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Wildfire Risk: Review of Utility Industry Trends

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DISCLAIMER

- This content is for initial information purposes and is not advice.
- The descriptions are general summaries and may not reflect the full detail or latest information.

Outline

- **Introduction**
  - Scope of review
  - Wildfire risk to utilities: context and key concepts
- **Wildfire risks to utility business model and provision of service**
  - Types of risk
  - Notable trends in wildfire-driven business risk
- **Trends in actions to address wildfire risk**
  - Utility actions to mitigate risk
  - Legislative trends related to utility wildfire risk
- **Additional topics**
- **Questions for future research**

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Introduction

Scope of review

- The aim of this review is to identify business-related impacts from wildfire on electric utilities and the responses from the electric utility industry, energy regulatory agencies, and stakeholders in utility credit and financing.
- Sources reviewed include academic literature, grey literature, regulatory documents, credit rating actions, popular press articles, and utility-prepared planning documents.
- This review identified several relevant pieces of state legislation, and a legislative review was subsequently incorporated into this effort. The scope of the legislative review included:
  - Laws from 2018* to 2025 and proposed legislation for the 2025 session.
  - Legislation and laws with relating clauses for wildfire, wildfire mitigation planning, wildfire liability, wildfire damages, and wildfire funds for electric utilities.
- Emphasis was placed on recent sources to try to provide the most up-to-date review possible. Legislative findings are current as of June 30, 2025.

*2018 was chosen as a start date because the first comprehensive legislation on utility wildfire mitigation was passed in 2018. Oregon 2013 law is also included in this scope because later Oregon law built upon it.

Wildfire poses a significant and growing risk to the utility business model

- **Wildfires across the Western United States—and, increasingly, nationwide—are increasing in frequency, destructiveness, and cost. The risks and costs associated with wildfire mitigation, liability, and recovery are creating a direct feedback loop with utility business risks. This could pose an existential threat to the utility business model.**
- These wildfire-driven financial risks are present for **all types of electric utilities**, including investor-owned, cooperative, and public.
- Utilities have in some cases **already been held liable for significant wildfire-related damages** found to be caused by their equipment, a dynamic that notably led to Pacific Gas & Electric (PG&E)'s 2019 bankruptcy.
- In addition to direct costs related to wildfire damages to utility or third-party property, actual or anticipated damages can create a **cascading cycle of increased costs**, including impacts to insurance cost and even the availability of commercial insurance to utilities; utility credit ratings; and cost of capital.


'The Biggest Existential Threat': NW Utilities Pursue Legislative Solutions to Wildfire Risks

by Greg Mason Feb 4, 2025


CNBC MARKETS BUSINESS INVESTING TECH POLITICS VIDEO INVESTING CLUB PRO LIVESTREAM

Electric utilities face billions in wildfire liability with aging power lines risking another catastrophe

PUBLISHED MON, AUG 28 2023-3:18 PM EDT | UPDATED MON, AUG 28 2023-4:12 PM EDT

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Costly wildfires imperil utilities accused of causing the spark

Southern California Edison is the latest large power company destabilized by its alleged role in igniting fires.

January 19, 2025


NEWS

PowerXchange Panel: Wildfire Threat Has Become National Issue

Published March 19, 2025 Author Erin Kelly Share

Wildfire poses a significant and growing risk to the utility business model

- As costs and risks associated with wildfire increase, **a critical question is how to fairly allocate these among different stakeholders,** including utility ratepayers, taxpayers, shareholders, property owners, and insurers.
- Wildfire costs and their associated feedback loops may **impact utilities' spending on other objectives,** exacerbating the potential for wildfire to be an existential risk.
- **Utilities nationwide are taking a wide range of actions** to mitigate physical and financial risk from wildfire. Some of these actions are mandated by state legislation, while others are voluntary actions driven by utilities.
- **Additional solutions may still be needed** to address the risk that wildfire poses to utilities.

Utilities are threatened by costly damages from wildfire impacts

- **Utilities face two main types of damages from wildfire impacts: direct damages to equipment and property, and liability from legal claims related to utility-caused damages to third parties.**
- While direct damages to a utility's own equipment can be significant, **third-party liability is typically a much greater financial concern** (Charles River Associates 2024, Kousky et al. 2018, S&P Global 2024).
  - The risk to utilities from third-party liability can be especially acute depending on states' liability frameworks; for example, California's inverse condemnation regime allows property owners to seek compensation for damage if the utility's equipment is the cause of ignition, regardless of utility negligence (Kousky et al. 2018).
  - Some other states have adopted or introduced legislation to establish negligence as the standard of liability or otherwise limit utility wildfire liability (see legislation review).
- **Utilities have already been impacted by significant damage claims. For example:**
  - In 2020, Pacific Gas and Electric settled through bankruptcy $25.5 billion in claims from 2017 and 2018 wildfires (Bloomberg 2020).
  - PacifiCorp estimates probable loss of $2.75 billion related to 2020 and 2022 wildfires; litigation is ongoing (Berkshire Hathaway Energy 2025).
  - In 2024, Hawaiian Electric Company and parent company HEI entered settlement agreements for $1.99 billion to resolve certain claims from the 2023 Maui fire and windstorm (Hawaiian Electric Company and HEI 2025).

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Utility risks

Categorizing wildfire business risks to utilities

- **Notable risks identified as key trends:**
  - Rising insurance costs and decreasing availability
  - Credit rating downgrades
  - Additional costs to access capital
  - Ratepayer impacts as a result of various risk factors

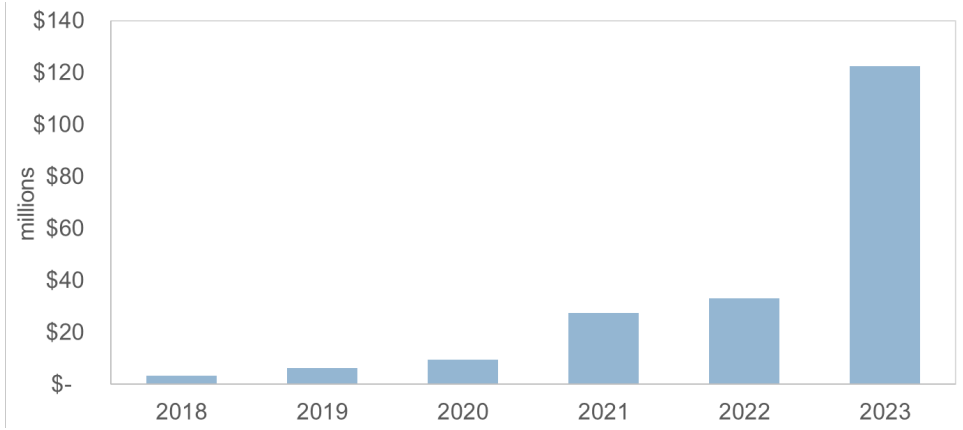
- **Second-order risks:**
  - Depletion of state wildfire funds
  - Ineffective implementation of wildfire mitigation plans

- **Additional risks of note:**
  - Direct costs of fire suppression, as well as equipment repair and restoration
  - Loss of life and property
  - Costs and risks of increased litigation
  - Regulatory cost recovery challenges
  - Erosion of customer and shareholder satisfaction
  - Stock volatility
  - Reputational harm

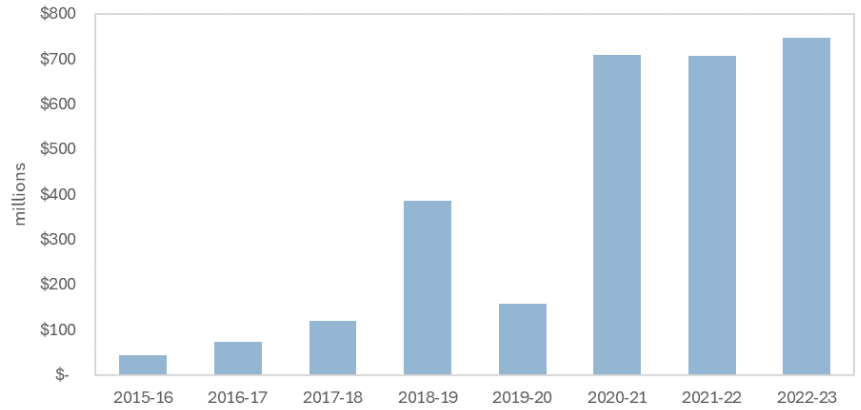
Many of these risks are identified directly by impacted utilities. Risks summarized here were compiled from Form 10-K filings of: Arizona Public Service Company 2025, Avista Corporation 2025, Berkshire Hathaway Energy Company 2025, Xcel Energy Inc. 2025, Pacific Gas and Electric 2025, Idaho Power 2025, in addition to the broader literature.

Utility insurance is increasing in cost and decreasing in availability

- **Liability insurance costs for some utilities have risen substantially in recent years:**



PacifiCorp 2024: ~35X increase from 2018 to 2023



PG&E 2023: ~16X increase from 2015-16 to 2020-21

- **Some utilities are having difficulty obtaining affordable insurance—or in some cases, any insurance—for the full potential liabilities of wildfire** (Chediak 2024, Wara et al. 2024).
- Both investor-owned and consumer-owned utilities have already been exposed to wildfire risk that exceeds their insurance coverage:
  - Hawaiian Electric Company, an investor-owned utility, had $165 million in annual general liability insurance at the time of the Lahaina incident in 2023; certain claims from that incident were settled in 2024 for $1.99 billion (Chediak 2023, Hawaiian Electric Company and HEI 2025).
  - Trinity Public Utility District, a public utility in California, has been unable to obtain liability insurance (Chediak 2024, S&P Global 2025).
- Lack of insurance coverage can limit a utility's ability to attract financing, impacting the utility's ability to invest in wildfire mitigation as well as other objectives (Chediak 2024).

