R. 08-12-009). However, the key issues related to this bill are found in the SB 1339 microgrid proceeding, including as scoped for Track 2 and Track 3.

*Resource Adequacy (RA)*. Following the California energy crisis of 2000-01, the California Legislature enacted legislation to prevent future incidents of widespread black outs and rolling brown outs due to lack of electric generating capacity. Among the reforms was the adoption of Public Utilities Code §380 which directs the CPUC, in consultation with the CAISO, to establish RA requirements for all load-serving entities (LSEs). The current RA program consists of system, local, and flexible requirements for each month of a compliance year. In October, LSEs under the jurisdiction of the CPUC must demonstrate that they have procured 90 percent of their system RA obligations for the five summer months (May-September) of the following year, as well as 100 percent of their local requirements, and 90 percent of their flexible requirements for each month of the coming compliance year. The CPUC has recently adopted changes to RA, including increasing the planning reserve margin from 15 percent to 17.5 percent and in some cases to 19 percent. Additionally, the CPUC has an open proceeding considering some of the proposals regarding valuing behind-the-meter distributed energy resources as proposed in this bill under Track 4 of the proceeding.

*SB 533*. The author expresses his intent to require specified repairs and upgrades, of the electric utilities' distribution and transmission grids and also requires more microgrid planning is included to ensure energy resiliency and grid reliability. The author notes the frequency of proactive power shutoffs, especially in his district, have become a burden to customers and a strain on critical services. With this in mind, the author is proposing the various elements of this bill.

*Too prescriptive?* The author is accurate to note that proactive power shutoffs can have a serious impact on customers and critical services. While the utilities continue to implement upgrades and improvements on their systems, the use of power shutoffs should wane. However, in the short-term proactive power shutoffs are likely to remain an important tool in the utility's toolbox to mitigate the risk of igniting a catastrophic wildfire. The use of proactive power shutoffs seems to be particularly long-term and more frequent for areas with a high wildfire risk. In that regard, continued oversight and reporting may be necessary. However, The Utility Reform Network (TURN) has a valid concern regarding the potential to provide utilities a blank check to spend without reference to their authorized budgets. *As a result, the author and committee may wish to amend this bill to limit spending to the budget that has been authorized in the general rate case.* Additionally, the utilities concern that this bill is overly prescriptive in its solutions seems valid. Therefore, *the author and committee may wish to amend the language to require utilities to incorporate mitigation in the WMP for specific circuits that are most frequently deenergized and note that mitigation may include but is not limited to the proposed solutions.*

*Resource adequacy.* As proposed in this bill, any generating or storage capacity that is part of a microgrid would be counted as supply-side resources for purposes of satisfying RA requirements. As TURN notes in its letter, such a change can result in many unintended implications, including additional costs for interconnection and upgrades to the electric grid. As noted by many of the opponents, the CPUC has active proceedings exploring the RA treatment of behind-the-meter resources, including in Track 4 of the RA docket. *Therefore, the author and committee may wish to delete the provisions in this bill addressing RA.*

*Is a centralized database necessary?* As proposed by this bill, a statewide centralized database would be established to maintain data regarding critical facilities and circuits across the state. The author's concern about stymied data-sharing by the electric utility with affected local governments has been a concern. However, the CPUC has increased requirements regarding data-sharing to help local governments better plan for deenergization events. As a result, the need for a centralized database may not be necessary and may post more security risks than provide benefits. As a result, the author may wish to consider removing the need for a centralized database, but instead continue to bolster the efforts to require electric utilities to share information via CPUC rules with affected local governments.

### **Prior/Related Legislation**

SB 1312 (McGuire, 2020) proposed a number of requirements related to reducing wildfire risks and proactive power shutoffs by electric IOUs.

SB 560 (McGuire, Chapter 410, Statutes of 2019) would have expanded the protocols required as a result of the deenergizing of electrical lines initiated by an electrical corporation (electric IOU), a local POU, or an electrical cooperative (co-op) to mitigate the impact of the event on specified customers and critical services, among other provisions.

