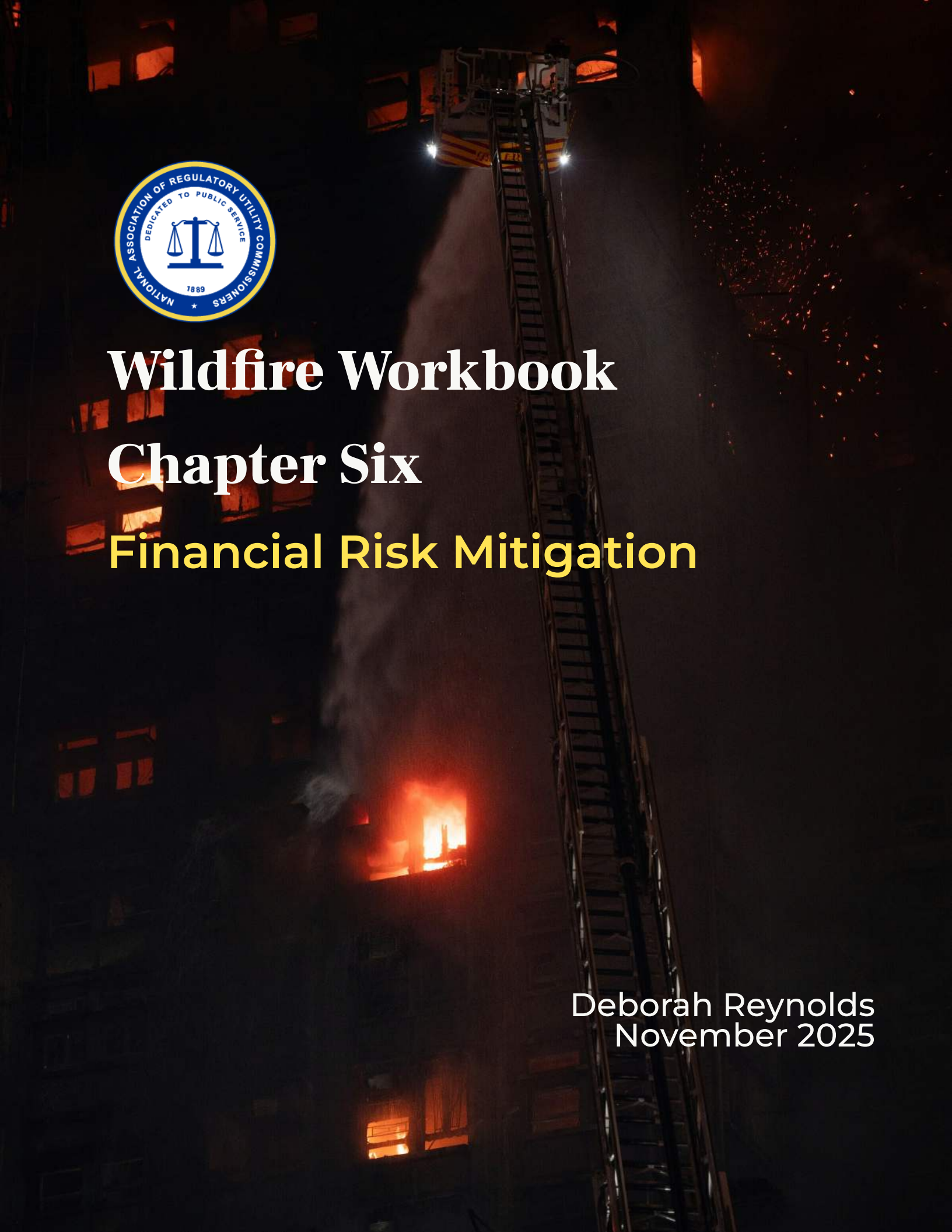

Wildfire Workbook

Chapter Six

Financial Risk Mitigation

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November 2025

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01

Chapter Introduction

As discussed elsewhere in this workbook, utilities are exposed to wildfire financial risk from two directions – both direct damage to infrastructure and third-party lawsuits. S&P Global suggests that wildfire-related litigation poses the largest financial risk to utilities, potentially leading to credit deterioration and even bankruptcy (**Wildfire-Exposed U.S. Investor-Owned Utilities Face Increasing Credit Risks Without Comprehensive Solutions**). The article further suggests that effective financial risk mitigation may need both regulatory and legislative solutions, and this workbook provides examples of both.

As utilities, commissions, and policy makers consider the various approaches described in this chapter, they must balance competing goals for both liquidity and affordability (**Chapter Five: Cost Recovery Mechanisms**). This theme is repeated throughout the workbook.

The first section of this chapter on regulatory approaches offers an overview of liability insurance issues, explains self-insurance with examples, and illustrates how wildfire risk affects insurance premiums, cost of capital, and asset valuation. It also covers the importance of accounting strategies that support timely cost recovery for utilities, which supports utility financial health. While both wildfire and extreme weather events have similar effects on utility financial risk, wildfires can result in significant liability litigation risk that does not occur with other extreme events.

The second section of this chapter on legislative approaches includes a summary of recent legislation and enacted statutes intended to reduce utilities' wildfire-related financial risk through changes to liability standards, increased commission oversight of mitigation efforts and plans, or permission to securitize wildfire-related costs. As of June 2025, Arizona, Idaho, Kansas, Montana, North Dakota, Texas, and Wyoming have followed Utah's example and passed legislation limiting utility liability related to wildfires. Similar legislative proposals are under consideration in other states. Details of state laws vary regarding liability for damage from utility-caused wildfires, and some of these variations may result in significant awards in jury trials. For examples of jury awards, see a *Wall Street Journal* article about **PG&E Bankruptcy**; See Oregon Public Broadcasting episode about **PacifiCorp jury awards**.

In the absence of state law to the contrary, the risk of utility-initiated fires creates an assumption that utilities should be the insurers of last resort and thus suggests potentially unbounded liability for utilities that cause wildfire damage. These state-specific approaches may still be the best solutions for managing risk without a federal solution because each state pays only for damage within the state.

02

Regulatory Approaches

In this environment of heightened financial risk from wildfire, utility regulators are still charged with balancing affordability for ratepayers and liquidity for the utility. Hardening the electric grid must be undertaken in a way that retains affordable rates for customers. When considering costs to be borne by ratepayers, regulators may increase their review and understanding of utility insurance coverage and costs, including coverage for both extreme weather and wildfire risks. Strategies may include self-insurance proposals to control rising costs and accounting practices that ensure timely cost recovery. Regulators will also continue monitoring the effects of wildfire risk on cost of capital and asset valuation. The following pages describe areas of regulatory concern and offer suggestions for regulatory action.