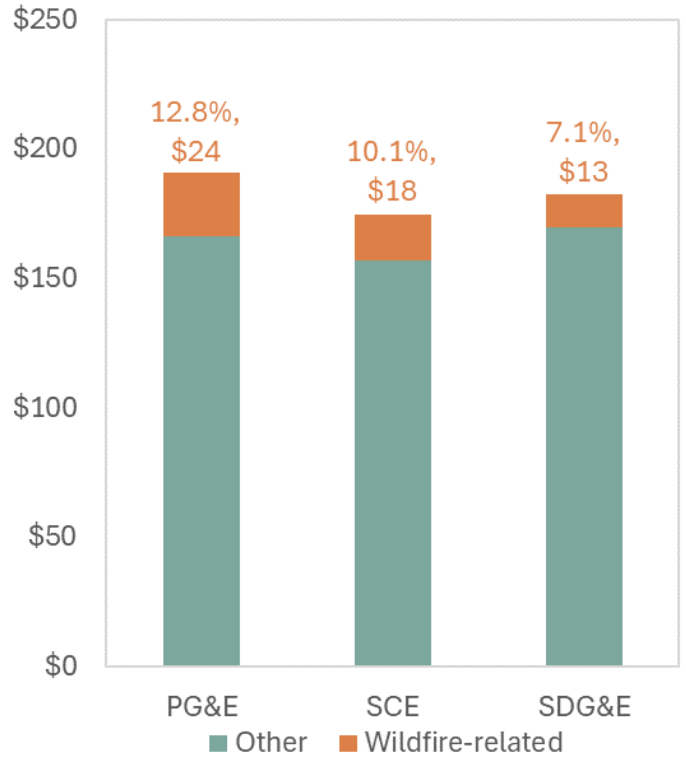
Wildfire risks can lead to utility credit rating downgrades

- **Credit rating actions can affect investor-owned utilities, municipal utilities, and cooperatives.** The industry average credit rating for investor-owned utilities is BBB+, generally considered to be "investment grade" and corresponding with consistent returns on investment and a relatively low cost of capital (Edison Electric Institute 2024).
- **Wildfire-related losses and liabilities can materially affect a utility's ability to meet financial commitments** and can therefore result in a credit rating downgrade or negative outlook. From 2020 through 2023, credit rating downgrades of North American regulated utilities outpaced upgrades by more than 3-to-1, in part due to increasing physical risk like wildfire (S&P Global 2024).
- A credit rating downgrade due to wildfire risk can **compound a utility's financial stress** by increasing the cost of borrowing and reducing access to capital (Kousky et al. 2019).
- A rating action for a subsidiary can also affect the parent company and other subsidiaries (S&P Global 2023).
- **Credit rating downgrades to utilities can occur relatively quickly after a wildfire, even before determination of liability.**
  - *Examples:*

Wildfire is increasing customer rates

- **Wildfire risk can lead to increased costs for utility customers in multiple ways:**
  - Utility spending on wildfire mitigation and risk coverage
  - Utility and customer contributions to state wildfire funds
  - Wildfire-related liabilities, including claims from property insurance companies seeking recovery from utilities through subrogation (Kousky et al. 2018)
  - Downgraded credit ratings and increased utility cost of capital, which can ultimately translate to higher ratepayer costs

Utility wildfire-related spending (including insurance and mitigation) accounted for ~7-13% of an average residential customer's monthly electricity bill in 2023 across California's investor-owned utilities



Data from California Public Utilities Commission 2024

Wildfire is increasing customer rates

- **Regulators of investor-owned utilities generally allow prudently-incurred costs to be recovered in customer rates.** The California Public Utilities Commission allowed customer recovery of $27 billion in utility wildfire-related costs from 2019-2023, representing ~7-13% of the average residential customer's monthly electricity bill in 2023 (California Public Utilities Commission 2024).
- Some investor-owned utilities are **requesting higher regulated returns on equity** to reflect increased risk from wildfire. In some cases, the utilities are **not receiving the full value of the requested increase** (Oregon Public Utility Commission 2024, FERC 2023, PG&E 2025). In Oregon, the regulator cited "evidence of mounting financial pressure on customers" as a reason for not increasing the allowed utility return on equity.
- **Regulatory *disallowance* of utility wildfire costs can also increase customer rates,** as it can increase the utility's cost of borrowing (Kousky et al. 2018, Wara et al. 2024).
- **Increasing wildfire costs can lead to increased rate pressure for all types of utilities, inviting tradeoffs.** Ratepayer recovery of wildfire costs directly impacts customers, while limits on cost recovery and return on investment may compromise utilities' ability to increase spending on wildfire mitigation and other objectives (S&P Global 2024, 2025; Wara et al. 2024, Lazo 2024).

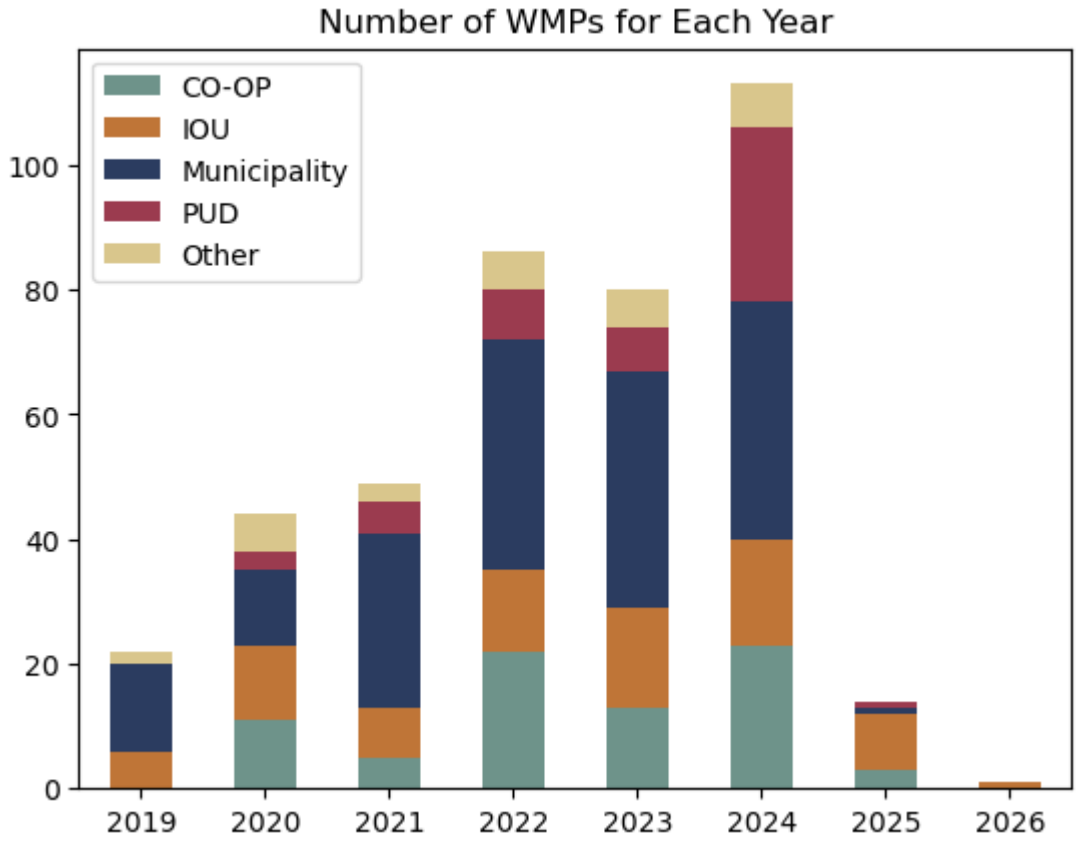
Utility actions

Utilities are taking action to mitigate and adapt to wildfire-driven risks

- Utilities are adopting a range of actions to mitigate and, in some cases, adapt to the risks wildfires pose to utility operations, provision of service, cost of business, and ratepayer affordability. Some of these steps are mandated by state legislation, as discussed in more detail in subsequent slides, while other actions are voluntary.
- **Notable trends in utility risk mitigation actions include:**
  - Adopting wildfire mitigation plans, either as mandated by legislation or as a voluntary effort
  - Increasing spending on both capital and operational mitigation efforts
  - Implementing adaptive operational measures like de-energization and de-rating
  - Seeking self-insurance or other alternative insurance options
  - Supporting credit ratings through a range of actions

Utilities are developing and implementing wildfire mitigation plans

- **Wildfire mitigation plans (WMPs)** are utility-prepared documents identifying strategies and measures to mitigate risk, including through:
  - Capital improvements like undergrounding and pole and conductor upgrades
  - Operational improvements like vegetation management and situational awareness
- WMPs are being prepared by **all utility ownership types.**
- Regular documentation of wildfire mitigation through WMPs may become a new norm due to **business pressures.**
- Implementation of an approved WMP can also **support utility credit ratings** (S&P Global 2024, Fitch 2023).