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.

AB 1144 (Friedman, Chapter 394, Statutes of 2019) required the CPUC to support resiliency during a deenergization event for communities in high fire threat districts by allocating at least ten percent (\$16.6 million) of the annual allocation of the self-generation incentive program in 2020 for the installation of energy storage



and other distributed energy resources for customers that operate a critical facility or critical infrastructure in these communities.

SB 901 (Dodd, Chapter 626, Statutes of 2018) addressed numerous issues concerning wildfire prevention, response and recovery, including funding for mutual aid, fuel reduction and forestry policies, wildfire mitigation plans by electric utilities, and cost recovery by electric corporations of wildfire-related damages.

SB 1028 (Hill, Chapter 598, Statutes of 2016) required electric CPUC-regulated utilities to file annual WMPs and requires the CPUC to review and comment on those plans.

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

**SUPPORT:**

350 Silicon Valley  
Association of California Water Agencies, if amended  
California Association of Public Authorities for IHSS  
City of Moorpark  
City of Santa Clarita  
City of Thousand Oaks  
Disability Rights California  
El Dorado Irrigation District  
Independent Living Resource Center  
Microgrid Resources Coalition, if amended  
Rural County Representatives of California  
Schneider Electric North America  
UDW/AFSCME, Local 3930  
Ventura County Board of Supervisors

**OPPOSITION:**

Southern California Edison  
San Diego Gas and Electric Company  
The Utility Reform Network, unless amended

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

Over the past two years, public safety power shutoff [PSPS] events have left more than three million Californians without power for days at a time. Events resulting in a power outage are meant as a last resort to ensure the

public is safe-guarded from wildfires sparked by electric utility infrastructure. However, their frequent use by the state's biggest investor owned utilities is now a problem and a burden to electric customers and local governments. These outages are exacerbated as many Californians continue following COVID 19 preventative measures, resulting in more time working from home, going to school from home and being dependent on access to the internet. Now add in three days or more of a PSPS outage and you just lost everything in your refrigerator, work productively, education and access to communication and internet service. Additionally, city and county critical services are strained as water services are disrupted, traffic lights stop working, and cities responding to the power outage initiate protocols as if a city or county were experiencing a natural disaster. But with no declared state of emergency the costs of these PSPS outages are borne entirely on local governments. Add on top of this, that it appears to be same segments of electric infrastructure being shut-off over and over and you quickly realize PSPS events can be significantly reduced if IOUs just target and repair their most PSPS prone zones. SB 533 will require these repairs and upgrades, and also requires more microgrid planning is included to ensure energy resiliency and grid reliability.

**ARGUMENTS IN OPPOSITION:** In opposition to this bill, SCE and SDG&E express concerns about the prescriptive nature of this bill both in terms of specified solutions and timelines. SDG&E specifically expresses concerns that this bill's approach would increase customer risk and work against safety and resiliency, stating that this bill ignores their advanced wildfire risk assessment model that now includes the risk of proactive power shutoffs. TURN expresses concerns that the language in this bill would result in a blank check to utilities to spend beyond their authorized budgets approved within their respective general rate case, and thereby increase costs to ratepayers.

SCE and SDG&E also raise concerns with the proposed centralized database of all governmental facilities in the high fire-threat districts and warn there should be extreme caution to how this information is handled, stored, and shared by different entities. Instead, the utilities argue that the existing collaboration and data-sharing requirements imposed by the CPUC should be sufficient to appropriately share this information and manage the security risk of this data getting into the wrong hands.

TURN, SDG&E and SCE also express concerns about the proposed language to require microgrids receive RA value. All three in opposition state these are issues actively being considered in both the CPUC microgrid proceeding and the RA proceeding and should be deleted from this bill.

SDG&E also opposes the treatment of CCAs within this bill to potentially operate distribution infrastructure which CCAs, stating that CCAs are legally authorized to procure energy resources, not to operate or plan the distribution system.

**-- END --**