Insurance Market Conditions

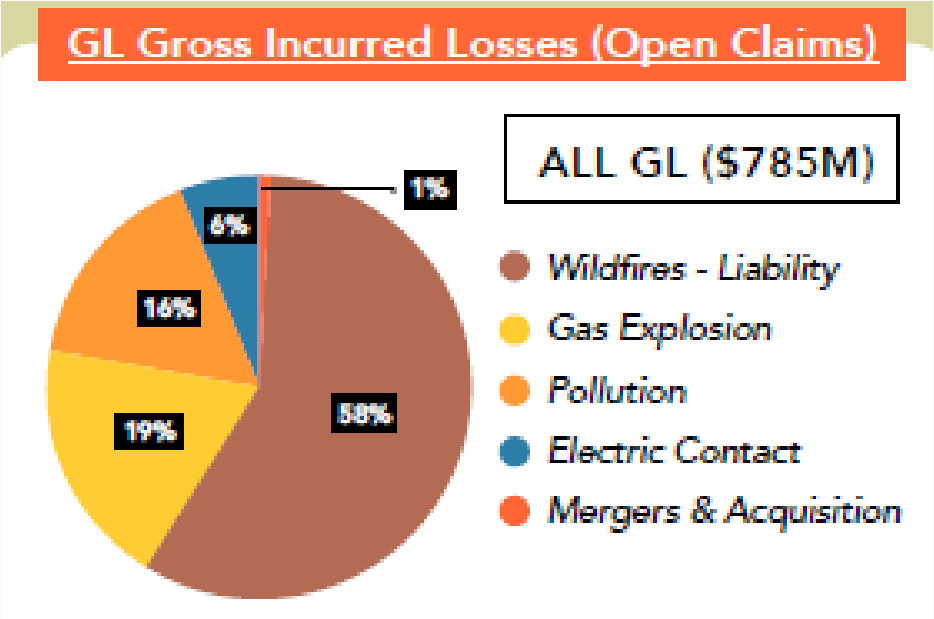
The liability insurance market for utilities has tightened, with soaring premiums and reduced coverage due to heightened wildfire and extreme weather events. Utility insurers are facing loss payments that far exceed premiums collected, which directly affects how much insurance is available in the market.

In this difficult market, each utility makes decisions about how much insurance they need to carry, or conversely, how much risk they should assume, and whether there is cost-effective coverage available in the market. (See Deep Dive: How Insurance Works – Figure 2 - example of liability insurance tower.)

For more information, the Washington State Insurance Commissioner's 2023 report on liability insurance market conditions provides a good primer on how liability insurance works. The report's survey of utilities in Washington state found that many utilities had prepared a wildfire mitigation plan at the request of their insurer. (*WA Insurance Commissioner Report*, 2023, p. 12)

- **Trend**: Insurers are adjusting insurance policies by adding wildfire exclusions and creating sub-limits for wildfire events. They are also offering much lower limits - reduced from $100 million in 2018 down to $25 million today. Major carriers offer multi-year policies that act more like financing mechanisms than traditional insurance. Industry mutual insurer EIM, in its 2024 annual report, shows that wildfire losses account for 58 percent of their open claims. (*EIM 2024 Annual Report* and Figure 1, p. 5.)

Figure 1



- **Implications**: Higher insurance premiums are passed on to ratepayers, raising affordability concerns. Limited coverage threatens utilities' operational stability, pushing them toward self-insurance. (*WA Insurance Commissioner Report*, 2023)
- **Example**: PG&E's move to self-insurance was driven by insurers' inability to offer affordable wildfire liability policies. (*Utility Dive*)

Self-Insurance and Captive Insurance

Utilities are increasingly turning to self-insurance due to the rising cost and limited availability of traditional wildfire liability insurance. This chapter uses the terms captive insurance and self-insurance interchangeably, because that is the common practice. However, self-insurance is more typically used to refer to the types of costs that utilities rely on cash flow to address, such as ongoing maintenance and repairs to infrastructure. (See Deep Dive: How Insurance Works for Electric Utilities, p. 27.)

As utilities respond to liability risk, they can set aside larger reserves to cover potential wildfire-related losses, reducing reliance on external insurers. This type of self-insurance often takes the form of a captive insurance company that is owned and operated by its utility parent company (not an insurer). In one real-world example, the captive insurance provider covers the entire $1 billion wildfire liability tower. Captives are usually formed to insure the risks of its organization and affiliates, potentially allowing them greater flexibility in coverage, pricing, and risk management.

- **Trend**: Commissions are looking more closely at utilities' use of self-insurance. A recent Utah Public Service Commission order noted that Rocky Mountain Power could have saved significant money by using self-insurance. (Disapproval Order by Utah PSC for Rocky Mountain Power's 2023 Wildland Fire Protection Plan, 2025.)
- **Implications**: Self-insurance reduces exposure to volatile insurance markets but requires significant capital reserves, impacting utilities' balance sheets. It may shift risk to ratepayers, as contributions to such funds are often passed through to customer bills. Experts note that while costs decrease, there's a higher risk of insolvency if reserves are insufficient (*Utility Dive*).

- **Example**: PG&E adopted a 100 percent wildfire self-insurance model in late 2023, establishing a captive and discontinuing third-party insurance to save an estimated $1.8 billion over four years in reduced insurance premiums (*Utility Dive*). As part of its approval, the California Public Utilities Commission (PUC) included an automatic adjustment mechanism to ensure that all costs incurred are recovered. This helps spread the costs of meeting liabilities over the timeframe when they become payable.
- **Example**: Nevada's NV Energy proposed a $500 million self-insurance program, adding $2.40 monthly to customer rates in high-risk areas. (NV Energy seeks to hike rates to fund self-insurance policies against wildfires)
- **Example**: Utah passed legislation in 2024 creating guidance for utilities to create self-insurance programs called Utah Fire Funds. Utilities must notify the Utah PSC to establish the fund and then get approval to add a surcharge to customer rates to build the fund over 10 years. The fire surcharge can be as much as $3.70 per month for an average residential customer. (*Utah Fire Funds*)

Utility Regulatory Strategies for Timely Cost Recovery

Credit ratings agencies and financial analysts consider how and when a utility requests cost recovery, as well as state commission decisions on recovery and return on equity levels, as part of their review of a utility's financial health. Regulatory strategies like deferrals of unexpected costs are important to the utility for financial health, especially post-wildfire events. More details about the carrying costs and rate options under these strategies are covered in Chapter Five: Cost Recovery Mechanisms.

- **Trend**: Utility practices like expedited cost recovery applications, also known as accounting petitions, are viewed by analysts as positive steps toward limiting financial risk. Analysts look for timely responses from utility commissions.
- **Implications:** Utilities and commissions may consider reviewing internal processes for cost recovery applications and other filings for efficiency.
- **Example:** The Idaho Public Utilities Commission (IPUC) issued an accounting order allowing PacifiCorp to defer increased wildfire insurance costs. The IPUC will consider the prudence of the costs in a later rate case.
- **Example:** The Florida Public Service Commission approved a 10-year Storm Protection Plan that includes an agreement for a limited proceeding to review recovery of incremental storm restoration costs. (PSC-2017-0272)

Cost of Capital Concerns

Wildfire risks have contributed to increased costs for utilities, as investors and lenders perceive higher risks. Investors are requesting higher returns, and lenders are increasing interest rates. For a review of the weighted average cost of capital, see page 10 in the NARUC *Cost of Capital primer*. Regulators may wish to increase their attention to cost of capital impacts.