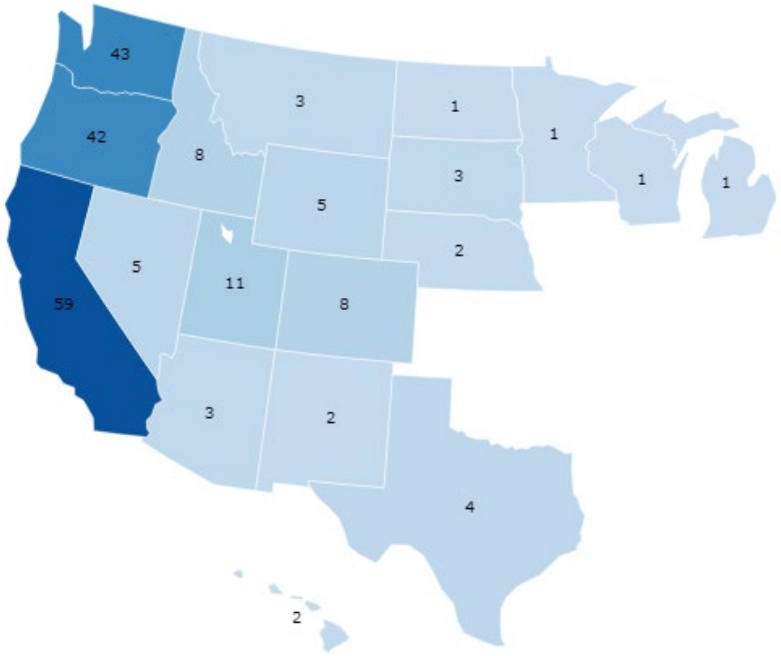


Count of WMPs catalogued in preliminary PNNL database

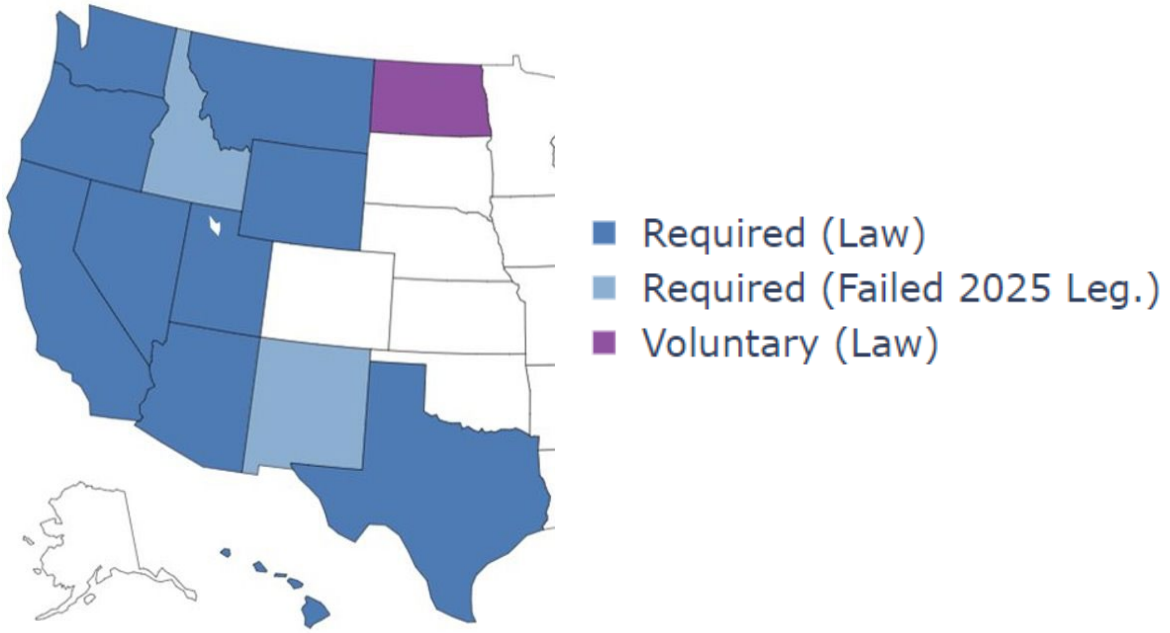
WMP adoption is increasing across the country

- WMPs are currently concentrated in the West, but the practice is anticipated to spread to other regions as wildfire risk increases.
- Nine states have passed legislation requiring utilities to prepare WMPs, and two additional states proposed legislation in 2025 that failed to advance. Utilities in other states are also producing WMPs without legislative requirements.

Utilities with at least one WMP



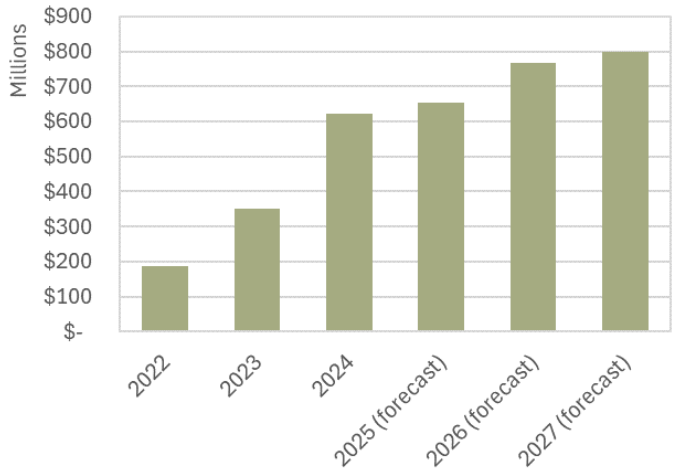
State WMP requirements



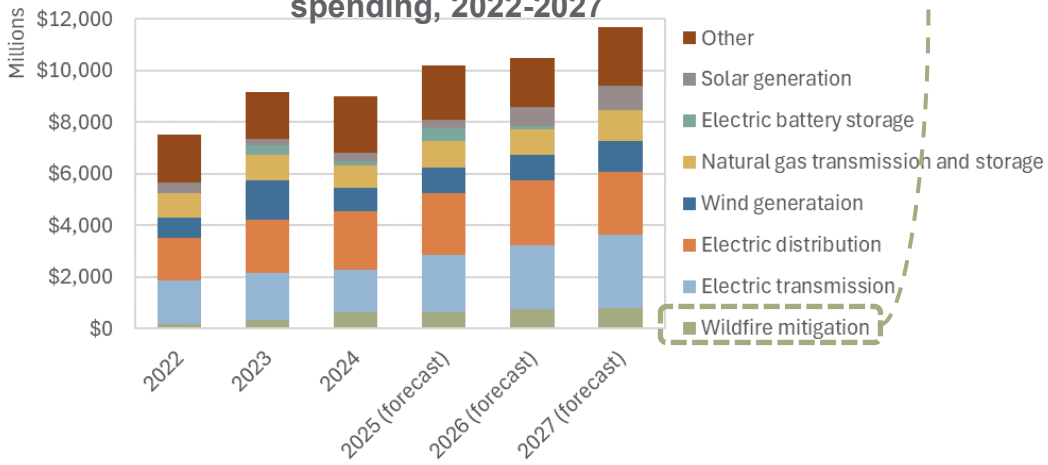
Wildfire mitigation spending can be significant and is generally increasing

- **Direct spending on wildfire mitigation currently is a small share of utility spending but is rapidly increasing**. Additionally, as emphasized throughout this report, direct spending represents only a fraction of the wildfire-related costs utilities must bear, which can include payments for third-party damages, insurance costs, and all other costs associated with capital cost increases and credit downgrades.
- In California, PG&E's spending on wildfire mitigation is expected to increase at a compound annual growth rate of approximately 8% from 2020-2025, with spending in 2025 estimated to **exceed $6 billion** (PG&E 2025).
- Berkshire Hathaway Energy (BHE), which operates utilities in multiple states, estimates that wildfire mitigation capital spending will increase from $188 million in 2022 to $797 million in 2027, **a compound annual growth rate of approximately 33%** (Berkshire Hathaway Energy 2025).
- Wildfire mitigation capital spending is a relatively small share of BHE's overall capital spending (2.5% in 2022), but is **the fastest growing category,** estimated to reach 6.8% in 2027 (Berkshire Hathaway Energy 2025).

BHE total wildfire mitigation capital spending, 2022-2027

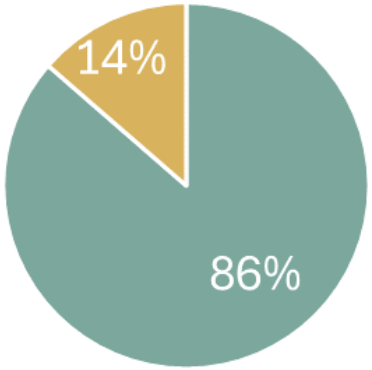


Wildfire mitigation as proportion of total BHE capital spending, 2022-2027

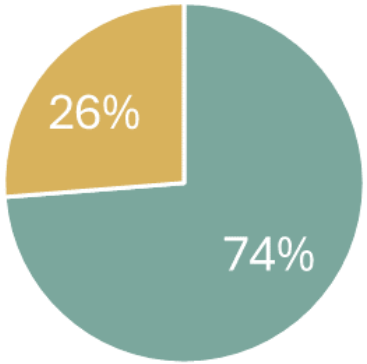


Capital spending makes up most of wildfire mitigation spending for many utilities

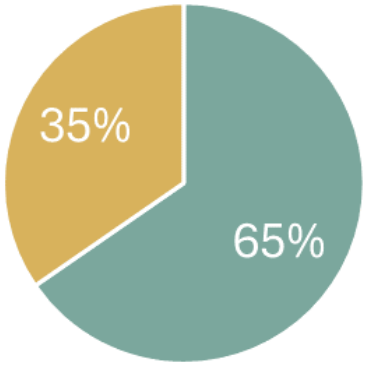
- Capital spending represents 55-86% of total wildfire mitigation spending across four utilities where the split between capital and operational spending was reported.
- For investor-owned utilities, prudently-incurred capital spending can become part of regulated rate base, meaning costs are recovered through ratepayers with a potential return on investment for the utility.



