Enhancing California's Resiliency to Natural Catastrophes

Senate Bill 254 (2025) Study Report

CEA CALIFORNIA EARTHQUAKE AUTHORITY™ | Wildfire Fund Administrator

April 7, 2026

Report Filing

This SB 254 Report is submitted to Governor Gavin Newsom and the Legislature pursuant to Public Utilities Code section 719, and in compliance with Government Code section 9795. A one-page summary of the Report has been distributed to Members of the Legislature via e-mail, with instructions on accessing an electronic copy of the full Report at this link: SB 254 Natural Catastrophe Resilience Study | CA Wildfire Fund. The full Report has also been delivered to the following:

Secretary of the Senate
Erika Contreras
The State Capitol, Room 307
Sacramento, California 95814

Chief Clerk of the Assembly
Sue Parker
The State Capitol, Room 319
Sacramento, California 95814

Legislative Counsel
Cara L. Jenkins
925 L Street, Suite 900
Sacramento, CA 95814

About the California Earthquake Authority (CEA)

CEA is a privately funded, publicly managed instrumentality of the State, created by the Legislature in the mid-1990s to assist in restoring the residential property insurance market during a period of instability following the 1994 Northridge earthquake. CEA insures nearly 1 million California homes against damage from earthquakes and has approximately $20 billion in claim-paying capacity. CEA's mission includes a commitment to earthquake education and seismic mitigation, accomplished through a retrofit grant program that has helped close to 40,000 California homeowners strengthen their homes against earthquake damage.

In 2019, the Legislature tapped CEA to act as the Administrator of the Wildfire Fund, a $21 billion claim-paying fund that insures California's three large investor-owned electric utility companies (IOUs) for liabilities arising from wildfires ignited by IOU equipment. The Wildfire Fund was established through the leadership of Governor Gavin Newsom and the Legislature under AB 1054 (2019, Assemblymembers Holden, Burke, Mayes; Senators Dodd and Hertzberg).

In 2025, the Legislature assigned CEA the task of conducting this Study and reporting on options to enhance natural catastrophe resiliency while meeting California's climate change and clean energy goals. CEA's dual roles as both an active participant in the property insurance market and as Administrator of the Wildfire Fund, allow CEA to bring a uniquely balanced perspective to the SB 254 Study.

Enhancing California's Resiliency to Natural Catastrophes

Senate Bill 254 (2025) Study Report

Submitted to:
The Honorable Gavin Newsom, Governor of the State of California,
and the Members of the California Legislature

Prepared By:

California Earthquake Authority
Administrator of the Wildfire Fund

Acknowledgments

A study with this extensive breadth and complexity of scope could not have been completed without the help of many people and organizations.

In Executive Order N-34-25, Governor Newsom directed the Department of Forestry and Fire Protection (CAL FIRE), the Office of Emergency Services (Cal OES), and the Office of Energy Infrastructure Safety (Energy Safety), and requested the California Public Utilities Commission (CPUC) and the Department of Insurance (CDI), to collaborate with one another and provide information and recommendations to the CEA, as Administrator of the Wildfire Fund, to support the preparation of the report as required under SB 254. Senior executives of these five named agencies and departments generously contributed their time and expertise as members of the Study steering committee and as subject matter experts. The formal written submissions of these agencies and departments are available at available at SB 254 Natural Catastrophe Resilience Study | CA Wildfire Fund.

Mark Ghilarducci and Paul Rosenstiel, Chair and Vice-Chair, respectively, of the California Catastrophe Response Council—the oversight body for the Wildfire Fund Administrator—also participated on the Study steering committee and gave wise counsel throughout the Study.

CEA also benefitted immensely from the many individuals and organizations who responded to the open call for contributions and gave kindly of their time and expertise in the many calls and focus group discussions conducted as part of the Study. Appendix A lists the contributing organizations to the Study and stakeholder submissions are available at the Wildfire Fund website.