- **Trend**: Credit metric deterioration, credit downgrades, and bankruptcy risks have impacted borrowing costs. “PG&E’s CEO Patti Poppe said during the company’s fourth quarter earnings call on February 13, 2025, that it was unlikely the company would see substantial improvements in its credit score this year as a result of the fires.” (*Utility Dive*)
- **Implications**: Ratepayers bear increased capital costs through increased rates, raising affordability concerns. Unexpected increases in capital costs impact liquidity, reducing, until the next rate case, the funds available for infrastructure upgrades and electric capacity projects, potentially slowing necessary maintenance, upgrades and investment.
- **Example**: Hawaiian Electric Company found its parent company’s credit rating below investment grade following the 2023 Lahaina fire. (Hawaii Lawmakers Wrangle Bills to Rescue Utility Hit by Wildfire Suits)
- **Example**: After jury awards against PacifiCorp for $90 million in June, 2023, the company found its outlook revised to negative. (PacifiCorp Downgraded To 'BBB+', Outlook Revised, *S&P Global Ratings*)
- **Example**: Edison International outlook revised to negative from stable due to possible risk that SCE’s equipment may be linked to the Eaton Fire. (Research Update: Edison International And Subsidiary, *S&P Global Ratings*)

Asset Valuation

Wildfire risks may prompt utilities to request changes to the value of their rate base assets. Assets like overhead lines and poles are typically depreciated in broad groups – meaning the utility applies a common average service life to all the assets in the group. See NARUC *Depreciation Expense primer* (p. 14) for typical groups of assets. In some cases, the utility may also break the asset groups up into vintages – meaning assets of similar age. When replacing overhead lines with underground lines, the impacts of the changes will appear in the comparison between the two groups of assets — overhead and underground — which regulators may wish to review more closely.

- **Trend**: Utilities, in their wildfire mitigation plans, are proposing measures to harden infrastructure (e.g., burying power lines or replacing wood with steel or composite poles) and may be retiring vulnerable assets early.
- **Implications**: Changing valuations affects utilities' financial statements and creditworthiness. Allowing recovery of accelerated depreciation for early retirement of assets while building out new, more expensive assets would place additional strain on customer bills.
- **Example**: Xcel Energy in Colorado proposed $9 billion in wildfire mitigation. (Wildfire Mitigation Plan 2025-2027, *Xcel Energy*)

03

Legislative Approaches

A key element of the risk for utilities is liability for damage caused by their equipment. An article from Cleary Gottlieb provides a thorough explanation of the various elements of liability and how it relates to wildfire risk. (**Utility Companies with Wildfire Liability Exposure Pose Unique Considerations for Investors, *Cleary Gottlieb***). Each state will have standards for civil and criminal liability, and changes to the legal standard require legislative action. Other approaches requiring legislation include issuing bonds or establishing financing mechanisms, also called securitization. Finally, as commissioners interact with legislators, the regulatory construct already in place in each state will affect the selection of appropriate legislative changes. Montana approached this challenge with a **legislative work group and report**, which was followed by the adoption of legislation in 2025.

Liability Caps and Limits

Wildfire-related liabilities have increased due in part to new interpretations of legal standards by the courts. (See Deep Dive: Wildfire Liability.)

- **Trend**: Utah was the first state to limit utility liability in its 2020 legislation (*Stateline*). In 2025, at least 12 states passed bills limiting utility wildfire liability. Similar proposals are under consideration in other states. (See Summary of Legislation)
- **Implications**: Expanded utility liability or the risk of expanded liability increases financial risk, discourages infrastructure investment, and raises questions about cost allocation fairness. At a special panel at the February 2025 NARUC Winter Policy Summit , an insurance executive stated that limiting the liability of utility companies may result in increased costs for home insurance and/or more home insurance companies leaving those states, which will make it more difficult for homeowners to buy insurance.
- **Example**: Utah's legislation protects companies from negligence charges if they have an approved wildfire mitigation plan in place, and limits damages victims can collect. (Utah Senate Bill 224).

Some states have passed laws addressing insurance options in their state, including self-insurance options for utilities. In 2025, Colorado's legislature was considering a proposal to create a re-insurance fund for homeowners that would cover catastrophic losses, thus limiting the need for the utility to act as the insurer of last resort.

- **Example**: Colorado's House Bill 1302, while it did not pass, proposed the creation of a state-run reinsurance fund that would cover catastrophic losses in the amount of $100 million.
- **Example**: Nevada's Assembly Bill 376 allows insurance companies to exclude wildfire from homeowner's insurance and allows the creation of group captives for homeowners.

Securitization Legislation

In some states, authorizing legislation allows utility commissions to approve utility requests to issue financing bonds through a special-purpose entity to cover costs from extraordinary events, which is a process known as securitization. Such bonds are guaranteed by ratepayer funds. Extraordinary events vary across the country, from catastrophic wildfires in the west, hurricanes and other severe weather events in the east, and stranded assets in the middle of the nation. *S&P Global* provides a helpful overview of securitization from 2018 to 2023, noting securitization activity in California, Louisiana, North Carolina, Indiana, Michigan, and Oklahoma. (Credit FAQ: The Rationale Behind U.S. Utility Securitization And Reasons For Recent Growth, *S&P Global Ratings*). New York, South Carolina, New Mexico, Kentucky, and Missouri have also made use of securitization to finance extraordinary costs.

In Colorado, Xcel Energy has requested approval of securitization as part of the review of its wildfire mitigation plan. Hawaii, Oregon, Washington, and Virginia all have securitization laws on the books.

- **Trend**: Utilities are increasingly asking for permission to securitize extraordinary costs. Estimated bill impacts for residential customers range from less than 1 percent in Michigan up to 7 percent in Louisiana.
- **Implications**: Although securitization is more complex to establish, the lower interest rates available under securitization more than offset initial costs and deliver savings for ratepayers. Securitization may also decrease tax liability.
- **Example**: PG&E 2022 Wildfire bonds (PG&E gets initial approval to securitize $7.5B of wildfire costs, despite ratepayer impact concerns, *Utility Dive*).

Wildfire Funds

Establishing shared liability funds like the California Wildfire Fund may potentially reduce utilities' financial exposure. Although the existence of the fund did support some improvement of utility financial health ratings, there is now concern that the fund is not large enough to respond to the expected liability. (Insurance — public or private — likely won't stop utility wildfire risks, experts say, *Utility Dive*)

- **Trend**: California is the only state with an established wildfire fund created via legislation that includes both ratepayer and shareholder funding.
- **Implications**: Wildfire funds are intended to stabilize utility financial health by providing a backstop for impacted customers to recover costs for damage. However, in a state with potentially uncapped liability, there is a risk that the funds available will not be sufficient to cover unexpected wildfire liabilities. (CPUC Affordability and Ratemaking)
- **Example**: The California Wildfire Fund supports certain investor-owned utilities in covering wildfire-related liabilities. It is capitalized with $10.5 billion from utility shareholders and $10.5 billion from ratepayer surcharges, totaling $21 billion. Utilities contribute to the fund proportionally to their customer base and have a deductible for each eligible wildfire event. Utilities must maintain reasonable insurance coverage to participate in the fund. Requirements around the related wildfire mitigation plans are described in that section of this workbook. (California Wildfire Fund)
- **Example**: A proposal for a national wildfire backstop fund from The Hamilton Project is another option that might decrease insurance costs. (Climate change and utility wildfire risk: A proposal for a federal backstop, *The Hamilton Project*)

04

Differing State Responses to Wildfire Financial Risk

States are responding to the financial risk of utility-caused wildfires in diverse ways, reflecting their unique political, economic, and environmental contexts.

