Office of Senate Floor Analyses
(916) 651-4171

THIRD READING

Bill No: SB 1011
Author: McNerney (D)
Amended: 5/18/26
Vote: 21

SENATE ENERGY, U. & C. COMMITTEE: 13-3, 4/13/26
AYES: Allen, Archuleta, Arreguín, Becker, Caballero, Gonzalez, Hurtado, McNerney, Reyes, Richardson, Rubio, Stern, Wahab
NOES: Ochoa Bogh, Grove, Strickland
NO VOTE RECORDED: Dahle

SENATE PRIV., DIGITAL TECH. & CONS. PROT. COMMITTEE: 7-2, 4/20/26
AYES: Cabaldon, Gonzalez, McNerney, Padilla, Reyes, Umberg, Wiener
NOES: Jones, Seyarto

SENATE APPROPRIATIONS COMMITTEE: 5-2, 5/14/26
AYES: Cervantes, Cabaldon, Grayson, Richardson, Wahab
NOES: Seyarto, Dahle

SUBJECT: Energy: Utility Infrastructure AI Safety, Oversight, and Workforce Protection Act

SOURCE: California Federation Labor Unions, AFL-CIO
California School Employees Association, AFL-CIO
Engineers and Scientists of California, Local 20, IFPTE
Utility Workers Union of America, Local 132
Utility Workers Union of America, Local 483
Utility Workers Union of America, Local 522

DIGEST: This bill (1) requires the California Public Utilities Commission (CPUC) to adopt standards by January 1, 2020, for electrical and gas corporations' use of artificial intelligence (AI) models; (2) specifies certain requirements that must be included in the CPUC's standards for utility AI models, including but not limited to, requirements for human review of AI models used in certain utility

operations; (3) requires the CPUC to direct electrical and gas corporations to file plans with the CPUC demonstrating compliance with the CPUC's AI standards and authorizes the CPUC to prohibit a gas or electrical corporation's use of an AI model if the CPUC finds that the model's use would negatively impact the safe, reliable and affordable provision of utility services (4) requires the boards of Community Choice Aggregators (CCAs) and local publicly owned electric utilities (POUs) to adopt policies regarding their use of AI models that are consistent with standards adopted by the CPUC.

ANALYSIS:

Existing law:

1) Establishes the CPUC, consisting of five members appointed by the Governor, and authorizes the CPUC to fix rates and establish rules for public utilities. (Article XII of the California Constitution)

2) Requires the CPUC to establish rules for a public utility and revise those requirements through an order or rule whenever the CPUC, after a hearing, finds that existing rules, practices, equipment, appliances, facilities or service of any public utility or manufacturing, distribution, transmission, storage or supply methods employed by the public utility are unjust, unreasonable, unsafe, improper, inadequate, or insufficient. (Public Utilities Code §761)

3) Requires every public utility to establish and maintain adequate, efficient, just, and reasonable services, instruments, equipment and facilities needed to promote the health, safety and comfort of customers, employees, and the public. Any rule adopted by a public utility regarding its services or rates for the public must be just and reasonable. (Public Utilities Code §451)

4) Establishes the California Wildfire Safety Advisory Board, consisting of seven members to advise utilities and the Office of Energy Infrastructure Safety (OEIS) on utility wildfire safety issues, as specified. (Public Utilities Code §326.1)

5) Establishes the OEIS in the Natural Resources Agency to oversee electrical corporations' compliance with wildfire safety requirements, as specified. (Government Code §15470 et. seq.)

6) Establishes the CEC, consisting of five members appointed by the Governor, and specifies the duties of the CEC. Every two years, the Governor must designate a chair and vice chair from the CEC's membership. The CEC must appoint a public adviser every three years to carry out certain public engagement duties. (Public Resources Code §25200 et. seq.)

7) Defines an "artificial intelligence model" as an engineered or machine-based system that varies in its level of autonomy and that can, for explicit or implicit objectives, infer from the input it receives how to generate outputs that can influence physical or virtual environments. Existing law establishes requirements for large developers of artificial intelligence models. (Business and Professions Code §22757.10 et. seq.)

This bill:

1) Defines an "artificial intelligence model" as an engineered or machine-based system that varies in its level of autonomy and that can, for explicit or implicit objectives, infer from the input it receives how to generate outputs that can influence physical or virtual environments.