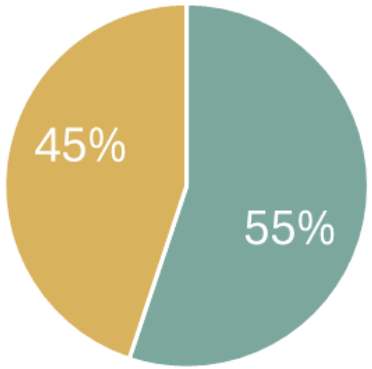
Xcel Energy
$1.9 billion proposed wildfire mitigation spending 2025-2027 (Xcel Energy 2025)



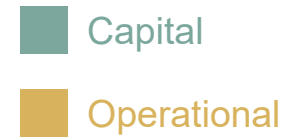
Rocky Mountain Power
$64.8 million in wildfire mitigation spending 2024-2026 (Rocky Mountain Power 2024)



Avista
$52 million in wildfire mitigation spending 2024 (Avista Corporation 2025)

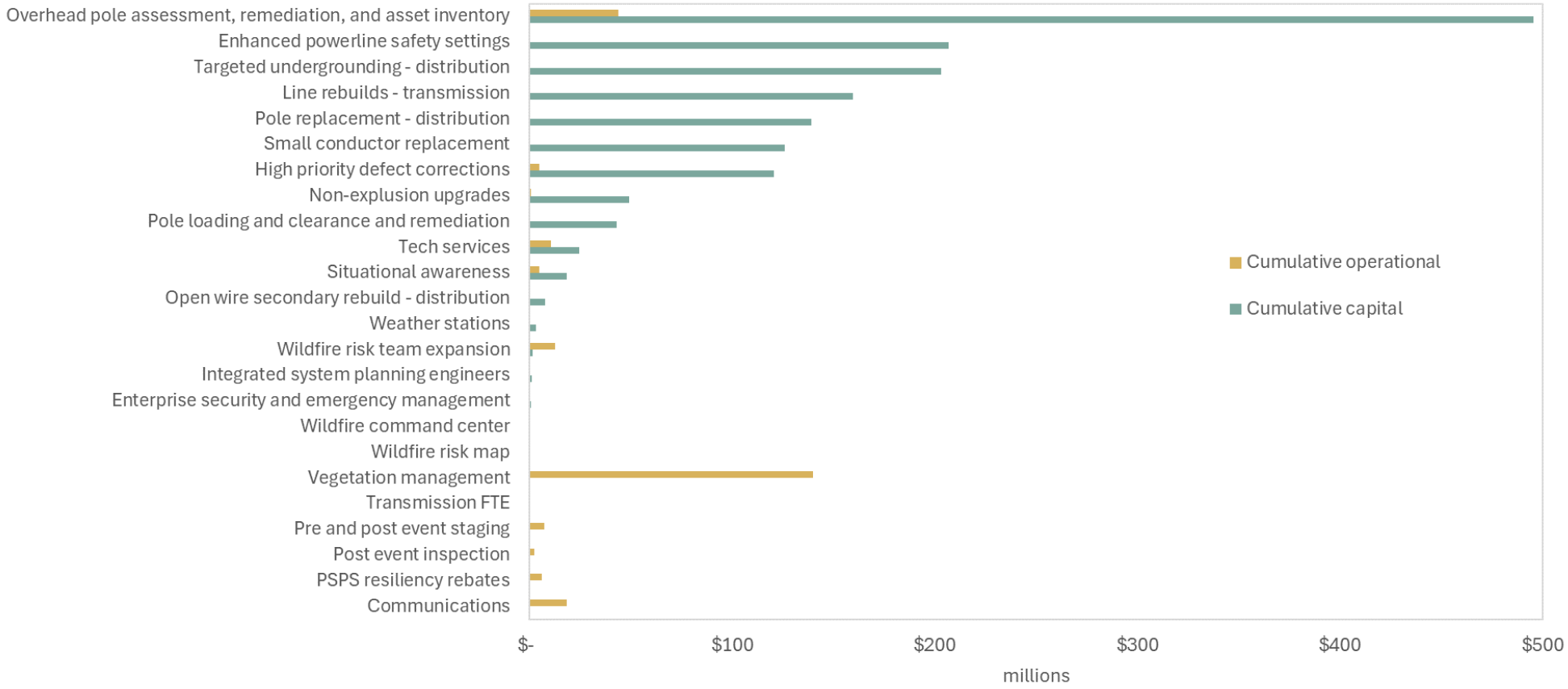


Portland General Electric
$110 million - $135 million in wildfire mitigation spending forecast for 2025 (PGE 2025)
*graph shows average of reported ranges



Wildfire mitigation spending can take many forms

For example, Xcel Energy's 2025-2027 proposed wildfire mitigation plan in Colorado identified 24 categories of operational and capital spending:



Total proposed spending for 2025-2027: $1.9 billion

Data from Xcel Energy 2024

Wildfire mitigation measures can be prioritized through risk analysis

- Several utilities are using a **risk spend efficiency (RSE)** analysis to prioritize mitigation spending in the face of tradeoffs and competing pressures (Xcel 2024, Hawaiian Electric 2025, PacifiCorp 2024, PG&E 2025).
- $Risk\ spend\ efficiency = \frac{Annual\ risk\ reduction \times Project\ life}{Cost\ of\ project}$
- A greater RSE ratio indicates a greater efficiency.

Example: Hawaiian Electric's 2025-2027 wildfire safety strategy identifies a portfolio of mitigation actions based on a risk spend efficiency threshold of greater than 0.9.

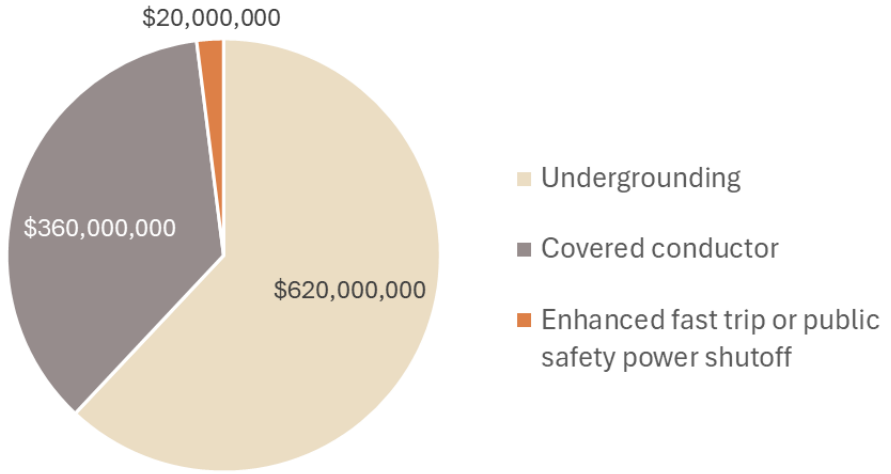


Chart adapted from Hawaiian Electric 2025

Wildfire balancing accounts (WBA)

- **Some Western utilities have established wildfire balancing accounts to track wildfire costs, allowing some recovery from ratepayers for higher-than-anticipated mitigation spending.**
  - This practice has existed for decades in California (Raftery 2012, CPUC 2009) and has more recently been adopted in Oregon and Washington.
- Tariffs for planned wildfire mitigation costs are included in customer rates. Balancing accounts keep track of any differences between planned and actual wildfire mitigation expenses.
- A two-way account allows a utility to refund customers if actual expenses are lower than planned, or to recover additional expenses if they are higher.
  - E.g., Avista's 2023 rate increase for customers in Washington and Idaho included recovery of additional wildfire expenses based on balancing account tracking (Avista 2023).
- **Some regulators have measures to safeguard customers from excessive rate impacts, such as:**
  - Require justification for and approval of proposed expenses
  - Require an application if extra expenses will go above a certain percentage of the planned expenses
  - Require performance-based metrics report of mitigation measures completed
  - Offer monetary reward or charge penalty based on percentage of completed mitigation measures

Example Metrics Required in WA for WBA Reviews *(Includes Annual Amount, Cumulative Amount, and Annual Cost Per Mitigation Component)*
No. of Trees Trimmed
No. of Hazard Trees Removed
Miles of Conductor Undergrounded
No. of Reclosers Installed
No. of Grid Hardening Projects Completed

De-energization measures are used to reduce wildfire risk, but involve tradeoffs

- **In addition to spending on capital and operational mitigation efforts, utilities are implementing operational de-risking strategies that can be used during periods of acute fire risk.**
- **Some utilities proactively de-energize certain lines** using public safety power shutoffs (PSPS) to reduce the risk of utility-caused wildfire during high-risk conditions. The practice has significant customer impacts.
- **PSPS as a mitigation approach involves tradeoffs.** On the one hand, PSPS reduces wildfire ignition risk and the potential for extensive damage to both utility equipment and third-party property. On the other hand, PSPS can leave customers without grid power, burdening customers with the economic and social costs of outages, and can also cause other damages for which the utility might be liable (Macmillan et al. 2023, Babrauskas 2024).
- Because of the widespread impact to customers from power outages that can result from PSPS, the practice is widely described by utilities in WMPs and other documentation as a wildfire mitigation measure of last resort or "last line of defense" (Hawaiian Electric 2024, Portland General Electric, California Public Utilities Commission).
- Though PSPS has been proposed or used by utilities since 2008, there are not definitive guidelines on its implementation (California Public Utilities Commission 2009, Babrauskas 2024). Utilities in Oregon and Hawaii have been sued for not implementing PSPS in wildfire situations (Chappell and Koenig 2023, PacifiCorp 2025).