- **California**: Established comprehensive funds (e.g., California Wildfire Fund) and regulatory oversight. Courts have applied strict liability standards that allow victims to sue utilities even without negligence. This approach, seen in recent lawsuits against Southern California Edison for the 2025 Los Angeles wildfires, emphasizes consumer protection but increases utility financial pressure. (California utility faces billions in claims for fire damage, *Reuters*)
- **Utah**: Focuses on customer-funded fire funds (e.g., Utah Fire Fund) and self-insurance options to manage rising insurance costs. This approach aims to balance utility stability with consumer affordability, as seen in Rocky Mountain Power's rate case requests. (This bill shifts costs to Utahns for wildfire insurance claims, *Salt Lake Tribune*)
- **Wyoming**: Limits liability for utilities that implement mitigation plans, reducing financial exposure and protecting utility solvency. (Wyoming shields utility companies from wildfire-liability payouts, *The Guardian*)
- **Oregon**: 2025 legislative proposals introduce funds for victims of wildfire contingent on not suing utilities (HB 3917) and safety certificates for compliant utilities (HB 3666), offering a unique balance between consumer protection and utility financial stability. (Oregon wildfire bills offer some financial protections to utility companies, *OPB)*

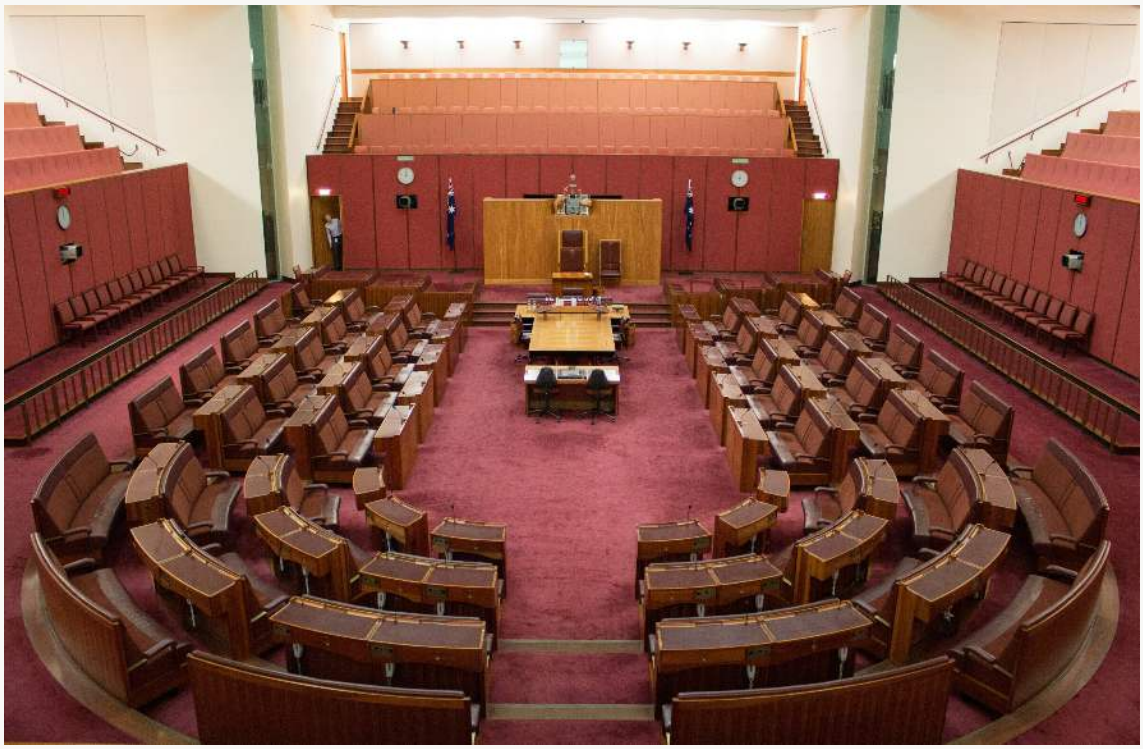
These varying approaches highlight the complexity of the issue and the need for tailored solutions that address both the financial stability of utilities and the protection of consumers and the environment, which have required time to develop solutions. Regulators and utilities are further constrained by the obligation to serve. Pacific Northwest National Laboratory is tracking the evolution of laws in this area through a database of wildfire mitigation plans that provides updated information.

Table 1: Summary of State Legislation Addressing Financial Risk Mitigation

State	Legislation	Key Features	Effective Date
Arizona	HB 2201 (2025)	Adds liability protections for utilities with wildfire mitigation plans approved by State Forester	Signed May 12, 2025
California	AB 1054, AB 111 (2019))	Reimburses claims, managed by CEA, overseen by Council, three participating utilities	July 12, 2019
California	SB 901 (2018)	Allows recovery of wildfire-related costs and expenses, subject to CPUC approval	January 1, 2019
Hawai'i	SB 897 (2025) Actual text	Directs PUC to develop rules determining an aggregate liability limit	July 1, 2025
Hawai'i	SB 1501 (2025)	Step-in agreements; power purchase costs trust fund; surcharge for reserve fees	June 6, 2025
Idaho	SB 1183 (2025)	Limits utility liability with approved wildfire mitigation plan	July 1, 2025

State	Legislation	Key Features	Effective Date
Kansas	HB 2107 (2025)	Limits punitive damages to $5 million	March 27, 2025
Montana	HB 490 (2025)	Utility not grossly negligent if it substantially followed its wildfire mitigation plan	Signed May 13, 2025
North Dakota	SB 2339 (2025)	Utilities not subject to strict liability for wildfire damages, requiring proof of negligence or intent. Allows voluntary WMPs as evidence of reasonable care.	Signed April 24, 2025
Oregon	HB 3143 (2023)	Securitization of costs incurred from an event with a federal or state declaration of emergency	July 31, 2023
Oregon	HB 3917 (proposed 2025)	Proposal creates fund for victims who do not sue, funded by utilities	Proposed, 2025
Texas	HB 145 (2025)	Allows self-insurance; limits liability unless utility is found negligent, reckless, or intentionally caused fire	June 20, 2025
Utah	SB 224 (2024)	Allows utilities to create Utah Fire Funds, funded by surcharges, caps noneconomic damages	May 1, 2024
Utah	HB 66 (2020)	Creates wildland fire protection plans and limits utility liability where the plans have been both approved and completed	May 12, 2020
Washington	HB 1032 (2023)	Requires wildfire mitigation plans designed by Office of Energy Resilience and Emergency Management	July 23, 2023

State	Legislation	Key Features	Effective Date
Washington	HB 1990 (2025)	Securitization of costs from declarations of disaster or emergency	May 17, 2025
Washington	HB 1522 (2025)	Requires commission approval of plans	July 27, 2025
Wyoming	HB 192 (2025)	Reduces liability if mitigation plans in place, limits damages	July 1, 2025