CEA also wants to recognize the tremendous dedication and technical expertise brought to bear by the team of researchers, analysts, planners, and subject matter experts who worked tirelessly to complete their research and help CEA deliver this Report to the Legislature and Governor in the very short timeline as requested. Key contributing organizations and staff include:

***SB 254 Research Study Director:** Laurie A. Johnson*

***Aon:** Andy Neal, Paul Eaton, Alison Mangialardi, Ian McCracken, Nick Paterala Hai Pham, Benjamin Schuker, Defne Talu, Anna Vincent, Maria Ziskelevich*

***Ascent Environmental:** Erik de Kok, Curtis E. Alling, Tanya Jones, Michele Mattei, Luis Montes, Adam Qian, John Steponick*

***California Forward:** Nuin-Tara Key*

***California Polytechnic State University (Cal Poly) WUI Fire Institute:** Frank Frievalt*

***Climate Risk & Capital Advisory:** Laurie Schoeman*

***Farallon Strategies:** Michael McCormick, Danaka DeBow, Kif Scheuer*

***Insurance for Good:** Carolyn Kousky, Xuesong You*

***RAND:** Lloyd Dixon, Jamie Morikawa, James Anderson, Sampada Acharya, Phoebe Levine, Benjamin Miller, Nicholas Pace*

***Scidan Consulting Group:** Nathan Pollak, James MacDowell*

***University of Queensland:** Paula Jarzabkowski*

The SB 254 Study team, including the acknowledged individuals and organizations, undertook research, analysis, and stakeholder engagement in support of this Study, and participated in a convergence process that informed and assisted in generating the Policy Pathways, Strategies and Options set forth in Section 5 of this Report. The content of Section 5 is solely attributable to CEA and does not necessarily reflect the views of the California State Government contributors, and any of the individual consultants, stakeholders, advisors, representatives, or other subject matter experts who participated in the Study.

Table of Contents

Executive Summary **1**

1 Background & Context **4**

California's Catastrophe Response History 4
2017-2018 Wildfire Season 4
Inverse Condemnation 5
California's Response to the 2017-2018 Wildfire Season – AB 1054 6
California Wildfire Fund 8
January 2025 LA Wildfires 9
State Responds Again – SB 254 11

2 Study Mandate **13**

Study Team Structure and Scope 13
Stakeholder Engagement 14
State Government Involvement in the Study 16

3 Current State of California's Catastrophe Resiliency **17**

Call to Action 17
Compounding Risks: Climate, Development, and the Anatomy of Catastrophic Wildfire 18
Ratepayers, Policyholders, and Survivors 23
Electric Utility System 26
Property Insurance Market 27
Community, Landscape, and Property-Level Mitigation 28
The State's Growing Natural Catastrophe Loss Problem 30
Synthesis - An Interconnected System Under Compounding Strain 32

4 The Cost of Inaction **33**

Impacts on California Communities and Survivors 33
Impacts on Electric Utility Ratepayers 34
Impacts on Electric Utilities 35
Impacts on the Insurance Market 36
Synthesis – The Cost of Inaction is High and Growing 40

5 Pathways to Catastrophe Resiliency **41**

Pathway 1 – Commit to Community Wildfire Risk Reduction 44
Pathway 2 – Equitably Allocate Catastrophe Burdens 61
Pathway 3 – State Roles for Addressing Catastrophe Resiliency 87

6 Conclusions **103**

Assessing Cost-Benefit Tradeoffs of Different Policy Pathways 103
Monitoring Policy Effectiveness Over Time 105
Closing 107
Appendix A: List of Contributing Organizations A-1
Appendix B: List of Abbreviations B-1
Appendix C: Glossary C-1
Appendix D: Catastrophe Risk Modeling Definitions, Assumptions, Footnotes, and Disclaimers .. D-1