Advanced grid technologies can offer additional risk mitigation

- Utility wildfire mitigation plans increasingly include a wide range of advanced grid technologies that can reduce ignition risk, enhance operational flexibility, and limit PSPS impacts.
- Utilities and regulators currently lack reliable data for which technologies offer the most promise for mitigating wildfire.

Advanced Grid Technology	Description
Fast-Trip Systems	Rapid fault detection and isolation reduce arc duration and ignition potential from conductor faults, sometimes referred to as protective equipment and device settings (PEDS).
Adaptive Reclosures	Intelligent reclosure logic delays or prevents automatic re-energization in high wildfire risk conditions.
Undergrounding Conductor	Undergrounding conductors eliminates overhead ignition sources, making it a critical but costly wildfire mitigation strategy in utility wildfire mitigation plans.
Covered Conductor	An overhead power line with a non-insulated but weather-resistant covering over the conductor, designed to reduce contact-related faults and wildfire ignition risks.
Advanced Fire-Safe Devices for Monitoring and Controls	Replacement of traditional expulsion-type fuses and surge arresters with devices that minimize ignition risks in wildfire-prone zones.
Dynamic Line Rating (DLR)	Adjusts transmission line capacity in real time based on temperature, wind, and conductor conditions.
Topology Optimization and Improvements	Reconfigures the grid's structure to improve reliability, minimize losses, and reduce wildfire or overload risks.

Source: Bhattacharya et al. 2025

Some utilities are seeking alternative forms of insurance and risk coverage

- **Utilities are seeking additional solutions to cover risks that cannot be addressed via direct spending or operational strategies.**
- In response to the increasing cost and decreasing availability of liability insurance, several utilities are seeking self-insurance as an alternative or supplement (NV Energy 2025, PacifiCorp 2024, PG&E 2023, Southern California Edison 2023).
- Some utilities can benefit from a state wildfire fund, which can act as an alternative insurance measure (see legislation review):
  - California's three investor-owned utilities participate in a $21 billion state fund, established via legislation in 2019, that helps cover catastrophic events.
  - In Utah, legislation passed in 2024 allows creation of a wildfire fund for investor-owned utilities.
- In addition to existing state funds, PacifiCorp is exploring a multi-state fire fund that would act as a risk pool for potential catastrophic wildfires (PacifiCorp 2024).
- Utilities may also seek other forms of risk coverage like catastrophe bonds, recovery bonds, and parametric insurance (Kousky et al. 2019, Penrod 2024).

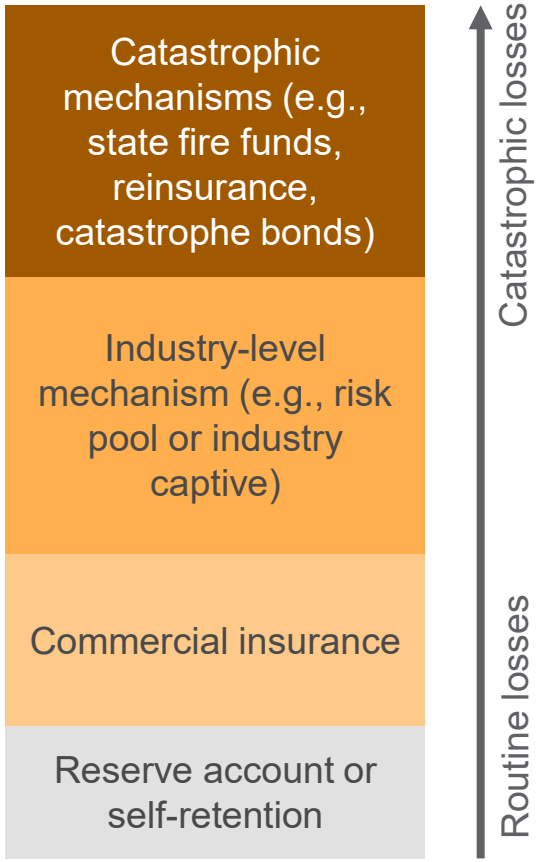
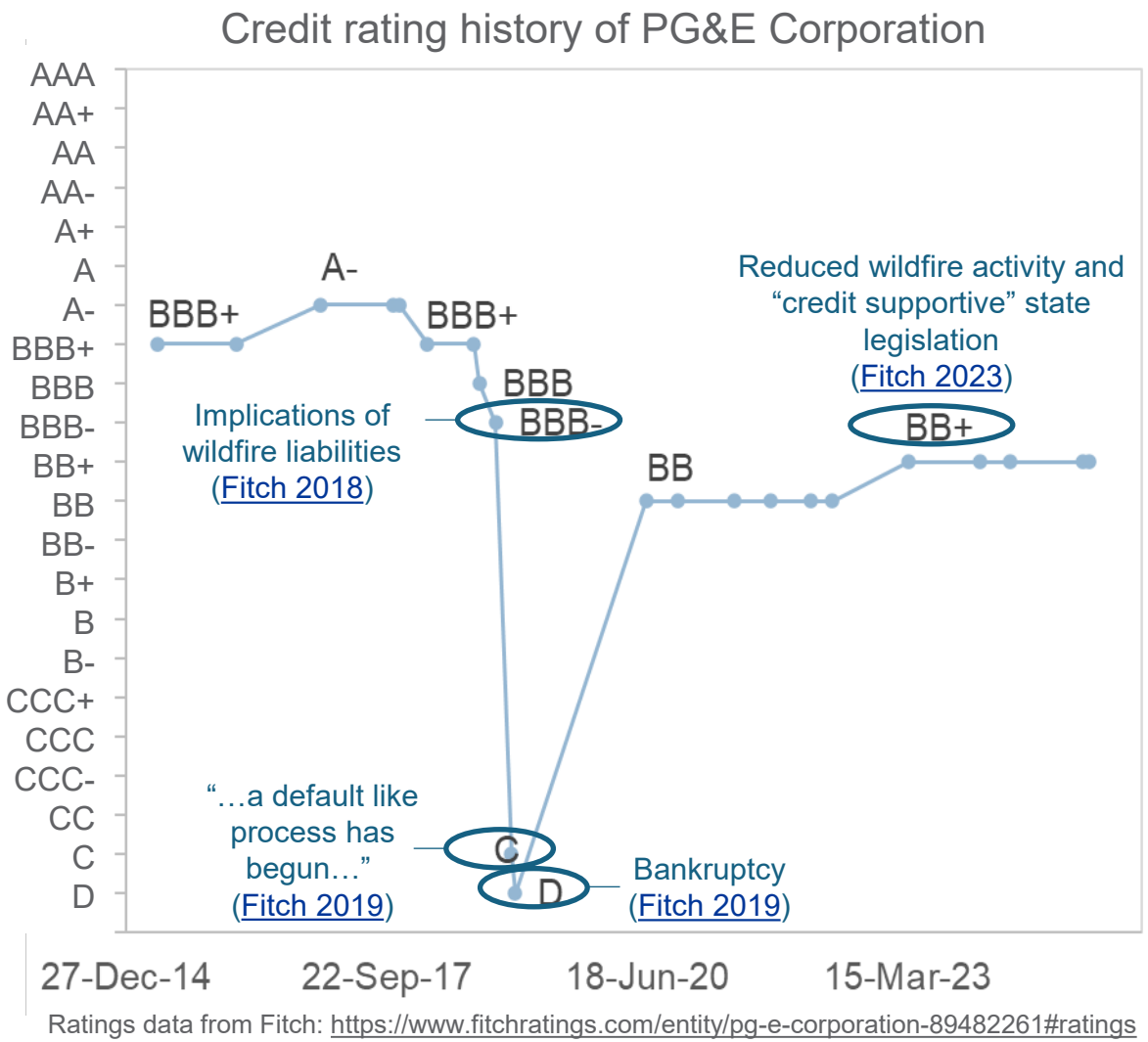


Figure adapted from Kousky et al. 2019 and PacifiCorp 2024

Utility and state actions can support utility credit ratings

- **Taken together, utility adoption of risk mitigation and coverage measures can protect or support recovery of credit ratings.**
- Implementation of wildfire mitigation plans can reduce risks and support credit ratings. For example, PG&E's credit rating was upgraded in 2024 based in part on effective implementation of wildfire mitigation plans (S&P Global 2024).
- State legislative actions can also be credit-supportive for utilities. A 2023 credit upgrade to PG&E (Fitch 2023) cited recently adopted legislation in California, including:
  - The creation of the California Wildfire Fund
  - A process for state certification of utility wildfire mitigation plans
  - Securitization of certain wildfire-related costs as authorized by legislation



Ratings data from Fitch: https://www.fitchratings.com/entity/pg-e-corporation-89482261#ratings

Legislative trends

Utilities and wildfire: legislative trends

- State legislation is a useful window into understanding stakeholder dialogue on public policy governing wildfire liability and mitigation requirements. As utility business risks from wildfire have increased, states have enacted legislation to establish standards, transparency, and accountability.
- **As noted above, state actions have resulted in:**
  - Improved utility credit through liability and damages caps or public payment funds
  - Clarification of prudence of incurred costs for cost recovery
- **This section reviews the scope and temporality of legislative actions.**

Overview: Legislative approach by state

State	Wildfire Mitigation Planning	Modified Liability	Modified Damages	Payment Fund or Bond Authorization
AZ	Law	Law	Law	
CA	Law	Law		Law
HI	Commission Order	Law		
ID	Law	Law	Clarification of Law	
KS			Law	
MT	Law	Law	Law	
ND	Law	Law		
NV	Law			
OR	Law		Law	
TX	Law	Law		
UT	Law	Law	Law	Law
WA	Law			
WY	Law	Law	Law	