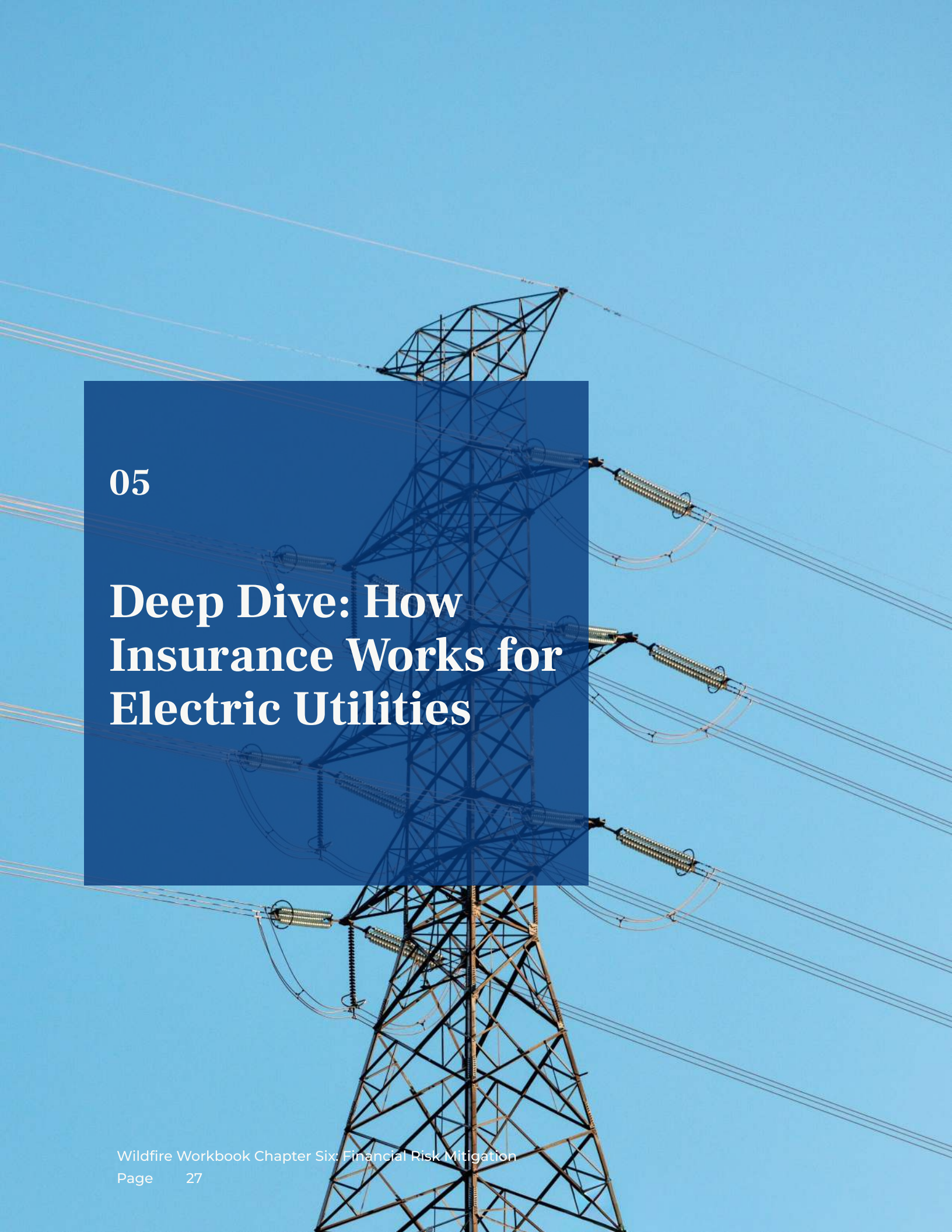


Key Citations

- Strategies to mitigate wildfire threats, *American Public Power Association*
- California PUC 2024 Report to the Legislature on Senate Bill 695, p. 47
- Overview and operations, *California Wildfire Fund*
- California Wildfires: Issues, Challenges and Lessons for Insurance and Reinsurance, *Actuaries Digital*
- Customers pay billions for wildfire prevention, *CalMatters*
- Wildfire liability exposure for utility companies, *Cleary Gottlieb*
- Disapproval Order by Utah Public Service Commission for Rocky Mountain Power's 2023 Wildland Fire Protection Plan, 4/25/2025
- 2024 Annual Report, *EIM*
- Allocating utility wildfire costs and options, *LAO*
- Montana State Legislature Energy and Telecommunications Interim Committee memo on Utility Wildfire Statutory Considerations, May 2024
- State-Based Efforts, Legislation Boost Local Risk Reduction, Resiliency to Wildfires, *MRSC*
- Cost of Capital and Capital Markets Primer, *NARUC*
- Depreciation Expense Primer, *NARUC*
- Database of Wildfire Mitigation Plans, *PNNL*
- Wildfire cost increases for California electric utilities, *Public Advocates*
- Stateline: Utilities seek liability protections amid intensifying wildfires
- Federal backstop for utility wildfire risk, *The Hamilton Project*

Key Citations (continued)

- As wildfires losses mount, will commercial insurers decline to cover utilities?, *Utility Dive*
- Insurance solutions for utility wildfire risks, *Utility Dive*
- Washington State Insurance Commissioner Report to the Legislature 2023 Liability Insurance Market Conditions



05

Deep Dive: How Insurance Works for Electric Utilities

This section explains how insurance functions for electric utilities, explaining the differences between self-insurance, captive, mutual, and commercial insurance, the role of reinsurance, how utilities balance property risk (first party) and liability risk (third party), and how utilities manage liability risk with insurance.

Insurance for Electric Utilities: Overview

Electric utilities face risks of physical damage to infrastructure (property risks) and of legal claims from incidents like wildfires or injuries (liability risks). Utilities purchase insurance to transfer some of these risks to insurers, protecting themselves from catastrophic financial losses. Utilities decide how much coverage to buy based on risk assessments, financial capacity, regulatory requirements, and cost considerations. As they make their decisions, utilities choose from a variety of insurance products or options that best meet their needs.

Key Risks Considered

- **Property Risks**: Damage to the utility's physical assets (like substations) from natural disasters (like hurricanes, earthquakes, wildfires) or operational failures (equipment breakdowns).
- **Liability Risks**: Financial awards in lawsuits for third-party bodily injury or property damage that result from incidents like wildfire, electrical contact, auto accidents, or environmental violations.

Key Takeaways

- **Insurance Options: Self-Insurance, Captive, Mutual, Commercial**: Self-insurance allows the utility to retain and manage some risk to help reduce costs for predictable losses; captives allow customized risk retention; mutuals offer cost-effective, tailored coverage; commercial insurers provide flexibility and high limits.
- **Reinsurance:** Insurance companies also purchase insurance through reinsurance markets. This enables insurers (including captives) to offer affordable, high-limit coverage, critical for catastrophic liability risks like wildfires, and supports self-insurance for larger exposures.
- **Balancing Risks**: Utilities use a mix of self-insurance, captive, mutual, and commercial insurance, supplemented by reinsurance and alternative mechanisms (like wildfire funds), to manage property and liability risks while controlling costs.
- **Strategic Decisions**: Risk modeling, financial capacity and regulatory requirements drive insurance decisions, with utilities prioritizing operational continuity (assets) and financial protection (liability).

Insurance for Electric Utilities: Overview

Utilities typically follow a structured process to identify property and liability coverage needs:

- **Risk Assessment**: Use actuarial models and catastrophe modeling to estimate probable maximum losses for property risks (e.g., asset replacement costs) and liability risks (e.g., lawsuit awards). Utilities may seek expert help from actuaries and insurance providers as they assess their risk.