Figures

Figure 1 Number of Wildfire Mitigation Plans by Western U.S. State, 2019-2025 7
Figure 2 Expanded Wildfire Risk-Pooling Under AB 1054 8
Figure 3 Historical and Recent Fuel Accumulation in Yosemite Valley 20
Figure 4 Changes in Electricity Rates by State 23
Figure 5 Growth in Insurer-Initiated Non-Renewals and California FAIR Plan Policies since 2015 in ZIP Codes Facing 2019 Moratoria(2015-2021) 27
Figure 6 FAIR Plan policy growth since 2015 37
Figure 7 Probabilistic range of modeled outcomes for a More Durable Wildfire Fund, no risk transfer purchased 80
Figure 8 Probabilistic range of modeled outcomes for a More Durable Wildfire Fund, with risk transfer 82
Figure 9 Probabilistic range of modeled outcomes for a Durable Wildfire Fund with Liability Reform 86
Figure 10 Probabilistic range of modeled outcomes for State-backstop 92
Figure 11 Probabilistic range of modeled outcomes for State sponsored Insurer with Liability Reform 96
Figure 12 Probabilistic range of modeled outcomes for quasi-insurance utility liability program 97
Figure 13 Targeted Mitigation Impacts by % of Communities Targeted vs Randomized Mitigation Impacts 100

Tables

Table 1 Touchpoints with Key Stakeholder Groups 16
Table 2 All Wildfire Property Damage Losses 31
Table 3 California's Earthquake, Flood, Wildfire Property Damage Losses and Insurance Gap ... 32
Table 4 Triggers, Mechanisms, and Consequences 40
Table 5 Potential Community Wildfire Mitigation Financing and Funding Strategies 102
Table 6 Summary of Policy Pathways 104

Executive Summary

California has a long history of setting and achieving ambitious policy objectives to drive economic prosperity and growth to meet the needs of Californians. The State's current high priority needs include:

- Affordable, safe, reliable, and clean energy, provided by stable utilities able to do their part to help California meet its long-range climate and energy goals;
- Access to a robust, competitive, and fairly regulated property insurance market able to meet the recovery promise for all policyholders; and,
- Safe, catastrophe resilient communities.

Natural catastrophe resiliency depends on a healthy insurance market, fiscally sound utilities, and sustained investment in risk reduction. Climate change is intensifying pressure on all three of these resiliency objectives.

Climate change is driving increased catastrophic wildfire risk, compounded by forest fuel buildup after decades of aggressive fire suppression. California's insurance market is not meeting the needs of the most vulnerable regions of the State. At the same time, the state's electric utilities must balance among competing imperatives: delivering safe, reliable, clean, and affordable energy across a vast geographic landscape; bearing the constitutional obligation to pay for all property damage from wildfires ignited by utility equipment regardless of fault; and financing the grid improvements required to meet the State's ambitious climate and clean energy goals. At the center of these pressures are California consumers who need and deserve the level of affordability necessary to achieve the California promise of abundance and prosperity.

Enhancing California's catastrophe resiliency, while remaining committed to long-range climate adaptation and clean energy goals, will require integrated solutions that cut across all elements of governmental and private sector interests. In short, a Whole of Society approach to catastrophe resiliency.

The Legislature and Governor requested this report in September 2025 for one simple reason—there are no easy answers to achieving these objectives. There are, however, a range of available options that will enhance California's catastrophe resiliency over the near and long term. The research and analysis undertaken as part of this Study yielded a range of Policy Pathways, Strategies, and Options that will advance the natural catastrophe resiliency goals of SB 254.

This Report first provides background and context as a foundation for a candid assessment of California's current catastrophe resiliency. After acknowledging the cost of inaction, the Report sets out Policy Pathways, Strategies, and Options for the Governor and Legislature to consider.

The Policy Pathways range from more narrowly focused opportunities to address specific challenges, to more transformational solutions that tackle an array of interconnected policy issues but carry significant capitalization and financing requirements. No Pathway includes the option to simply fail to act. Failing to act will come at a significant cost. This Report seeks to quantify, to the extent possible, the ***Cost of Inaction*** as a baseline against which to measure the costs of solutions discussed within each Pathway.

Pathways to Catastrophe Resiliency

Pathway 1 – Commit to Community Wildfire Risk Reduction builds on the foundational work and investments California has made on landscape-scale fire management and resiliency and focuses on the need to bring targeted intensity to protecting communities most at risk for conflagrations. This Pathway sets forth Strategies and Options to:

- Establish statewide coordination for community wildfire mitigation;
- Stimulate community and home-level risk reduction to acknowledge the shared responsibility for wildfire risk reduction and community resiliency; and,
- Continue to prioritize electric utility safety and accountability by maintaining high-quality infrastructure safety.