2) Requires the CPUC to adopt standards by January 1, 2028, for an electrical or gas corporation's use of AI models. This bill specifies that the CPUC's AI standards must do at least the following:

    a) Establish disclosure requirements for an electrical corporation or gas corporation to specify the types of AI models it uses and how those models are used by the electrical corporation or gas corporation.
    b) Require an electrical corporation or gas corporation to identify the employee job classifications impacted by any planned implementation of an AI model and efforts taken to ensure effective education, training, and retention for impacted employees.
    c) Identify steps an electrical corporation or gas corporation shall take to ensure that AI models do not impact utility safety, affordability, and reliability.
    d) Establish requirements for human review and approval for the deployment and use of AI models to ensure that electrical and gas services are safe, affordable, and reliable, including requirements for the placement of human review in the deployment of AI models.
    e) Ensure that deployment of artificial intelligence models do not displace utility employees needed for the safe, affordable, and reliable provision of electrical and gas services, as specified.

f) Establish requirements for human review and approval of any artificial intelligence that is high risk, safety sensitive, or would have a material operational impact.

3) Authorizes the CPUC to prohibit an electrical or gas corporation's use of an AI model if the commission finds that deployment of the model would negatively impact the provision of safe, affordable, and reliable electrical or gas service.

4) Requires the CPUC to direct an electrical or gas corporation to file a plan demonstrating compliance with the CPUC's AI model standards. The CPUC may request records it deems necessary to verify compliance with its standards.

5) Requires the CPUC to ensure that OEIS can review any electrical corporation's AI model plan to ensure that an AI model used for wildfire mitigation purposes is consistent with the electrical corporation's wildfire mitigation plan.

6) Require the CPUC to ensure that impacted bargaining units are consulted in the development plans filed at the CPUC regarding utilities' use of AI models.

7) Requires each CCA and POU to adopt a policy regarding their respective use of AI models. This bill requires CCA and POU policies to be consistent with the standards adopted by the CPUC.

Background

How do utilities use AI? Utilities' use of generative AI is nascent; however, some utilities are seeking ways to develop AI tools that are trained to help with specific power sector needs. Diablo Canyon Power Plant partnered with Atomic Canyon to deploy a generative AI system that uses the Nuclear Regulatory Commission database and the Oak Ridge National Laboratory's Frontier supercomputer to search data from Diablo Canyon's files to synthesize information for federal regulatory filings. This use of AI is the first commercial use of generative AI at any nuclear power facility in the nation. The use of AI can have benefits; however, some recent demonstrations of AI have also shown that generative AI can also lead to unsafe and erroneous decisions. Several California gas and electric utilities are starting to integrate AI into efforts to prevent and respond to wildfires. Electric utilities have turned to AI solutions to obtain better data identifying infrastructure with greater risks for igniting wildfires and use of cameras with AI data analysis to identify potential fires before they grow. Early results from the use of these AI wildfire mitigation tools indicates that the tools are successful at reducing wildfire

ignitions associated with utility infrastructure and provide early notifications to emergency personnel when fires are spotted.

Multiple agencies oversee utility safety requirements, but few standards exist for AI utility use. While AI can provide substantial resources to improve utility safety and reliability, AI can also pose risks to the energy sector. Biases in algorithms or poor AI training can lead to systemically reproduced biased and erroneous outcomes. Superintelligent AI systems are capable of creating systems that lack sufficient human input to stop harmful outcomes. The CPUC is one of several state and federal agencies that have adopted rules setting forth specific requirements for certain utility safety measures. Multiple CPUC general orders establish requirements for safe installation and operation of electric and natural gas infrastructure. Under existing utility safety rules, utilities under the CPUC's jurisdiction must report certain critical incidents to the CPUC within two working hours or four non-working hours if the incident resulted in death, hospitalization, major news coverage, significant property damage, or prompted an investigation regarding potential utility wildfire ignition. Additionally, CPUC General Order 166 (GO 166) establishes standards for electric utilities' operation during emergencies and disasters, which includes mandatory reporting regarding major power outages. While the CPUC has adopted specific requirements regarding safety measures for electrical and gas infrastructure, the CPUC has not adopted specific safety requirements for utilities' use of AI when operating electrical and gas infrastructure. The CPUC generally has broad authority to regulate utilities to ensure the provision of safe and reliable gas and electric service at just and reasonable rates; however, it is unclear if CPUC rules have been sufficiently reviewed and updated to reflect the use of AI in utility operations. It is also not clear whether the CPUC has information from all the utilities regarding the types of AI models used. While some AI models may pose limited risks, other AI models that use more intelligent generative AI functions can pose greater risks by amplifying biases and creating data "hallucinations." This bill would expand disclosures of electrical and gas utilities' use of AI models and expand the CPUC's authority to regulate these utilities' use of AI.

Bill requires the CPUC to regulate human review of utilities' AI operations. This bill requires the CPUC to establish standards for utilities' AI models, and this bill requires those standards to include specific provisions regarding human review of AI processes in utility operations. Specifically, this bill requires the CPUC to establish requirements for human review during the deployment of AI models. AI models may differ widely from each other and may be developed for highly customized purposes. To effectively evaluate the appropriate level of human

review for each use of AI models in the energy utility sector, the CPUC may need to evaluate AI deployment usage on a case-by-case basis to ensure that AI used for utility safety and reliability is not impeded while preventing harmful AI outcomes.