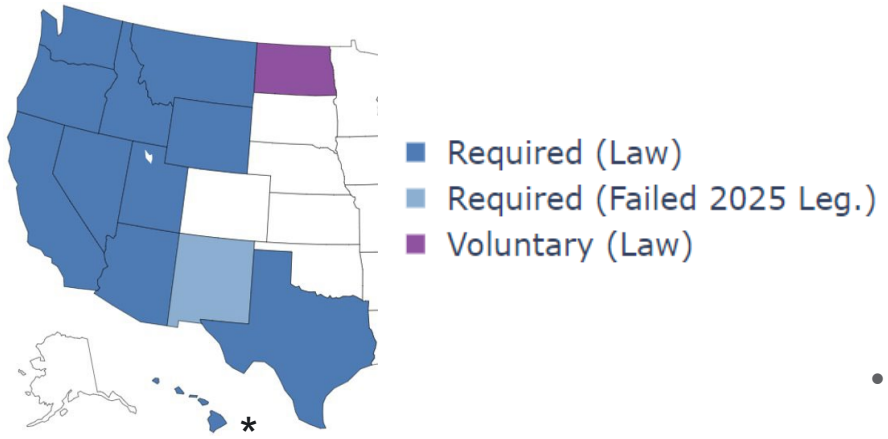
Laws or commission order Not addressed

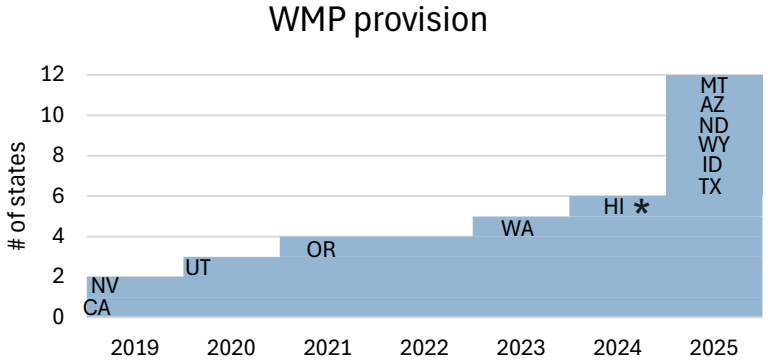
Idaho, New Mexico, Oklahoma, Oregon, and South Dakota proposed 2025 legislation that did not pass.

In 2025 nine states proposed legislation related to utility wildfire risks, of which seven passed some portion.

Cumulatively, thirteen states have addressed components of utility wildfire risk legislatively and another three have attempted to through unsuccessful legislation.

Wildfire Mitigation or Wildfire Protection Plans

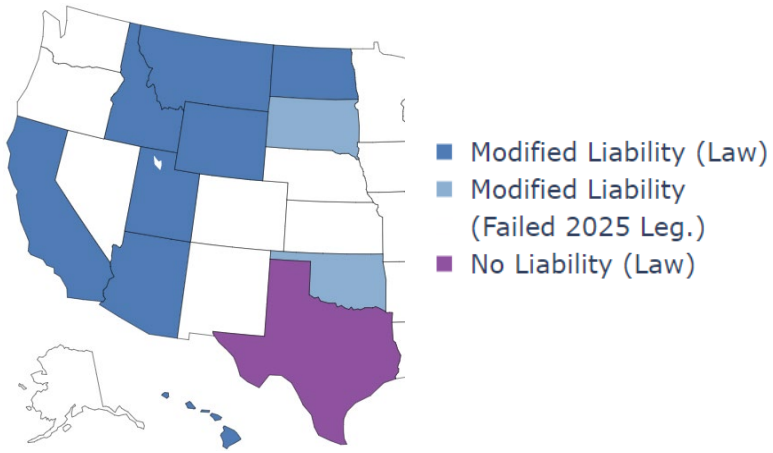


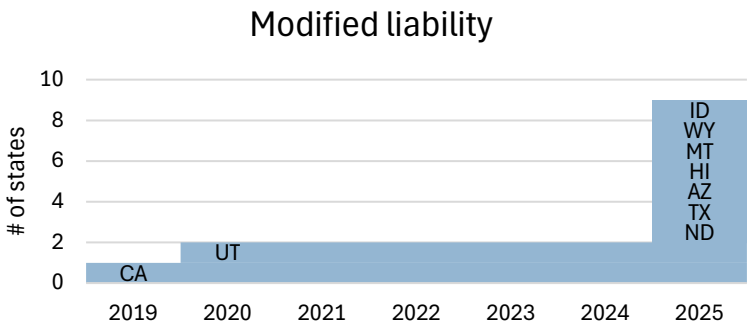


*Hawaii requires WMPs through Commission Order No. 41033, which achieves the same objective as legislatively directed WMPs and is included in summary information here. Oklahoma 2025 legislation directs utilities to comply with Commission requirements and the National Electric Safety Code but does not require WMPs explicitly at this time and is not included here.

- **California and Nevada** introduced the first legislation requiring Wildfire Mitigation or Wildfire Protection Plans (WMPs) in 2019. Since then, a total of **seven states** have enacted legislation requiring WMPs. Three states require them as a component of qualifying for reduced risk, reduced damages, or utilization of a public fund for damages, and three additional states passed legislation to require or encourage them in their 2025 sessions.
- In California, legislation requiring WMPs was enacted coincident to legislation modifying the liability standard and creating a payment fund. In all other states, except Oregon, **the requirement for WMPs was the first mandate associated with clarification and/or reduction of utility business risk from wildfires**.
- The laws require submission of a WMP to the state Commission or governing board. Some states specify WMP content legislatively, while others leave content to Commission direction.
- Of the twelve states that proposed or passed legislation, five included language contributions from a single multistate utility (Baumhardt 2025). Another multistate utility expressed support for 2025 damage limitations in two states (Penrod 2025).

Legislative liability standards modifications

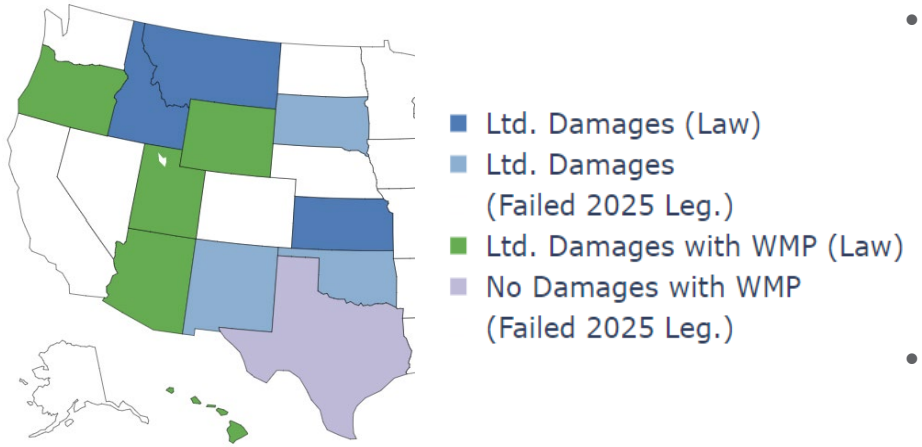


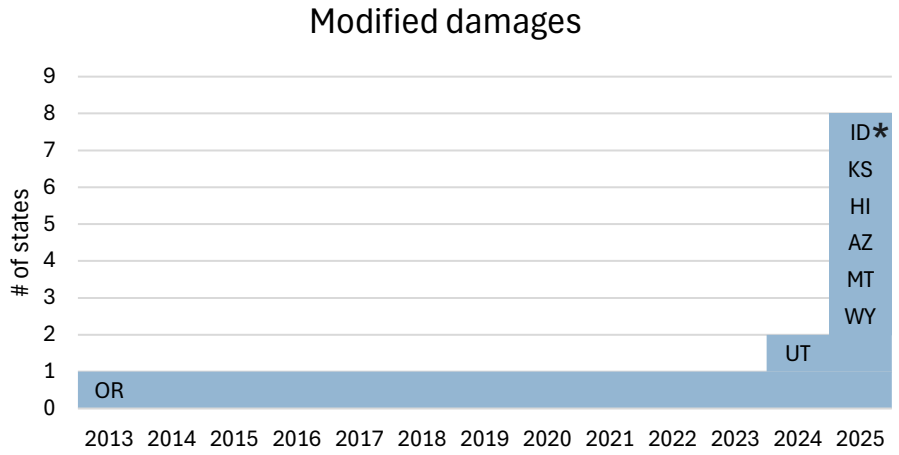


- Several states developed standards to clarify what is required of utilities to avoid liability.
- **Liability standards are set and vary by each state.** However, establishing liability of a utility for a wildfire is typically based in either state strict liability laws or state negligence laws. Negligence on the part of the utility is proven by establishing:*
  1. The utility owed a duty of care
  2. The utility breached the duty of care
  3. The utility breach caused damage, and
  4. The person bringing a claim can prove damages
- Liability standard *modifications* typically either **remove strict liability** or **provide additional definition for what it means to comply with or breach the duty of care.**
- Montana and North Dakota **have moved from strict liability to negligence law** for utility wildfire claims.
- Arizona, California, Idaho, Texas, Utah and Wyoming have established through legislation that the **standard of care has been met** through compliance with a WMP, establishment of a Safety Certification for wildfire, compliance with National Electric Safety Code, or completion of mitigation work established through WMP.
- Hawaii establishes a prudent conduct standard for determining who replenishes the wildfire fund. Of note, Nevada, Oregon, and Washington require WMPs, but do not currently establish that compliance with an approved WMP modifies liability.

*Note: the appendix includes summary legal terms and links to additional explanation.