Pathway 2 – Equitably Allocate Catastrophe Burdens offers options to implement balanced and equitable changes to the systems we use to socialize catastrophe losses in ways that help achieve existing and important societal objectives, including long-range clean energy and climate goals, and a strong and accessible residential property insurance market. This Pathway sets forth Strategies and Options to:

- Strengthen access to property insurance through enhancements to regulatory innovations that will improve insurance rate adequacy and industry stability;
- Address and solidify the FAIR Plan in the face of its unsustainable growth;
- Reform electric utility liability to rebalance costs between ratepayers, shareholders, and the broader public; and,
- Improve compensation mechanisms for survivors of utility-caused wildfires.

Pathway 3 – State Roles for Addressing Catastrophe Resiliency pivots to opportunities to consider more transformational changes by examining creative structures used around the world through which the State steps in to fill protection gaps that exist with existing loss management systems to achieve equitable allocations of catastrophe expenses, This Pathway sets forth Strategies and Options to:

- Establish a role for the State in financing catastrophe risk and recovery; and,
- Creating pathways and vehicles for funding community wildfire mitigation investments.

This call to action rests on the undeniable reality that climate change is accelerating, increasing the frequency and destructive force of natural catastrophes and conflagrations. Building on the Legislature's and Governor's initiatives to address these complex, interrelated challenges is essential to enhancing California's catastrophe resiliency.

SB 254 Study Report's Policy Pathways, Strategies, and Options

Pathway 1 – Commit to Community Wildfire Risk Reduction	
Strategy 1.1: Enhance the Statewide Approach to Driving Targeted Community Wildfire Risk Reduction.	Option 1.1.1: Strengthen and align statewide coordination for community wildfire mitigation. Option 1.1.2: Develop essential data and analytical infrastructure to identify and assess wildfire risk mitigation needs and track progress statewide. Option 1.1.3: Adopt and implement science-informed standards and programs to guide targeted, high-impact mitigation efforts in communities across the state. Option 1.1.4: Streamline administrative processes and procedures to maximize resources and expedite implementation of standards.
Strategy 1.2: Stimulate Community and Home Level Commitment and Shared Responsibility for Wildfire Risk Reduction and Community Resiliency	Option 1.2.1: Incentivize community wildfire mitigation planning and project-level implementation with financial resources and technical support. Option 1.2.2: Tighten the link between risk reduction and insurance. Option 1.2.3: Incentivize city and county pre-disaster recovery planning with financial resources and technical support.
Strategy 1.3: Continue to Prioritize Electric Utility Safety and Accountability	Option 1.3.1: Develop a risk tolerance standard with binding application to electric utility liability. Option 1.3.2: Preserve safety Certificate accountability and financial stabilization benefits. Option 1.3.3: Establish a statutory minimum safety weighting in electric utility executive compensation. Option 1.3.4: Establish a confidential reporting system with statutory safe-harbor protections.
Pathway 2 – Equitably Allocate Catastrophe Burdens	
Strategy 2.1: Strengthen Access to Residential Property Insurance for all California Homeowners and Renters	Option 2.1.1: Solidify the long-term effectiveness of the Sustainable Insurance Strategy. Option 2.1.2: FAIR Plan Reform - Return the FAIR Plan to a "market of last resort." Option 2.1.3: Institute a statewide insurance market health monitoring program. Option 2.1.4: Solve for underinsurance - Make the standard homeowners insurance product more responsive to catastrophe recovery needs. Option 2.1.5: Enhance market oversight following disasters.
Strategy 2.2: Reform Utility Liability	Option 2.2.1: Eliminate inverse condemnation for electric and gas utility-caused wildfires. Option 2.2.2: Modify the damages for which electric and gas utilities are liable outside of inverse condemnation. Option 2.3.3: Eliminate insurance subrogation.
Strategy 2.3: Efficiency and Compensation Improvements for Utility-caused Wildfires to Accelerate Recovery and Reduce Legal Costs	Option 2.3.1: Create a "fast pay" facility for survivors of utility-caused wildfires.
Strategy 2.4: Make a More Durable, Permanent Wildfire Fund	Option 2.4.1: Create a more durable Wildfire Fund with potential to use risk transfer. Option 2.4.2: Create a more durable Wildfire Fund with diversified funding sources. Option 2.4.3: Establish a more durable Wildfire Fund along with liability reforms.
Pathway 3 – State Roles for Addressing Catastrophe Resiliency	
Strategy 3.1. State Roles to Finance Catastrophe Risk	Option 3.1.1: Establish a State-administered wildfire liability insurance program for electric utilities. Option 3.1.2: Establish a State-backstop for electric utility wildfire liability with a residual utility self-insurance pool. Option 3.1.3: Establish a State-backed catastrophe reinsurance layer for the residential property insurance market. Option 3.1.4: Create a State-sponsored wildfire insurer.
Strategy 3.2: Statewide Funding for Community Wildfire Mitigation	Option 3.2.1: Develop a long-term funding and financing strategy for statewide community wildfire mitigation.

