

Date of Hearing: July 1, 2024

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY

Cottie Petrie-Norris, Chair

SB 1003 (Dodd) – As Amended June 20, 2024

**SENATE VOTE:** 39-0

**SUBJECT:** Electrical corporations: wildfire mitigation plans

**SUMMARY:** Requires electrical corporations to take into account both the time required to implement an action and the amount of risk reduced for the cost of a given action as part of the utility's wildfire mitigation plan (WMP).

Specifically, **this bill:**

- 1) Makes several findings and declarations related to: wildfire risks posed by infrastructure owned by electrical corporations; wildfire mitigation as a cost driver on electric utility bills; and the need to balance the time value and cost-effectiveness of wildfire mitigation measures into wildfire safety planning and cost-approval processes.
- 2) Requires an electrical corporation, also known as an investor-owned utility (IOU), to minimize the risks its electrical lines and equipment pose in contributing to catastrophic wildfires, taking into account both the time required to implement the proposed mitigations and the amount of risk reduced for the cost and risk remaining.
- 3) Revises the requirements of the WMP to, among other things:
  - a. Require the description of the preventative wildfire mitigation strategies and programs to be adopted by the IOU to also include consideration of their cost-effectiveness – calculated consistent with the direction provided by the California Public Utilities Commission (CPUC) in its Safety Model Assessment Proceedings – and the relative reduction of exposure to wildfire risk caused by variations in implementation timelines for the mitigation measures.
  - b. Require the list of all wildfire risks and drivers for those risks in an IOU's service territory to also include particular risks and risk drivers associated with the speed with which wildfire mitigation measures can and will be deployed by an IOU.
  - c. Require the description of actions the IOU takes to ensure safety, reliability, and resiliency of its system to also include consideration of the cost and time required to achieve those benefits.
  - d. Require the presentation of certain cost-effectiveness measures adopted by the CPUC.
  - e. Require, in its description of where and how the utility considered undergrounding, the IOU to explain the reasonableness, including consideration of cost-effectiveness, reliability impacts, and time required for installation compared to other alternatives, of the selected mitigation measure.

**EXISTING LAW:**

- 1) Establishes the Wildfire Safety Division (WSD) within the CPUC and transfers, by July 1, 2021, all functions of the WSD to the Office of Energy Infrastructure Safety (OEIS) within the Natural Resources Agency. (Public Utilities Code § 326 and Government Code § 15470-15476)
- 2) Requires each IOU 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. Additionally, requires each IOU to annually prepare and submit to OEIS a WMP for review and approval. Requires the WMP to include a description of preventative strategies and programs to minimize the risk of catastrophic wildfire, including consideration of dynamic climate change risk; a description of the metrics used to evaluate the plan's performance and underlying assumptions for the use of those metrics; and a list that identifies, describes, and prioritizes all wildfire risks and drivers of those risks throughout the IOU's service territory. (Public Utilities Code § 8386)
- 3) Requires OEIS to develop and recommend to the CPUC performance metrics to achieve maximum feasible risk reduction to be used to develop the WMP and evaluate an IOU's compliance with that plan. Defines "maximum feasible" to mean capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. (Public Utilities Code § 326 and Government Code § 15475)
- 4) Requires the CPUC to establish an expedited utility distribution infrastructure underground program open to a large IOU that submits to the OEIS an undergrounding plan, as specified. Requires OEIS to approve only those plans that demonstrate a substantial increase in electrical reliability and a substantial reduction in wildfire risk. Upon approval by the OEIS, requires the IOU to submit to the CPUC the plan and an application for review that includes:
  - a. Any substantial improvements in safety risk and reduction in costs compared to other hardening and risk mitigation measures over the duration of the plan; the cost targets;
  - b. The cost targets, at a minimum, that result in feasible and attainable cost reductions as compared to the IOU's historical undergrounding costs;
  - c. How the cost targets are expected to decline over time due to cost efficiencies and economies of scale; and
  - d. A strategy for achieving cost reductions over time.