Legislative damage limitations

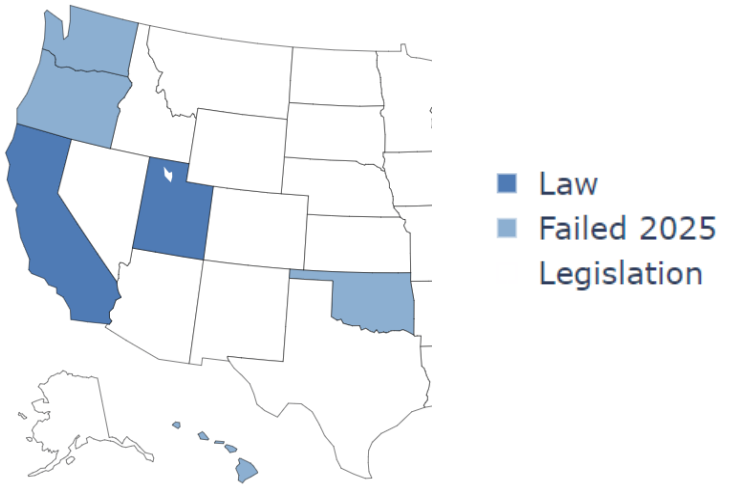


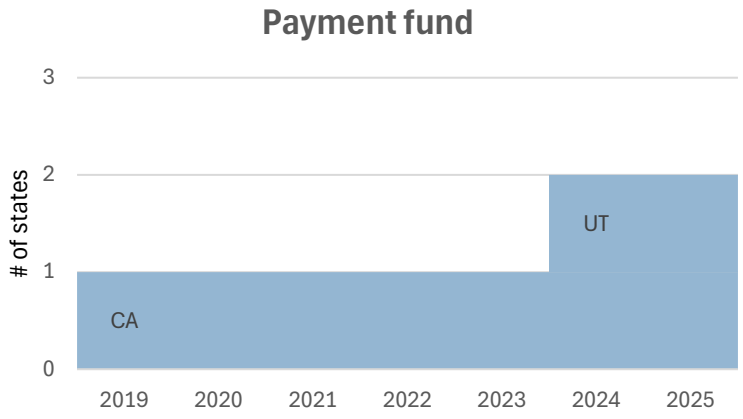


* Idaho law clarifies that existing damage caps for other cause apply to utilities. Separately, California AB1054 (2019-2020) allows recovery of costs and expenses arising from a covered wildfire if the costs and expenses are just and reasonable.

- Oregon enacted wildfire damage limitations for all plaintiff types in 2013 to the value of economic and property damage if not the result of negligence, and twice the value if the result of negligence. Utah followed in 2024 with legislation linking WMP approval and compliance to caps on damage recovery for economic and non-economic loss.
- **The 2025 legislative session saw legislation passed in six states to limit damages and as a result utility business risks from wildfires.** Five states proposed legislation that was not enacted.
- 2025 legislation included proposals by three states to limit damages for utilities with WMPs in place, five states to limit damages irrespective of whether a WMP requirement exists, and two states to prohibit damage claims against utilities with WMPs in place that cover the affected area.
- In all states with proposed or enacted legislation the damage language reduces the magnitude of damages from what would be allowable under standard tort law remedies.

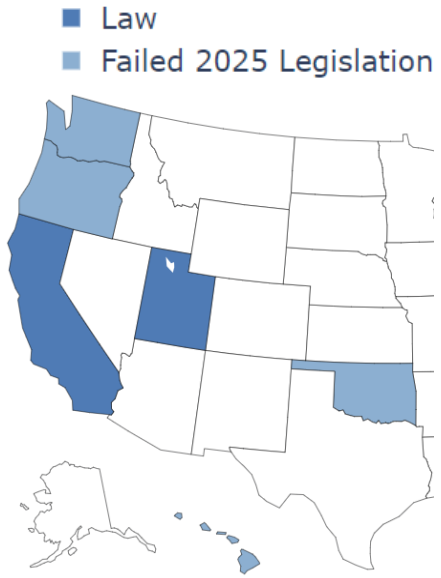
Legislatively-created payment funds

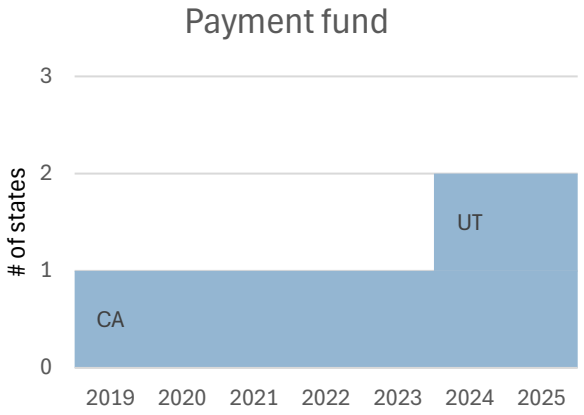




- California created the initial wildfire payment fund in 2019 with mandatory contributions from ratepayers and shareholders. In 2024, Utah authorized utilities to collect and self-manage wildfire funds that may be applied to payment of damages that exceed eligible payments covered by each utility's own funds.
- **2025 legislation related to payment funds did not show clear trends in the development of fund design.** Some legislation required fund capitalization from ratepayers but required recapitalization by shareholders if the utility is found negligent in causing the wildfire. Some legislation established workgroups to determine capitalization of the fund. And finally, some legislation authorized utility bonds. Ultimately, none passed.
- In some cases, consumer advocacy groups have described payment funds as a shift in financial responsibility from shareholders to customers (Balaraman 2021). Some states have responded with legislative requirements to include shareholder dollars in fund capitalization (California Catastrophe Response Council 2024).

Payment fund proposal structures vary



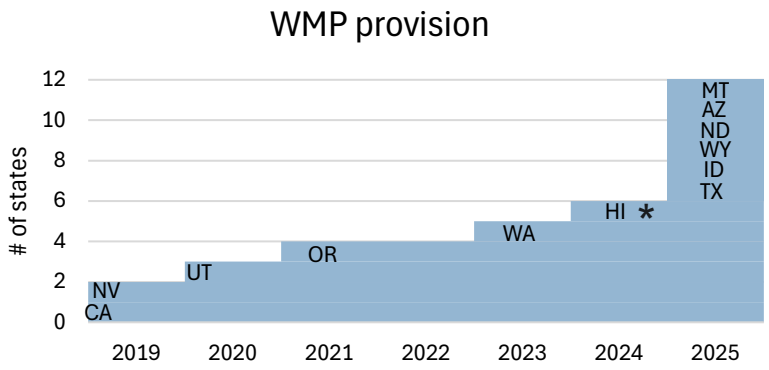


*2025 legislation in HI, OK, OR, and WA did not advance to law.

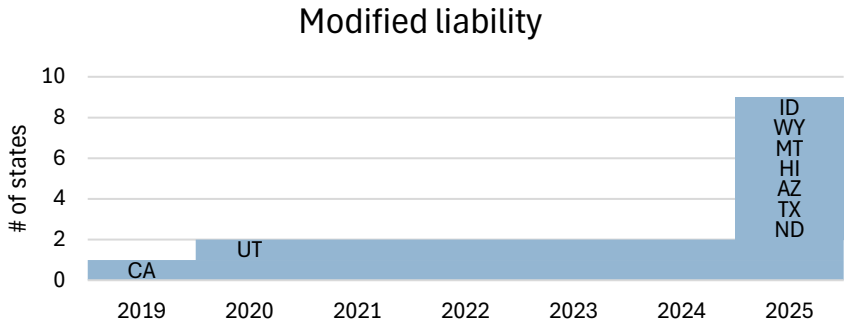
	CA	HI	OK	OR	UT	WA
Legislation	AB1054 (2019)	HB982/SB1201 (2025-proposed)	SB1071 (2025 proposed)	HB3917 (2025-proposed)	SB224 (2024)	HB1656 (2025-proposed)
Target volume	$21B			$800M	$1B	
Capitalization source	Ratepayers and shareholders (50:50)	Ratepayers and shareholders	Appropriated, grants, donations and “other funding sources”	Ratepayers and shareholders (up to 50:50)	Ratepayers	Ratepayer securitization for bonds
Capitalization time	10 years for utilities; 15 years for customer charge	Up to 5 years	Revolving taxpayer fund	Up to 10 years	Up to 10 years	
Utility payment cap	$1B				$10M	
Caps on customer rate increases			Not utility specific	3% increase to a customer’s bill in any rate class	4.95% increase in rates overall or $3.70 per month per average residential customer	