1 Background & Context

This Report was commissioned under SB 254 (2025, Senator Becker and Assemblymember Petrie-Norris). The scope of topics is broad and complex. The timeline was short—an acknowledgement that prompt action is required to maintain the State's momentum in addressing challenges facing California's utility sector and insurance market.

California's Catastrophe Response History

The SB 254 Study is one point on a longer throughline of California initiatives to address catastrophe recovery and resiliency. Following the devastation of communities from the 1989 Loma Prieta earthquake, 1991 Oakland Hills firestorm, and 1994 Northridge earthquake (to name just a few), the State took action to help impacted communities recover more quickly. The specific approaches varied, but in each case, the response also stimulated investment in forward-looking risk reduction and insurance market stabilization.

The Loma Prieta earthquake, for example, caused significant loss of life from the failure of elevated roads and bridges. In response, the State implemented a statewide ½ cent sales tax to generate recovery funds and launched a statewide bridge inspection and seismic retrofit program to mitigate against a recurrence of losses from seismically vulnerable public infrastructure.

The Oakland Hills firestorm spurred Federal, State, and local research and investigation to identify opportunities to improve prevention and suppression of urban conflagrations. The Northridge earthquake nearly collapsed California's property insurance market, precipitating a residential real estate and mortgage finance crisis. In response, the State established CEA to stabilize and restore the insurance, housing, and mortgage markets that deteriorated following that event.

In each of these examples, the State rose to meet the challenge and address serious market disruptions that frequently follow from natural catastrophes.

2017-2018 Wildfire Season

More recently, the State's catastrophe responsiveness was evident after the 2017-2018 wildfire season devastated several Northern California communities and forever altered the lives and homes of tens of thousands of survivors, destabilized California's major investor-owned utilities (IOUs), and precipitated Pacific Gas & Electric's (PG&E's) bankruptcy in January 2019.

The 2017-2018 fires marked an inflection point for California, raising broad public awareness of the magnitude of conflagration risk facing California, laying bare the devastating consequences for families and communities, and fundamentally altering the insurance industry's understanding and management of fire risk in high-risk areas in the California market. The impact on the utility sector, particularly on the IOUs, was immediate and severe. PG&E filed for Chapter 11 bankruptcy

protection, triggering cascading consequences: survivor claims and litigation were automatically stayed and subjected to the uncertainty of a bankruptcy proof-of-claim and negotiated reorganization process; ratepayers absorbed increased operational costs through higher rates; and PG&E's infrastructure investments to support clean energy goals stalled pending the reorganization's outcome. The other two major IOUs—San Diego Gas & Electric (SDG&E) and Southern California Edison (SCE)—also faced sharp credit downgrades that could have precipitated their own bankruptcies due to potential rating covenant defaults on billions of dollars in outstanding debts.[1] The catastrophic wildfires ultimately drove up energy costs and reduced affordability for customers throughout the state.

