

Date of Hearing: June 22, 2022

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY

Eduardo Garcia, Chair

SB 1383 (Hueso) – As Amended April 25, 2022

SENATE VOTE: 39-0

SUBJECT: Electricity: storage facilities: standards and records

SUMMARY: Requires the California Public Utilities Commission (CPUC) to implement and enforce standards for the maintenance and operation of electric storage facilities owned or contracted for by electrical corporations (IOUs) and requires the California Independent System Operator (CAISO) to maintain records of storage facility outages and provide those records to the CPUC on a daily basis.

EXISTING LAW:

- 1) Requires the CPUC to implement and enforce standards for the maintenance and operation of electric generation resources owned or contracted by IOUs. (Public Utilities Code § 761.3 [a])
- 2) Requires the CAISO to maintain records of generation facility outages and to provide those records to the Electricity Oversight Board and the CPUC on a daily basis. (Public Utilities Code § 761.3 [e])
- 3) Establishes the CAISO as a nonprofit public benefit corporation and requires it to ensure efficient use and reliable operation of the electrical transmission grid, as specified. (Public Utilities Code § 345.5)
- 4) Establishes standards for the maintenance and operation of electric generating facilities and power plants so as to ensure that electric generating facilities are effectively and appropriately maintained and efficiently operated, and to ensure electrical service reliability and adequacy. (CPUC General Order 167-B)

FISCAL EFFECT:

According to the Senate Appropriations Committee

- CPUC estimates ongoing costs of \$854,000 annually (ratepayer funds) for staff to coordinate implementation of the safety standards, administer an audit program, manage compliance tracking, and collect data and perform analysis, among other things.
- CPUC estimates one-time costs of \$2.2 million over three years (ratepayer funds) to preside over and manage proceedings and citation appeals, develop regulations, implement protocols, and conduct investigations to ensure compliance.

BACKGROUND:

Deregulation of IOUs & Electric Generation – In the last century the CPUC-regulated IOUs were vertically integrated which meant that the utilities owned nearly all of the electrical infrastructure serving customers including generating facilities. Monitoring of the safety and reliability of that IOU-owned infrastructure was part of the CPUC’s regulation of the utilities. However, after the 1996 enactment of electric restructuring laws, the CPUC ordered the IOUs to dispose of significant generation assets within the state to eliminate monopoly control of the generated electricity supply. Doing so moved those resources into the public sector (referred to as wholesale generators) and out of the regulatory reach of the CPUC.

In 2000-01 the state suffered an energy crisis as drought, delays in approval of new power plants, and market manipulation decreased the supply of electricity. The unregulated wholesale generators were accused of arbitrarily taking plants out of service which resulted in severe electricity shortfalls and rolling blackouts. In response, the CPUC began investigating power plant outages in January 2001 to ascertain whether the wholesale generators withheld electricity generation in an exercise of market power. Some generators challenged CPUC inspection authority in the state courts, which upheld CPUC authority to conduct unscheduled plant inspections. The U.S. Supreme Court declined to review the state court rulings and the CPUC conducted over 800 inspections in 2001.

During this same time frame the role of the newly created regional transmission organizations and independent system operators and interplay with state regulators of utilities was still developing. Tension developed between the authority of the CAISO to coordinate generating unit maintenance and outages under federal law and the CPUC’s jurisdiction under state law relating to outage control and coordination. The CPUC argued that FERC did not have authority over outage coordination, because FERC did not have jurisdiction over generation facilities.

To avert potential federal-state regulatory jurisdictional conflict over grid operations and control, the Legislature acted and recognized the CAISO’s authority over grid operations and outage protocols, but directed the CPUC to enforce the outage protocols of the CAISO resulting in a collaborative CAISO-CPUC effort to develop uniform generator standards and procedures, enforced by the CPUC through plant inspections. The authority to carry out this work is reflected in Public Utilities Code § 761.3.

The CPUC responded with the adoption of General Order 167-B and its Safety and Enforcement Division (SED), which conducts in-person audits at CPUC-jurisdictional electric generation facilities (e.g. natural gas, combined cycle, solar, wind and geothermal power plants) throughout the state. A team of auditors within SED regularly conduct comprehensive audits of power plants through performance data analysis, record review, field inspection, and plant staff interviews. During these audits, SED reviews the generator’s records and manuals, and inspects the facility to ensure that the generator’s operation and maintenance of the facility is in accordance with GO 167-D. In addition to scheduled audits, SED also conducts incident investigations at generation facilities and outage investigations. The entire audit process consists of three main phases: planning phase, plant visit phase, and report and resolution phase.

Battery Storage Reliability – Battery energy systems used for storing electricity are not electric generation resources but as the interconnection of these resources to the grid increases, they will have an increasing role in maintaining reliability of the grid. Last year a major battery storage

asset failed, resulting in an immediate shutoff of the facility and the loss of 300 megawatts (MWs) of capacity on the grid. The private owner of the facility, Vistra, which is under contract to PG&E, reported that smoke from a failed bearing in an air-handling unit in the building triggered a heat suppression system to improperly spray water on battery racks, causing damage and overheating and taking the system offline. The same facility experienced a second incident in February which took 100 MWs of storage offline. In a press release Vistra reported that there was early evidence that water hoses leaked and that some batteries short circuited, creating smoke in the building.

COMMENTS:

- 1) *Author's Statement.* According to the author, "The unexpected loss of energy capacity on the electric grid can have cascading and deleterious effects that can increase costs to customers and result in events such as rotating outages or worse. As the August 2020 rotating outages incidents demonstrated, California cannot afford to unexpectedly lose significant energy capacity on the electric system. With the state's reliance on energy storage – especially battery energy storage – expected to continue to increase, the state needs to ensure these resources and respective capacity will be available when needed. Recent safety incidents at the largest battery energy storage facility have raised concerns about the adequacy of the safety and reliability oversight of energy storage facilities. Unlike electric generating facilities owned by electric investor-owned utilities and located in the state which are subject to CPUC safety oversight to help ensure the safety and reliability of these systems, energy storage systems are not subject to the same safety oversight.

SB 1383 would expand the CPUC's current safety operation and maintenance standards of electric generation facilities to include oversight of energy storage systems. As California's reliance on energy storage systems – most especially lithium-ion battery storage systems – grows and is expected to grow exponentially, we must ensure the same reliability and safety of these facilities as we do for electric generating facilities."

- 2) *Inspection of Battery Storage.* Several years ago the CPUC directed development of protocols for energy storage inspections owned by the IOUs as an extension of its authority to inspect those utilities. However, the CPUC does not have jurisdiction over battery storage resources owned by private companies. This bill will extend the CPUC's current authority to inspect wholesale electric generators to battery storage resources.

REGISTERED SUPPORT / OPPOSITION:

Support

Pacific Gas and Electric Company and Its Affiliated Entities

Opposition

None on file.

Analysis Prepared by: Kellie Smith / U. & E. / (916) 319-2083