Probable Maximum Loss (PML)
PML is a critical metric in insurance and risk management, estimating the maximum financial loss expected from a single catastrophic event, such as a wildfire, earthquake, or hurricane, assuming protective measures like safety systems function as intended. Unlike Maximum Foreseeable Loss (MFL), which assumes all systems fail, PML accounts for effective mitigation, making it a more conservative estimate. PML is used to assess underwriting risks, set insurance premiums, and inform disaster preparedness. It considers infrastructure value, event probability, potential damage, and liability exposure, typically expressed in dollars or as a percentage of total asset value.

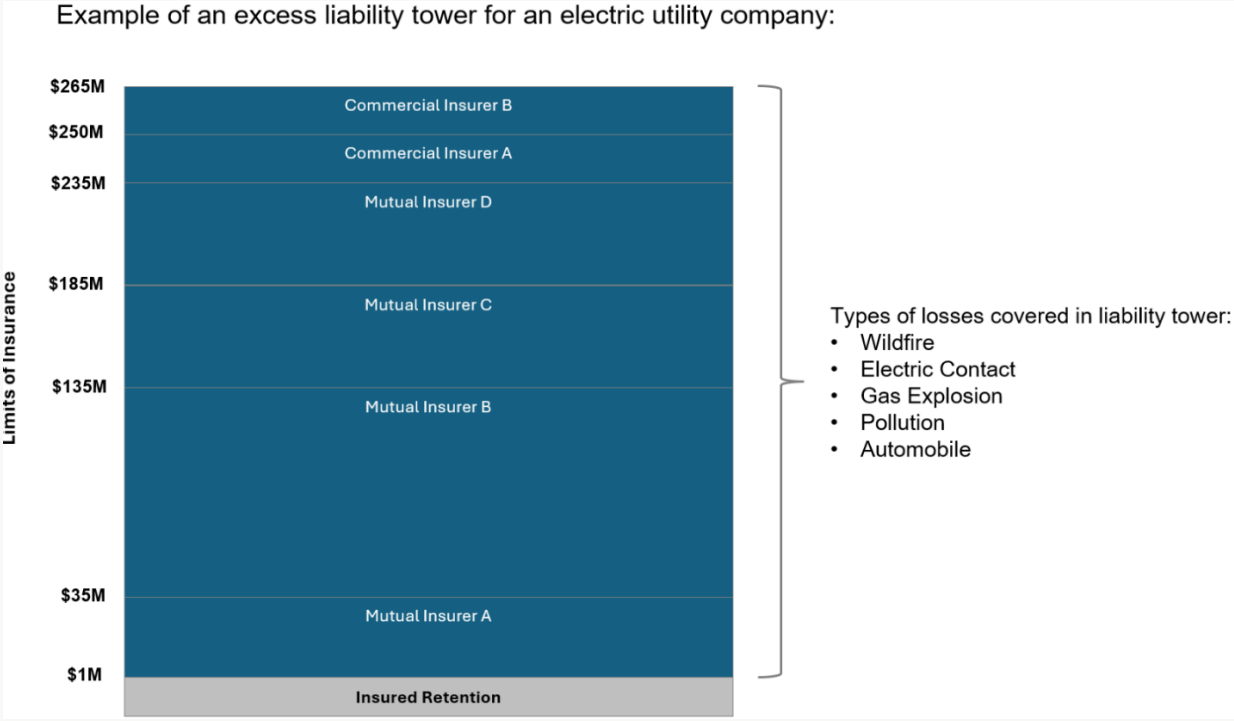
- **Financial Capacity**: Evaluate cash reserves and access to capital to determine self-insurance levels. Larger utilities typically retain more risk (via captive insurance or self-insurance) than smaller utilities or those that operate in the public sector.
- **Regulatory Mandates**: Comply with state and federal requirements that dictate minimum liability coverage.
- **Cost-Benefit Analysis**: Weigh premiums against the amount of coverage to be purchased and against potential losses. For property risks, utilities may accept higher deductibles, use captives, or self-insure to lower costs. For liability, they may prioritize higher limits to avoid catastrophic financial impacts.
- **Risk Mitigation**: Invest in grid hardening, cybersecurity, vegetation management, and other mitigation strategies to reduce both property and liability risks, lowering insurance needs and supporting self-insurance strategies.

Focus on Liability Insurance

In considering how to address its liability risks, a utility typically creates an excess liability tower (**Figure 2**), deciding how much risk can and should be transferred to the insurance market, and how much risk the utility should retain. These decisions are influenced by the availability of cost-effective insurance products in the market. Although insurers may be willing to provide liability insurance up to the amounts shown in the tower, the cost of such insurance may be prohibitive based on the geographic location of the utility and the unique perils they face.

Liability towers like the one shown in **Figure 2** are useful because each insurer has a maximum limit that it will provide for each insured party and type of risk. This excess liability tower example covers all liability risks, not just wildfire, which, while typical, is not always the case. The coverage shown is per occurrence. Once the utility has made claims that draw down the balance, the insurance may be subject to annual aggregate (total) limits and not automatically refilled, unlike policies for asset damages.

Figure 2



The first layer of a utility liability insurance tower is typically called self-insured retention (SIR). This is similar to a deductible and is typically required by the insurance provider. In some cases, this first layer may be a captive insurance company. Many utilities next join one or more mutual insurance companies (a mutual insurance company is owned by the members and has no shareholders). The top layers of insurance are typically purchased from commercial insurance companies.

For a utility with the liability tower shown above, Mutual Insurer A would cover $4 million of a $5 million loss. In a catastrophic event reaching $100 million, both Mutual Insurer A and B provide coverage. Any losses over $265 million would be covered by the utility (another form of self-insurance).

The utility may also need to address a sub-limit on or exclusion of types of risk in its liability tower. If the liability coverage from a particular company excludes wildfire liability, the utility will need to decide if it wishes to self-insure that shortfall, or if it wishes to go to the market and seek other providers. In one real-world example, the utility is purchasing insurance from nearly 25 different providers to get to the level of liability insurance needed, while in another real-world example, the utility splits off its wildfire liability completely, maintaining a separate wildfire liability tower.

Insurance Options: Self-Insurance, Captive, Mutual, Commercial

As utilities weigh self-insurance, captive, mutual, and commercial options, they consider each one's cost, coverage, and risk management. Below is a brief description of each option, an outline of advantages and disadvantages, and some examples of utility use cases.

Self-Insurance

- **Definition**: Self-insurance involves the utility setting aside funds to cover losses directly, without purchasing external insurance for certain risks. It's a form of risk retention where the utility acts as its own insurer. The utility must meet certain accounting standards to use this method.
- **Goals**: Reduces premium costs and provides flexibility in managing predictable or smaller losses, leveraging the utility's financial strength.
- **Advantages for Utilities**
    - **Cost Savings**: Eliminates premiums for certain risks, redirecting funds to reserves or risk mitigation.
    - **Control**: Utilities manage claims internally, avoiding insurer delays or disputes.
    - **Flexibility**: Suitable for high-frequency, low-severity risks (e.g., minor equipment failures, power lines) where losses are predictable.

- **Challenges**
  - **Financial Exposure**: Requires significant cash reserves to cover unexpected or large losses, risking financial strain.
  - **Regulatory Scrutiny**: Regulators may require proof of adequate reserves or risk management plans.
  - **Limited Scope**: May not be suitable for catastrophic risks (e.g., billion-dollar liability claims) depending on the size of the utility and its financial capacity.
- **Utility Use Case**: Self-insurance is often used for smaller property risks (e.g., routine maintenance losses) or initial layers of liability, with external insurance (captive, mutual, or commercial) for larger exposures. While commercial insurance for smaller assets like transmission and distribution lines and poles is technically available, high administrative costs and limited coverage options often lead utilities to self-insure a significant portion of the risk.