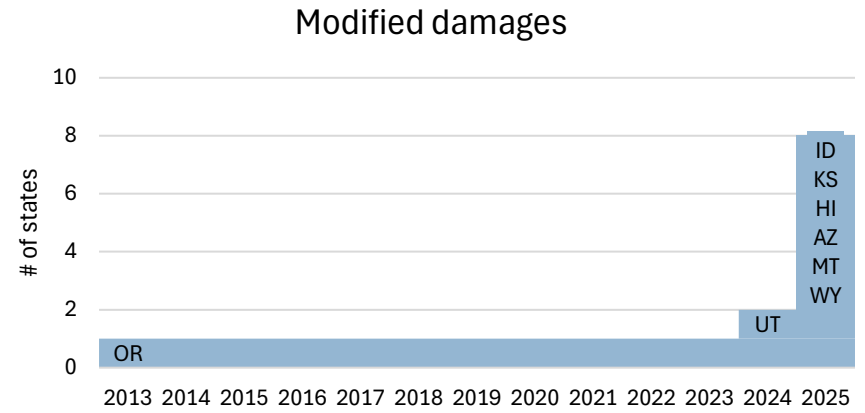
Legislative timeline comparison

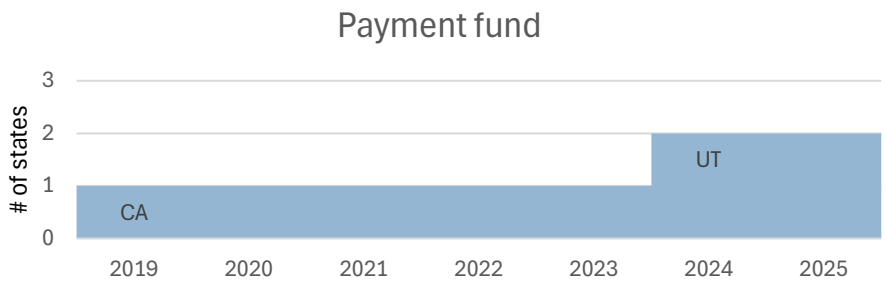
- **Some states have adopted individual wildfire provisions through separate legislation:**
  - OR adopted modified damages in 2013 and WMP requirements in 2021 and proposed legislation in 2025 for a wildfire fund
  - UT adopted WMP requirements and modified liability in 2020, and modified damages and payment fund in 2024
- **Several states are adopting multiple provisions in comprehensive wildfire legislation:**
  - CA 2019 legislative package led on WMP requirements, modified liability, and a payment fund
  - MT 2025 adopted legislation establishes WMP requirements, modified liability, and modified damages
  - ND 2025 adopted legislation establishes WMP requirements and modified liability
  - WY 2025 adopted legislation establishes WMP requirements, modified liability, and modified damages



* HI, Regulatory commission order







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Additional topics and questions

Additional and alternative measures may be necessary to mitigate utility wildfire risk

Additional measures proposed in the literature include:

- Permitting reform, e.g., for vegetation management and undergrounding, to expedite implementation of wildfire mitigation plans (Edison Electric Institute, in Penrod 2025).
- Differential electricity rates, where customers with higher wildfire risk would pay higher electricity rates (Kousky et al. 2018, 2019; Nordman and Hall 2020).
- Voluntary federal backstop insurance for utilities, conditioned on implementing certain risk reduction measures like improved situational awareness, fast-trip de-energization, and public-safety power shutoffs (Wara et al. 2024).
- Corporate restructuring as a potential means to isolate state or regional wildfire risks, among other things, as PacifiCorp was asked to explore in Utah (PacifiCorp 2024).
- Significant adjustments to utility ownership structure, such as municipalization or other public control of investor-owned utilities (Lin 2020, CA SB350 2020).
- Addressing wildfire risk through means beyond utilities' direct control, e.g., through hardening homes and reducing the consequences of wildfire, which could help reduce damages arising from utility-caused wildfires (Wara in Penrod 2025).

Key takeaways

- Utilities are taking actions to mitigate wildfire risk with direct spending and risk coverage like insurance. As risk increases, so can utilities' cost of doing business, which in turn can impact utilities' ability to proactively reduce their exposure to wildfire-related risks.
- Wildfire risks and their associated costs are already having cascading impacts on utilities' provision of service and raise timely questions about the fair allocation of costs between ratepayers and other stakeholders.
- Increasing wildfire risks pose wide-ranging threats to utilities' business models beyond the direct costs of wildfire mitigation.
- Many regions are working to identify policy solutions that can help address these risks, and many states have recently introduced or enacted legislation to address wildfire liability, risks, and cost allocation. States are taking a variety of approaches and some recurring legislative features are emerging as trends.
- Additional steps needed likely include creating a level playing field for stakeholder groups to analyze, evaluate, and communicate risk mitigation strategies.

Next steps and questions for future research

This preliminary review raised several questions that may be the subject of future research:

- How are risk and cost allocated among different stakeholders?
- What metrics can guide risk allocation and mitigation strategies?
- How can customer affordability be maintained amid increased spending on wildfire risk mitigation and risk coverage?
- What are the implications of utility ownership structure (investor-owned, municipal, cooperative) in responding to wildfire risk?
- What are the impacts of utility wildfire legislation and are potential models emerging?

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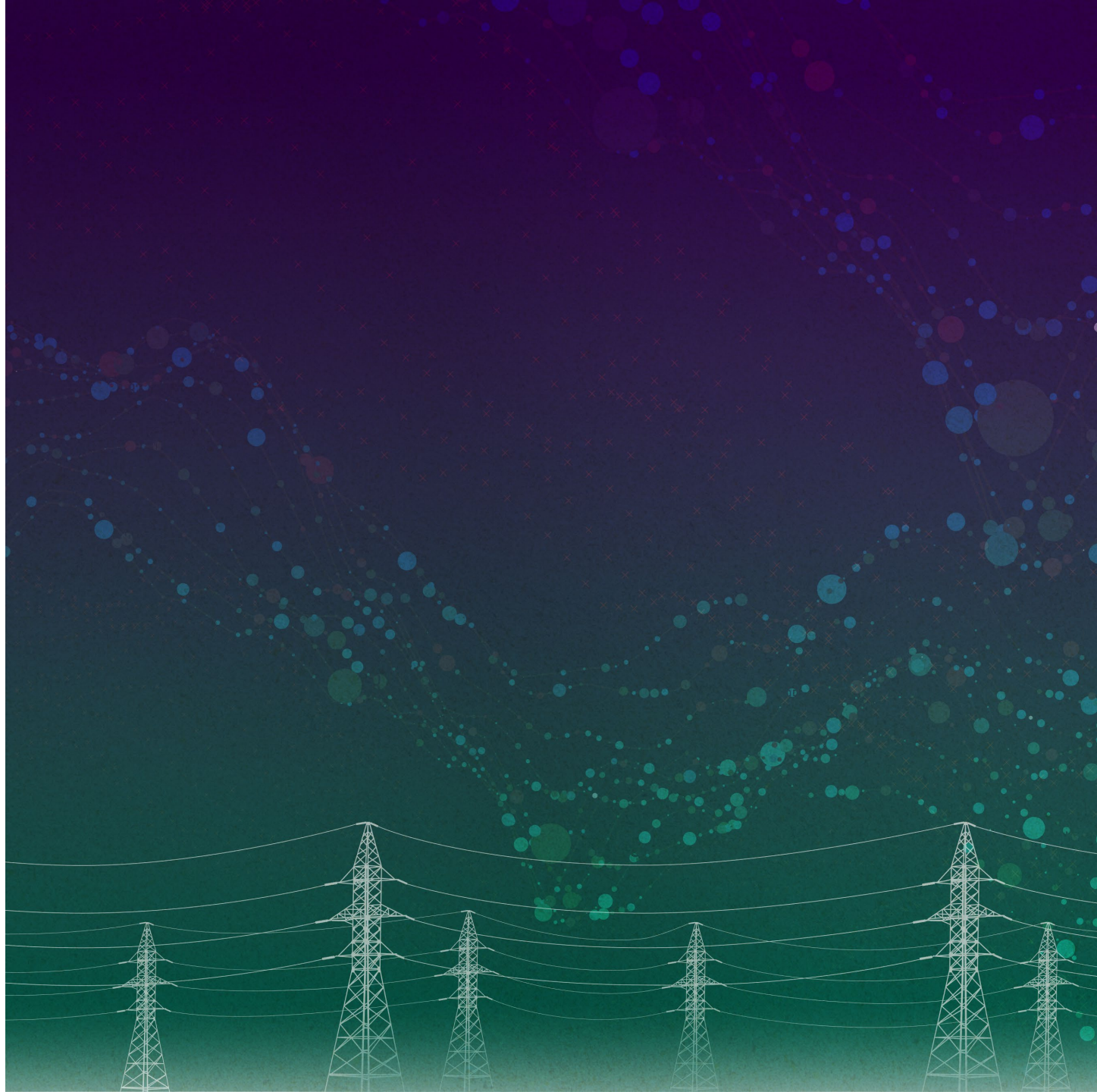
Thank you

For more information, contact
wildfire@pnnl.gov

Suggested citation: *Barlow, J., Powell, D., Kincaid, J., Abernethy-Cannella, K., & Boff, D. (2025). Wildfire Risk: Review of Utility Industry Trends. PNNL-SA-211619.*



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Appendix

Legal and legislative terms and definitions

Term	Definition
Commission Order (Regulatory)	A formal directive issued by a public utility commission. These orders can include rules for pricing, service standards, and operational procedures.
Law	Used here to describe legislation that has passed and been signed by the State Governor.
Legislation	Used here to describe legislation that has not passed and/ or been signed by the State Governor.
Negligent Conduct (Legal)	The failure to behave with the level of care that a reasonable person would have exercised under the same circumstances. Either a person's actions or omissions of actions can be found negligent. Additional Information can be found here.
Prudence of Costs (Regulatory)	Requires that a utility must follow a course of conduct that a capably managed utility would have followed in light of reasonably knowable circumstances. Purchases "prudently" made may be included in rate base. Additional information can be found here and here.
Rate Base (Regulatory)	The investor supplied facilities and investments required in supplying utility service to customers. Additional information on the role in ratemaking and rate of return here.
Reckless Conduct (Legal)	Behavior that is so careless that it is considered an extreme departure from the care a reasonable person would exercise in similar circumstances. Additional information can be found here.
Standard of Care (Legal)	An essential concept in determining whether a person was negligent and potentially liable for a tort. If a person breaches the standard that applies to them and their actions cause harm to another person, they will be liable for negligence. Additional information can be found here.
Strict Liability	Liability for committing an action regardless of intent or mental state. Additional information can be found here.
Tort (Legal)	An act or omission that gives rise to injury or harm to another and amounts to a civil wrong for which courts impose liability. Additional information can be found here.

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