Additionally, requires a utility with an approved plan to file a progress report with the OEIS and CPUC every six months and hire an independent monitor, selected by the OEIS, to review and assess the utility's compliance with its plan. Authorizes the CPUC to assess penalties should a utility fail to cure a deficiency identified by the monitor. (Public Utilities Code § 8388.5)

**FISCAL EFFECT:** According to the Senate Committee on Appropriations, this bill could incur unknown, potentially significant costs for OEIS to review and approve WMPs based upon an accurate assessment of cost-efficiency and with possible variations in implementation timelines. The CPUC estimates ongoing costs of \$210,000 annually (ratepayer funds) to review any new cost-efficiency data that might be submitted with a future WMP from the six IOUs, as well as to ensure each utility correctly identifies the distinct financial accounting mechanisms used to track WMP implementation costs, avoiding any potential overlap in venue, among other things. Additionally, this bill could have an unknown potential fiscal impact on the state as an electric utility ratepayer.

## **BACKGROUND:**

*Electric utility-related wildfires* – California has experienced some of the most devastating and costly wildfires over the past decade. Spurred by climate change, the risks for wildfires have increased with larger populations of dead trees – which serve as fuel – from extended drought conditions and bark beetle infestations,<sup>1</sup> more frequent extreme heat and high wind events, and growing encroachment of development into forested and high-fire threat areas.<sup>2</sup> Electrical equipment, including downed power lines, arcing, and conductor contact with trees and grass, can act as ignition sources. Of the 20 most destructive wildfires since 2015, power lines have caused six.<sup>3</sup> Utility-caused fires are often more destructive than those resulting from other sources because many occur in remote areas during high wind events, and those same weather conditions cause the fire to spread quickly, making it difficult to control. In response, the Legislature has passed many statutes to require electric utilities to mitigate the risk of their equipment and operations from igniting wildfires. Additionally, electric utilities shoulder the property liability costs from wildfires ignited by their equipment through the application of inverse condemnation.

*A regulatory paradigm for risk evaluation* – The CPUC oversees the development of the risk framework each IOU uses as the basis for analyzing their risks. The risk framework involves the submission of Risk Assessment and Mitigation Phase (RAMP) reports by IOUs that document an initial quantitative and probabilistic assessment of an IOU’s top safety risks, plans to mitigate those risks, and estimates of costs associated with the mitigation measure. Occurring in 4-year cycles staggered before a utility’s respective general rate case (GRC) proceeding, RAMP proceedings also provide a public forum for stakeholders to provide comment on a utility’s approach to reducing safety risk and offer alternatives prior to a project spending request being formally submitted for funding authorization as part of a GRC application. The framework also includes the Safety Model Assessment Proceeding (S-MAP), which establishes risk assessment expectations and policies, in part, by comparing approaches, innovations, and capacities among California’s four large electric IOUs in their individual responses to RAMP obligations. The goal of the S-MAP is to make utility decision-making about weighing and mitigating safety risks more quantitatively rigorous, transparent, and objective. The S-MAP continually informs and updates RAMP. Together, the RAMP and S-MAP make up the risk-based decision-making framework that the CPUC uses to inform each IOUs’ GRC and assess whether the utilities are

---

<sup>1</sup> Vox; “Beetles, drought, and fires are a ticking time bomb in the West”; July 2021; <https://www.vox.com/2021/7/29/22594137/bark-beetles-wildfire-california-oregon-climate-change>.

<sup>2</sup> Stanford News; “The shifting burden of wildfires in the United States”; January 2021; <https://news.stanford.edu/2021/01/12/shifting-burden-wildfires-united-states/>.

<sup>3</sup> State Auditor; “Electrical System Safety: California’s Oversight of the Efforts by Investor-Owned Utilities to Mitigate the Risk of Wildfires Needs Improvement”; March 2022.

appropriately and reasonably directing resources – the costs of which can be recovered through ratepayers if approved by the CPUC – to mitigating wildfire and safety risks.