Related/Prior Legislation

SB 947 (McNerney) of 2026, limits employers' use of ADS in certain employment decisions and requires the Labor Commissioner to oversee employers' use of ADS in workplace decisions. The bill is pending in the Senate.

SB 833 (McNerney) of 2025, establishes requirements for human oversight over AI systems used with critical infrastructure. The bill also defined AI as including ADS. The bill is pending in the Assembly.

SB 420 (Padilla) of 2025, regulates the use of high-risk ADS, including requiring ADS developers and deployers to performing impact assessments on their systems. The bill establishes the right of individuals to know when an ADS has been used, details about the systems, and an opportunity to appeal ADS decisions, where technically feasible. The bill is pending in the Assembly.

SB 53 (Weiner, Chapter 138, Statutes of 2025) required large developers of certain AI tools to adopt protocols to address catastrophic risks associated with AI, disclose certain information about their AI models, and submit specified reports to Office of Emergency Services.

SB 7 (McNerney) of 2025, would have established limitations and notices for the use of ADS in employment decisions. The bill was vetoed.

AB 1018 (Bauer-Kahan) of 2025, would have regulated the use of ADS. It established obligations on developers and deployers of ADS designed or used to make or facilitate "consequential decisions. The bill is on the Senate Inactive File.

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

According to the Senate Appropriations Committee, ongoing costs likely in the high hundreds of thousands of dollars annually (ratepayer funds) for the CPUC to adopt standards governing the use of AI models in utility operations, review and evaluate utility AI safety plans for compliance, establish oversight and enforcement mechanisms to ensure adherence to adopted standards, and assess and

monitor any impacts to the provision of safe, affordable, and reliable electrical or gas service.

SUPPORT: (Verified 5/14/26)

California Federation Labor Unions, AFL-CIO (Co-source)
California School Employees Association, AFL-CIO (Co-source)
Engineers and Scientists of California, Local 20, IFPTE (Co-source)
Utility Workers Union of America, Local 132 (Co-source)
Utility Workers Union of America, Local 483 (Co-source)
Utility Workers Union of America, Local 522 (Co-source)
California Alliance for Retired Americans
Oakland Privacy

OPPOSITION: (Verified 5/14/26)

Burbank Water and Power
California Chamber of Commerce
California Municipal Utilities Association
Imperial Irrigation District
San Diego Gas and Electric Company
Southern California Gas Company
Southern California Public Power Authority

ARGUMENTS IN SUPPORT: According to the author:

> AI has the potential to improve efficiency in California's power grid and quicken response to wildfires and life-threatening dangers, but AI also presents significant risks. AI can hallucinate – make mistakes that could pose serious threats. Without human oversight, unchecked AI could trigger catastrophic equipment failures, service outages for thousands of residents, or life-threatening safety hazards. California can't afford to outsource the safety of our power grid to unproven, unmonitored algorithms. California also needs to protect workers in the power sector from widespread job displacement. SB 1011 is a commonsense solution that will reduce risk by ensuring that AI use supports human decision-making rather than replacing it.

ARGUMENTS IN OPPOSITION: Opponents argue that the CPUC is not equipped to regulate AI models and regulations adopted by the CPUC may impede

the use of AI models that are beneficial in the utility sector. In opposition, the California Chamber of Commerce states:

> The bill's definitions of "artificial intelligence model" is so broad that the bill likely sweeps in a wide range of longstanding utility systems, including distribution and outage management systems, powerplant control systems, and platforms used to manage distributed energy resources. In doing so, the bill risks inadvertently capturing decades of standardized utility technology already embedded in day-to-day grid and natural gas system operations.

The Southern California Public Power Authority (SCPPA) opposes this bill, arguing that requiring POUs to adopt policies similar to those imposed by the CPUC on IOUs would extend the CPUC's regulatory powers to locally-governed POUs. In opposition, SCPPA states:

> It should also be noted that SB 1011 requires all POUs to develop these CPUC policies, regardless of whether the utility is actually using AI models or already has an existing policy governing its use of AI models. In these cases, the bill is an unnecessary or duplicative paper exercise that adds an undue administrative burden on not-for-profit POUs that operate on a local government budget. The utilities represented by SCPPA are public agencies, operated by public employees, and governed by locally elected officials. Utility operational decisions are guided by what is in the best interest of the public they serve. This includes reliability, safety and cost.

Prepared by: Sarah Smith / E., U. & C. / (916) 651-4107
5/19/26 12:47:55

****** END ******