Captive Insurance

- **Ownership**: A captive insurer is a wholly-owned subsidiary created by the utility (or a group of utilities) to insure its own risks.
- **Goals**: Provides customized coverage and cost control by retaining and managing risks internally, with profits staying within the utility or parent group.
- **Advantages for Utilities**:
    - **Cost Control**: Captives eliminate commercial insurer profit margins, potentially reducing costs. Premiums paid to the captive remain within the utility's financial ecosystem.
    - **Customized Coverage**: Captives can tailor policies to specific utility risks (e.g., unique equipment or regional hazards) not adequately covered by commercial markets.
    - **Risk Retention Flexibility**: Utilities can choose how much risk to retain versus transfer to reinsurers, optimizing their insurance strategy.
    - **Tax and Financial Benefits**: Premiums paid to captives may offer tax advantages. Retained profits can build reserves for future claims or provide net income for the parent corporation.

- **Challenges**:
    - **High Setup Costs**: Establishing a captive requires significant upfront capital and ongoing management (e.g., regulatory compliance, actuarial expertise, investment strategy).
    - **Limited Capacity**: Captives may not have the financial capacity to cover catastrophic losses. Captives may purchase reinsurance for large risks like wildfire liability.
    - **Regulatory Oversight**: Captives are subject to insurance regulations, which vary by jurisdiction (e.g., domiciles like South Carolina or Vermont).
- **Utility Use Case**: Captives are often used for property risks or niche risks (e.g., cyber, environmental, wildfire) where commercial premiums are high or coverage is limited. Group captives, shared by multiple utilities, are common to pool resources and risks.

Mutual Insurance

- **Ownership**: Policyholders (e.g., utilities) own the insurer, acting as both customers and partial owners.
- **Goals**: Prioritizes policyholder benefits, focusing on long-term stability and tailored coverage. Surplus profits may be returned as dividends. Some mutual providers apply the dividends as a credit against the premiums.
- **Advantages for Utilities**:
    - **Cost Stability**: Premiums are set to cover losses and operational costs, often resulting in lower, more predictable costs, smoothing out the long-term cost of risk.
    - **Customized Coverage**: Mutuals, like AEGIS or EIM, offer policies tailored to utility-specific risks, such as grid failures or natural disasters.
    - **Risk Management Support**: Mutuals often provide risk engineering services, helping utilities improve infrastructure resilience (e.g., wildfire mitigation).
- **Challenges**: May require upfront capital contributions or active governance participation, which can be resource intensive.

Commercial Insurance

- **Ownership**: Owned by shareholders or investors, operating as for-profit entities.
- **Goals**: Aims to maximize shareholder profit, which can lead to high premiums and strict underwriting.
- **Advantages for Utilities**:
    - **Broad Market Access**: Commercial insurers offer high-limit policies suitable for large liability risks.
    - **Flexibility**: Easier to obtain coverage for diverse or emerging risks, like cyber liability, without ownership commitments.
- **Challenges**:
    - **Higher Costs**: Premiums are often higher and more volatile, especially after major claims or market shifts.
    - **Less Customization**: Policies are standardized, potentially leaving gaps in coverage for utility-specific risks.

Reinsurance: How It Works

Reinsurance is a risk financing mechanism allowing primary insurers (mutual, commercial, or captive) to transfer portions of their risk to reinsurers operating in larger markets. This protects insurers from catastrophic losses and enables utilities to access higher coverage limits.

- **Mechanism**:
    - A utility buys a primary insurance policy (e.g., $100 million for property damage).
    - The primary insurer (or captive) purchases reinsurance to cover losses exceeding a certain threshold (e.g., $50 million).
    - Reinsurers, like Swiss Re or Munich Re, assume this excess risk, spreading it across global markets.
- **Types**:
    - **Treaty Reinsurance**: Covers a portfolio of risks (e.g., all property policies for a utility).
    - **Facultative Reinsurance**: Covers specific, high-risk policies (e.g., wildfire liability for a single utility).

- **Benefits for Utilities**:
    - **Increased Capacity**: Reinsurance allows insurers to offer higher coverage limits, critical for liability risks like wildfire lawsuits that can exceed $1 billion.
    - **Premium Stability**: By spreading risk, reinsurers help stabilize primary insurers' finances, potentially reducing premium volatility.
    - **Access to Expertise**: Reinsurers often provide risk modeling and mitigation advice, benefiting utilities indirectly.
- **Impact on Captives and Self-Insurance**: Captives typically rely heavily on reinsurance for catastrophic risks due to limited capacity. Self-insured utilities may use reinsurance directly or indirectly through captives or other mechanisms to cover large losses.
- **Utility Perspective**: Reinsurance may be critical for securing affordable, high-limit coverage, especially in high-risk regions.

Resources for Insurance Options and Guidance

The following websites provide additional information on insurance options and guidance for electric utilities, with a focus on regulatory oversight, industry standards, and recent developments. Insurance organizations and insurance commissioner websites are included, followed by news sources and energy mutual insurance company websites with suggested prompts for further research.

- **Insurance Information Institute (**www.iii.org**)**: Offers resources including articles, research, infographics, and videos—to help consumers and businesses understand insurance, manage risk, and make informed decisions.
- **Suggested Prompt**: Search for “wildfires” to see recent wildfire facts and statistics, including information on the most costly, most destructive, and most deadly wildfires in the US.
- **Captive Insurance Companies Association (**www.cicaworld.com**)**: Offers resources on captive insurance, including setup costs and regulatory considerations.
    - **Suggested Prompt**: Search for “utility captive insurance case studies” to find examples of risk retention.

Insurance Commissioner Websites

- **National Association of Insurance Commissioners (**www.naic.org**)**: Provides state-by-state insurance regulatory insights, including utility risk management and reinsurance standards.
    - **Suggested Prompt**: Search for “utility insurance regulations by state” to understand regional differences.
- **California Department of Insurance (**www.insurance.ca.gov**)**: Offers guidance on utility insurance regulations, wildfire liability, and consumer protections. Resources include details on the California Wildfire Fund and market conduct exams for insurers like State Farm.
    - **Suggested Prompt**: Search for “utility wildfire liability regulations” to explore PG&E’s compliance requirements.
- **North Carolina Department of Insurance (**www.ncdoi.gov**)**: Offers information on utility insurance, including property and liability coverage requirements.
    - **Suggested Prompt**: Search for “utility insurance requirements North Carolina” to compare with California’s mandates.

- **Washington State Office of the Insurance Commissioner (**www.insurance.wa.gov**)**: Provides reports and regulatory guidance on utility insurance, including the 2023 report “New report on utilities’ liability market reveals increased costs, coverage exclusions” (https://www.insurance.wa.gov/news/new-report-utilities-liability-market-reveals-increased-costs-coverage-exclusions-01-18-2023), which surveys 36 utilities and highlights rising liability insurance costs, wildfire exclusions, and fewer insurers offering coverage due to regional risk categorization with states like California.

    - **Suggested Prompt**: Search for “Washington utility liability insurance 2023” to explore challenges faced by local utilities.