*Wildfire mitigation plans* – In addition to the RAMP and S-MAP processes, wildfire risks and the mitigation measures an IOU proposes to reduce those risks undergo another special review process via the WMP. Initiated by the enactment of SB 1029 (Hill, Chapter 598, Statutes of 2016), the first substantive WMPs were filed with and approved by the CPUC in June 2019 through the rulemaking process. The IOUs were required to file progress reports regarding the implementation of their 2019 plans and the CPUC required the IOUs to take formal actions and file reports to the CPUC if concerns about the effectiveness of any wildfire mitigation action proposed within the WMP arose. Later in 2019, the Legislature revised the scope of the WMP to cover at least a three-year period,<sup>4</sup> and divided oversight of the plans between OEIS (originally the Wildfire Safety Division housed under the CPUC) and the CPUC.<sup>5</sup> OEIS is tasked with assessing safety; they evaluate if proposed actions in the WMP achieve the maximum feasible wildfire risk reduction.<sup>6</sup> The CPUC is then tasked with reviewing cost; they evaluate if the cost of implementing each mitigation effort in the WMP is just and reasonable for purposes of cost recovery. The CPUC also has enforcement authority with regard to an IOU’s progress and performance on their WMPs.

*Tradeoffs abound* – In February 2024, researchers at the University of California, Berkeley’s Energy Institute at Haas published a report examining the cost-effectiveness, wildfire risk reduction, and impacts on reliability of various wildfire mitigation measures – including system hardening, operational measures, and vegetation management – recently deployed by Pacific Gas and Electric (PG&E).<sup>7</sup> They found that the deployment of fast-trip settings<sup>8</sup> on high-hazard days is by far the most cost-effective ignition reduction measure, but can leave an estimated 28% of ignition risk unmitigated and risk outage impacts to customers. Enhanced vegetation management (approximately \$250,000 per mile) is less effective at mitigating risk, and significantly more expensive than fast-trip settings. The researchers also found that undergrounding power lines (approximately \$3.7 million per mile), despite the higher investment cost of the strategy itself and the additional costs utilities receive as a rate of return on infrastructure, is more cost-effective than vegetation management, primarily because undergrounding effectively eliminates ignition risk. Yet, vegetation management comprises the largest non-fuel operations and maintenance cost for utilities today.<sup>9</sup>

*Rising utility bills from wildfire mitigation efforts* – Since 2013, rates have increased across all three IOUs and exceeded the assumed rate of inflation.<sup>10</sup> Californians currently pay some of the highest utility rates in the country. In March 2023, California had the seventh highest average

---

<sup>4</sup> AB 1054 (Holden, Chapter 79, Statutes of 2019)

<sup>5</sup> AB 111 (Committee on Budget, Chapter 81, Statutes of 2019)

<sup>6</sup> “Maximum feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. Public Utilities Code § 326

<sup>7</sup> Energy Institute at Haas, UC Berkeley; “Risk-Cost Tradeoffs in Power Sector Wildfire Prevention”; February 2024.

<sup>8</sup> Fast trip settings increase the sensitivity of protective devices and equipment that trigger automatic power line outages when a fault is detected.

<sup>9</sup> T&D World; “How Risk-Based Vegetation Management Program Slashes Costs”; January 2023;

<https://www.tdworld.com/vegetation-management/article/21258571/how-risk-based-vegetation-management-program-slashes-costs>

<sup>10</sup> CPUC; “Utility Costs and Affordability of the Grid of the Future: An Evaluation of Electric Costs, Rates, and Equity Issues Pursuant to P.U. Code Section 913.1”; May 2021.

electricity rates and the tenth highest average residential natural gas prices of any of the states.<sup>11</sup> According to the CPUC, one of the key drivers putting upward pressure on customers' electric rates since 2021 is wildfire mitigation work.<sup>12</sup> Over the next several years, wildfire risk mitigation costs are projected to continue their upward trend, from both the recovery of past incurred costs and of future projected costs. While these costs encompass a wide variety of wildfire risk costs, including vegetation management efforts and wildfire liability insurance coverage, the high costs of undergrounding, which contributed to hiking the average utility bill by more than \$30 a month for PG&E customers earlier this year, are being acutely felt by ratepayers.<sup>13</sup> Another rate increase for customers is expected soon, after the CPUC authorized PG&E's most recent GRC, which included the undergrounding of 1,230 miles of electric distribution lines.