Inverse Condemnation

At the heart of the IOU credit concerns was California's inverse condemnation doctrine. *Article I, Section 19* of the California Constitution requires that "just compensation" be paid when private property is taken or damaged for public use. California courts have interpreted Section 19 to allow property owners to sue government entities under inverse condemnation for property damage caused by public improvements when the government takes or damages property without initiating formal eminent domain proceedings. Inverse condemnation imposes strict liability on public entities for damages caused by public works, regardless of negligence. The doctrine functions as a risk spreading mechanism, distributing the costs of damages caused by a public improvement or service across the community of beneficiaries.

In recent decades, California courts extended inverse condemnation to private IOUs, reasoning that although IOUs are not public entities, their facilities serve a public use and the costs of any damage incurred in the provision of that public use can be spread among ratepayers, consistent with the doctrine's risk-distribution rationale. California is the only state to have applied the strict liability standard of inverse condemnation to privately owned IOUs. This extension has had significant consequences for the state's energy system, particularly in the wake of catastrophic wildfires linked to utility infrastructure.

Inverse condemnation operates within a broader regulatory construct that also includes the *Utility Regulatory Compact* which grants public utilities exclusive territories within which to build and operate electric infrastructure, in exchange for agreeing to strict regulation and, critically for wildfire risk, a "duty to serve" all customers within their territory, regardless of cost or the increased wildfire risk from expanding infrastructure to serve urban development in higher-risk areas. IOUs are regulated by the California Public Utilities Commission (CPUC) to ensure safe, reliable, affordable service at reasonable costs, without excessive profits. These CPUC-regulated utilities operate the largest physical service areas in California and encompass most high wildfire threat areas in the state. Embedded in this construct is the "cost of service" model that allows a utility to recover through electricity rates the cost of building and maintaining the infrastructure

[1] Lin, J. (2019, January 29). The big problem this bankruptcy won't solve for PG&E. *CalMatters.* Available: https://calmatters.org/economy/2019/01/pge-bankruptcy-problems-wildfires-outcomes/

necessary to serve all customers within its territory. Under this model, wildfire-related costs are among those spread across customers through rates. These include both wildfire risk reduction infrastructure improvements (after CPUC approval) and liability payments from utility-caused wildfires if the CPUC determines that the utility acted prudently in managing its system. When the CPUC finds a lack of prudency, as it did in 2017 regarding SDG&E's 2007 Witch Fire, the liabilities are borne by utility shareholders. Together, wildfire-related risk reduction and liability costs have a major impact on the affordability of customer electricity bills.

These doctrines—inverse condemnation, the utility regulatory compact and the cost-of-service model—are at the center of the complex policy discussions that inevitably follow major wildfire catastrophes.

California's Response to the 2017-2018 Wildfire Season – AB 1054

In the aftermath of the 2017-2018 wildfires, the Legislature first passed Senate Bill 901 (2018, Senator Dodd), which, among other things, established a Commission study catastrophic wildfire cost and recovery (the SB 901 Commission). The SB 901 Commission's work was an important first step in developing policy solutions in these areas.

Before the SB 901 Commission could complete its final report, PG&E filed for bankruptcy in early January 2019, and credit rating agencies signaled looming severe downgrades of the other two large IOUs absent State action. The State faced the immediate prospect of bankruptcy or the severe impairment of the IOUs providing energy to up to 80% of California households, undermining the IOU's ability to access capital markets for grid investment and worsening customer bill affordability.

The Governor promptly established an Energy Strike Team led by his Cabinet Secretary and other senior staff, to bring together nationally recognized experts and evaluate options to address the crisis. The Strike Team generated a report addressing how to resolve the crisis while continuing to pursue long range clean-energy goals.[2] Drawing on the Strike Team's findings, the Governor partnered with the Legislature to enact AB 1054 (2019, Assemblymembers Holden, Burke, and Mayes; Senators Dodd and Hertzberg). AB 1054 implemented sweeping changes to the regulation of utility infrastructure safety, stimulated tens of billions of dollars in utility risk-reduction investments and created the California Wildfire Fund (Wildfire Fund).