News Websites

- **Insurance Journal (www.insurancejournal.com)**: Covers utility insurance developments, including cybersecurity risks and regulatory updates. Recent articles discuss information on security events impacting insurers, which could affect utility coverage.
    - **Suggested Prompt**: Search for "utility insurance risks 2025" to explore emerging threats.
- **Los Angeles Times (www.latimes.com)**: Provides in-depth coverage of California's insurance landscape, including PG&E's wildfire liability and commissioner investigations into claim handling.
    - **Suggested Prompt**: Search for "PG&E wildfire insurance claims 2025" to track ongoing regulatory actions.

Energy Mutual Insurance Companies

- **Associated Electric & Gas Insurance Services (AEGIS) (www.aegislink.com)**: A member-owned mutual insurer providing property, liability, and excess coverage for utilities, with a focus on tailored solutions for energy sector risks. Offers risk engineering and loss control services.
- **Energy Insurance Mutual (www.eimltd.com)**: A mutual insurer tailored to utilities, offering customized property risk coverage for assets like transmission lines and substations. Offers risk engineering services to enhance infrastructure resilience against natural disasters.

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Deep Dive: Wildfire Liability Standards

Wildfire liability standards determine the extent to which individuals or entities can be held responsible for damages resulting from a wildfire. These standards vary significantly depending on the jurisdiction (both state and federal) and the specific circumstances surrounding the fire's origin. The following is only a generalized description of some of the standards and considerations that could arise. Always consult with legal counsel about any specific situation.

Common Liability Standards

Each state will have standards or definitions of liability in its laws, and the standards may or may not address the risk associated with wildfires.

- **Strict Liability**: Under this standard, a party is held responsible for damages regardless of whether they took reasonable precautions or acted negligently. This means the party is liable simply because their actions or operations initiated the fire. As an example, in California, courts have applied the standard of strict liability under the doctrine of inverse condemnation.
- **Simple Negligence**: This standard requires proof that the party failed to exercise reasonable care to prevent wildfire. If their behavior was negligent (i.e., they failed to trim vegetation frequently enough), they can be held liable. Many states have variations on simple negligence, sometimes holding utilities to an enhanced standard beyond reasonable care.

- **Negligence Per Se**: This standard applies where liability is established due to a party's violation of a statute or regulation intended to prevent wildfires, such as fire safety codes. The violation itself is considered evidence of negligence, simplifying the plaintiff's burden of proof.
- **Gross Negligence**: This is a higher standard than simple negligence. Under gross negligence, a party is only liable if they acted with reckless disregard for the potential consequences of their actions. Following clear plans and guidelines may help reduce the likelihood that a court would find the utility guilty of gross negligence.
- **Uncertain Liability**: In some states, there is no clear legal language specifically addressing liability for wildfires. This creates a degree of uncertainty regarding who is responsible for damages. In such states, plaintiffs may be more likely to rely on other causes of action like inverse condemnation. Description on the next page.

Who Can Be Held Liable?

Several parties can be held liable for a wildfire, including:

- **Individuals/Landowners**: Landowners can be held liable if a fire starts on their property and causes damage to others. In cases of catastrophic wildfires, individuals are unlikely to be able to pay for the damages that result from those fires, so individuals may not be sued at all. Smaller companies in a similar situation may quickly file for bankruptcy.
- **Utility Companies**: Utility companies can be held liable if their negligence, such as inadequate equipment maintenance, failure to trim vegetation, or failure to shut off power during high-risk periods, contributes to a wildfire.
- **Independent Power Producers (IPPs):** IPPs can be held liable if their negligence, such as inadequate equipment maintenance or failure to trim vegetation, contributes to a wildfire. IPPs typically operate power generation facilities (such as wind turbines, solar farms, or gas plants) and may own limited transmission lines to connect to the grid. Their liability exposure depends on the state's legal framework and the specific role they play in the electrical system.
- **Government Entities**: Governments may be held liable if their actions or inactions contribute to a wildfire, such as poorly managed public lands or negligence in firefighting efforts. Sometimes government entities are immune from liability.
- **Non-Governmental Organizations (NGOs) or Contractors**: Organizations or contractors involved in activities like prescribed burning can be held liable for damages from escaped fires, depending on the state's liability standards. Many states have passed laws limiting liability for organizations like homeowners associations conducting prescribed burns.

Other Causes of Action Against Utilities

In addition to negligence-based claims, utilities in some states may face other legal causes of action related to wildfires, including:

- **Trespass**: This can occur when a utility's actions, such as a fire sparked by its equipment, results in unauthorized intrusion onto another's property, causing damage. For example, if a fire spreads from a utility's power lines to private land, the affected property owner might be able to claim trespass in some states.
- **Nuisance**: A utility might be liable for nuisance if its operations, such as poorly maintained power lines or equipment, create a condition that substantially interferes with another person's use and enjoyment of their property. For instance, smoke, ash, or fire damage caused by a utility's infrastructure could constitute a private or public nuisance, depending on the scope of impact.
- **Inverse Condemnation**: In some jurisdictions, property owners can pursue inverse condemnation claims against utilities, particularly if the utility is publicly regulated. This claim arises when a utility's actions, such as a fire caused by its infrastructure, result in property damage akin to a government taking, requiring compensation because there were no formal eminent domain proceedings.
- **Breach of Contract or Regulatory Duty**: If a utility fails to comply with contractual obligations or state regulations (e.g., vegetation management standards or safety protocols), affected parties can pursue claims based on breach of these duties, particularly if such failures contribute to a wildfire.

Damages

In a civil lawsuit concerning a wildfire, the plaintiff asks for compensation for wildfire-related damages. As mentioned above, states may have specific laws about damages in these cases. These damages may include:

- **Economic Damages**: These cover tangible losses, such as damage to real property (e.g., homes, buildings) and personal property (e.g., vehicles, belongings). Costs might also include expenses for evacuation, temporary housing, or loss of income due to business interruption.
- **Non-Economic Damages**: These include compensation for intangible losses, such as emotional distress, pain and suffering, or loss of enjoyment of property. Non-economic damages might be limited unless bodily injury or death occurs.
- **Punitive Damages**: These can be awarded in cases of gross negligence or egregious conduct, such as a utility's reckless disregard for safety protocols. In most states, punitive damages require clear and convincing evidence and are intended to punish the liable party and deter future misconduct.

Important Considerations

- **State Variations**: Wildfire liability legal standards and causes of action are highly state-specific, with varying definitions of negligence, strict liability, and other claims like trespass or nuisance.
- **Mitigation Efforts**: A utility might not be held liable if a private party or government agency prevented it from accessing its facilities for fire mitigation. Some states have established liability limitations when a utility has a wildfire mitigation plan.
- **Statute of Limitations**: Civil actions, including those for trespass or nuisance, must be commenced within a specific timeframe, typically two years from the start of the fire, though this varies by jurisdiction.
- **Burden of Proof**: The level of evidence required to establish liability varies by claim. For simple negligence, plaintiffs must show a preponderance of evidence that the defendant's actions caused the harm. Negligence per se may lower this burden by using statutory violations as evidence. Gross negligence and punitive damages require a higher standard, often clear and convincing evidence of reckless or egregious conduct. Strict liability typically requires only proof that the defendant's actions caused the fire, regardless of intent or care.

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