#### COMMENTS:

- 1) *Author's statement.* According to the author, "While some IOUs contend that undergrounding cable is the safest way to reduce the risk of igniting new wildfires, there are alternatives, such as insulating existing utility cable. Insulating wires, for example, costs an estimated \$800,000 per mile, compared to \$3 million per mile for undergrounding and may be as, or nearly as effective in preventing wildfire ignitions as undergrounding, and achievable in far less time. While the current IOU wildfire mitigation plan review process does assess the amount of wildfire risk reduction from different strategies, relative to cost, it does not consider the speed with which different strategies can be delivered. Safety today has a different value (time value) than safety in 3 or 10 years. Failure to take this factor into account may result in today's utility customers paying higher electric utility rates without commensurate benefit from wildfire risk reduction."
- 2) *Muddying the waters.* Through legislative efforts, the assessment of WMPs is bisected between OEIS, who evaluates the safety of proposed projects, and the CPUC, who evaluates the costs to implement safety projects. They work in tandem: the WMP requires approval by OEIS before it is evaluated by the CPUC. Since these two entities have different and distinct priorities, often in practice the CPUC authorizes a modified version of the OEIS-approved WMP. For example, in PG&E's most recent WMP, OEIS approved the utility's plan to underground 2,100 miles from 2023 to 2026 which would result in reducing ignition risk and de-energization events by approximately 99% in the most threatened areas.<sup>14</sup> Subsequently, PG&E requested rate recovery in their 2023-26 GRC for 2,000 miles of undergrounding – close to the estimation in their approved WMP – at an estimated cost of \$5.9 billion. The CPUC then only authorized 1,230 miles of undergrounding, opting to authorize covered conduction installation for the other 778 miles, at a forecasted expenditure of \$4.7 billion together. This tension between safety and cost, and the different outcomes inherent in balancing the two, is highlighted by these recent decisions regarding PG&E's undergrounding plan.

---

<sup>11</sup> State Auditor; "Electricity and Natural Gas Rates: The California Public Utilities Commission and Cal Advocates Can Better Ensure That Rate Increases are Necessary"; August 2023.

<sup>12</sup> CPUC; 2023 Senate Bill 695 Report; May 2023.

<sup>13</sup> NBC Bay Area; "New PG&E rate hike approved by CPUC"; March 2024; <https://www.nbcbayarea.com/news/local/pge-rate-hike-cpuc/3475233/>

<sup>14</sup> PG&E; 2023-2025 Wildfire Mitigation Plan; Page 345 and Table 8.1.2-2; March 2023.

This bill would require the IOUs to evaluate and explain the timeliness and cost-effectiveness of mitigation measures in their WMPs. Supporters of this bill motivate the need for this extra information on mitigation efforts by citing utility undergrounding projects as a source of concern. They contend that waiting several years for undergrounding projects does not reduce the risk of wildfire ignitions quickly enough and comes with too high a price tag as compared to other measures that can be deployed sooner. However, this seemingly presumes that timeliness and cost-effectiveness go hand-in-hand. This may not be the case. Vegetation management is timelier but less cost-effective than undergrounding, according to the report mentioned above. Additionally, the utilities are becoming more efficient with undergrounding: PG&E reported undergrounding 180 miles in 2022, more than double the amount they undergrounded in 2021 (73 miles);<sup>15</sup> and they anticipate achieving more efficiencies with undergrounding in the coming years.<sup>14</sup> The proposal in this bill also calls into question how the omission of other factors, such as reliability and social impact, may impact OEIS' decision-making. The balancing of safety, timeliness, and cost-effectiveness might favor the use of operational mitigation measures such as fast-trip settings and public safety power shutoffs, which are the most cost-effective and quickest to deploy, but would lead to unplanned power outages, impacting reliability and posing immense consequences for public health and commerce.

It is unclear to the committee how the function of OEIS would remain distinct from the CPUC should the office be required to consider cost-effectiveness in its evaluation of WMP actions. Such a direction would be counter to the intent of previous legislative efforts, which sought to establish in OEIS a regulator whose sole focus and mission is safety. However, this bill does not obligate OEIS to select wildfire mitigation actions solely on the basis of cost, nor even to act on the additional information required by this bill as part of the WMP. Rather, it requires the IOUs to use timeliness and cost-effectiveness as elements in their justification for selecting certain mitigation measures in their WMPs. The IOUs already report cost values as part of their WMP filing – either risk-spend efficiency or cost-benefit ratio metrics. OEIS reviews the proposed mitigations on the basis of what will minimize system risk. This bill does not change this fundamental structure of OEIS, but instead may provide some additional clarity into how the IOUs select certain mitigation strategies over others, and allow both OEIS and the CPUC to appropriately weight the IOUs' proposals.

### 3) *Related legislation.*

AB 2054 (Bauer-Kahan) would, among other provisions, require all proposed IOU wildfire spending to include a cost-benefit analysis with at least one credible alternative. Status: *Set for hearing on July 2<sup>nd</sup>* in the Senate Committee on Energy, Utilities, and Communications.

---

<sup>15</sup> PG&E; "PG&E Hits Significant Milestone: In a Single Year, the Most Powerlines Have Been Put Underground and Energized, Serving and Protecting Customers"; November 2023; <https://investor.pgecorp.com/news-events/press-releases/press-release-details/2023/PGE-Hits-Significant-Milestone-In-a-Single-Year-the-Most-Powerlines-Have-Been-Put-Underground-and-Energized-Serving-and-Protecting-Customers/default.aspx>

4) *Prior legislation.*

SB 884 (McGuire) required the CPUC to establish an expedited electric utility distribution infrastructure undergrounding program for large IOUs. Required the OEIS, followed by the CPUC, to approve or deny the plan, and required additional actions and reports. Status: Chapter 819, Statutes of 2022.

AB 2889 (Zbur, 2022) would have required IOUs to include, as part of their 2023 WMP, a multiyear undergrounding plan covering at least 7 but no more than 10 years and including methodology for identifying and prioritizing circuits for undergrounding, targets for the undergrounding work, a workforce development plan, and a description of how the undergrounding will reduce the scope and extent of above-ground activities. Status: Held – Assembly Committee on Appropriations.

SB 533 (Stern) required that an IOU's WMP identify circuits that have frequently been de-energized to mitigate the risk of wildfire and the measure taken, or planned to be taken, by the IOU to reduce the need for, and impact of, future de-energization of those circuits. Status: Chapter 244, Statutes of 2021.

SB 70 (Nielsen) required each IOU to additionally include a description of where and how the utility considered undergrounding electrical distribution lines within those areas of its service territory identified to have the highest wildfire risk in a specified fire threat map. Status: Chapter 400, Statutes of 2019.

AB 1054 (Holden), among other provisions, authorized IOUs to establish a memorandum account to track costs incurred to implement the WMP, and to file an application for recovery of any costs accounted in the memorandum account but not yet authorized for recovery in a GRC application. Required the CPUC to consider whether the cost of implementing each IOU's WMP is just and reasonable in its GRC application, and to review the costs in the memorandum accounts and disallow recovery of those costs the commission deems unreasonable. Status: Chapter 79, Statutes of 2019.

AB 111 (Committee on Budget) created the OEIS within the Natural Resources Agency, under the supervision of a director appointed by the Governor, to oversee each IOU's WMP. Status: Chapter 81, Statutes of 2019.

SB 901 (Dodd) required a more detailed list of information that a utility must provide in their WMP, including inspection and maintenance, vegetation management, system hardening, de-energization, and metrics for evaluation, among others. Status: Chapter 626, Statutes of 2018.

SB 1028 (Hill) required IOUs to file annual WMPs and required the CPUC to review and comment on those plans. Status: Chapter 598, Statutes of 2016.

**REGISTERED SUPPORT / OPPOSITION:****Support**

California Farm Bureau Federation  
Clean Power Campaign

Defenders of Wildlife  
Junior Philanthropists Foundation  
Pacific Forest Trust  
Planning and Conservation League  
Sierra Forest Legacy  
Sonoma Clean Power  
The Utility Reform Network (TURN)  
Usgbc Los Angeles

**Opposition**

None on file.

**Analysis Prepared by:** Kathleen Chen / U. & E. / (916) 319-2083