During the same period, the California Wildfire & Forest Resilience Task Force was charged with developing an action plan to address the climate-change-driven increase in the frequency and severity of catastrophic wildfires. The January 2021 Action Plan set forth key goals that resonate in

[2] Office of Gov. Gavin Newsom. (2019, April 12). "Wildfires and climate change: California's energy future." *A report from Governor Newsom's Strike Force.* State of California. Available: https://www.gov.ca.gov/wp-content/uploads/2019/04/Wildfires-and-Climate-Change-California%E2%80%99s-Energy-Future.pdf

this Report: increasing mitigation, strengthening protection of communities, managing forests in balance with economic and environmental goals, and driving innovation and accountability.

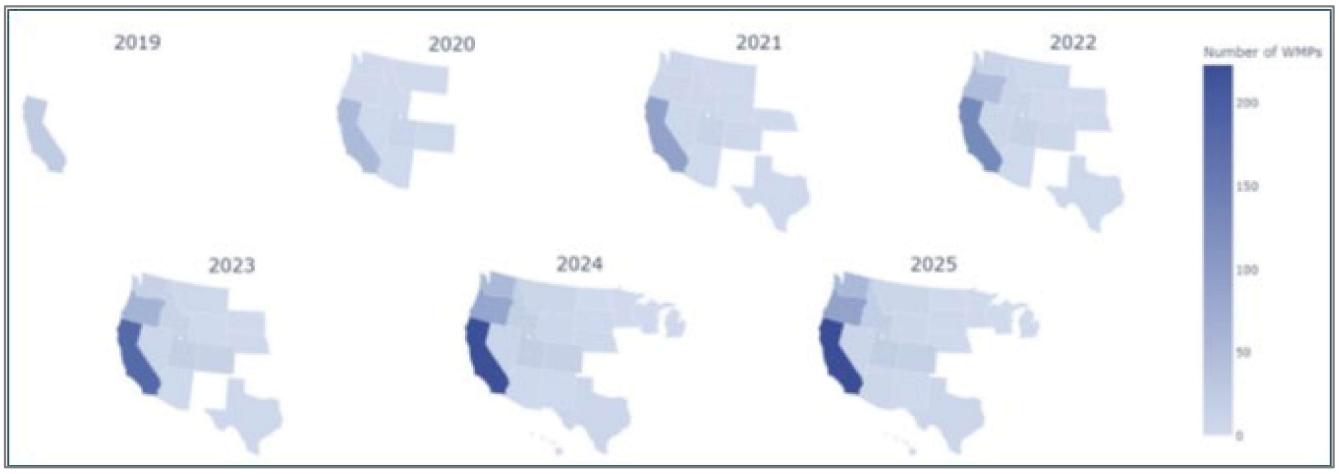
In 2018, California became the first state to require each utility operating in a high fire threat area to submit a detailed wildfire mitigation plan (WMP) describing its assessment of its wildfire risk exposure, the specific risk mitigations it would deploy, the metrics to evaluate mitigation effectiveness, and the timeline and budget for implementation.

The following year AB 1054 established the Office of Energy Infrastructure Safety (OEIS and commonly referred to as "Energy Safety") to oversee utility safety investments and WMP compliance. The State directed the IOUs to begin implementing their WMPs quickly and established cost recovery mechanisms outside the regular general rate case structure to expedite safety investments. IOUs were required to submit executive compensation plans to Energy Safety for approval and to expressly link executive compensation to safety. The State also created an enhanced enforcement structure for PG&E, including the potential for State takeover for significant ongoing safety violations (SB 350, 2020).

The State paired this aggressive strategy to accelerate IOU safety investments with the creation of a $21 billion Wildfire Fund, capitalized with equal contributions from ratepayers and shareholders, to help utilities pay claims from future fires. The IOUs' access to the Wildfire Fund and liability protections were also expressly linked to maintaining a "safety certificate" issued by Energy Safety. To earn a safety certificate, an IOU must meet strict wildfire mitigation and safety conditions, including requirements linked to the strength of the safety culture within the organization, integration of safety performance into executive compensation, and board-level safety supervision.

While California led the nation in requiring WMPs for electrical utilities, other Western U.S. states were quick to follow—reflecting both increasing risk exposure, driven by many of the same climatological and societal factors facing California, and a growing national awareness of the magnitude of catastrophic wildfire risk.

Figure 1 Number of Wildfire Mitigation Plans by Western U.S. State, 2019-2025



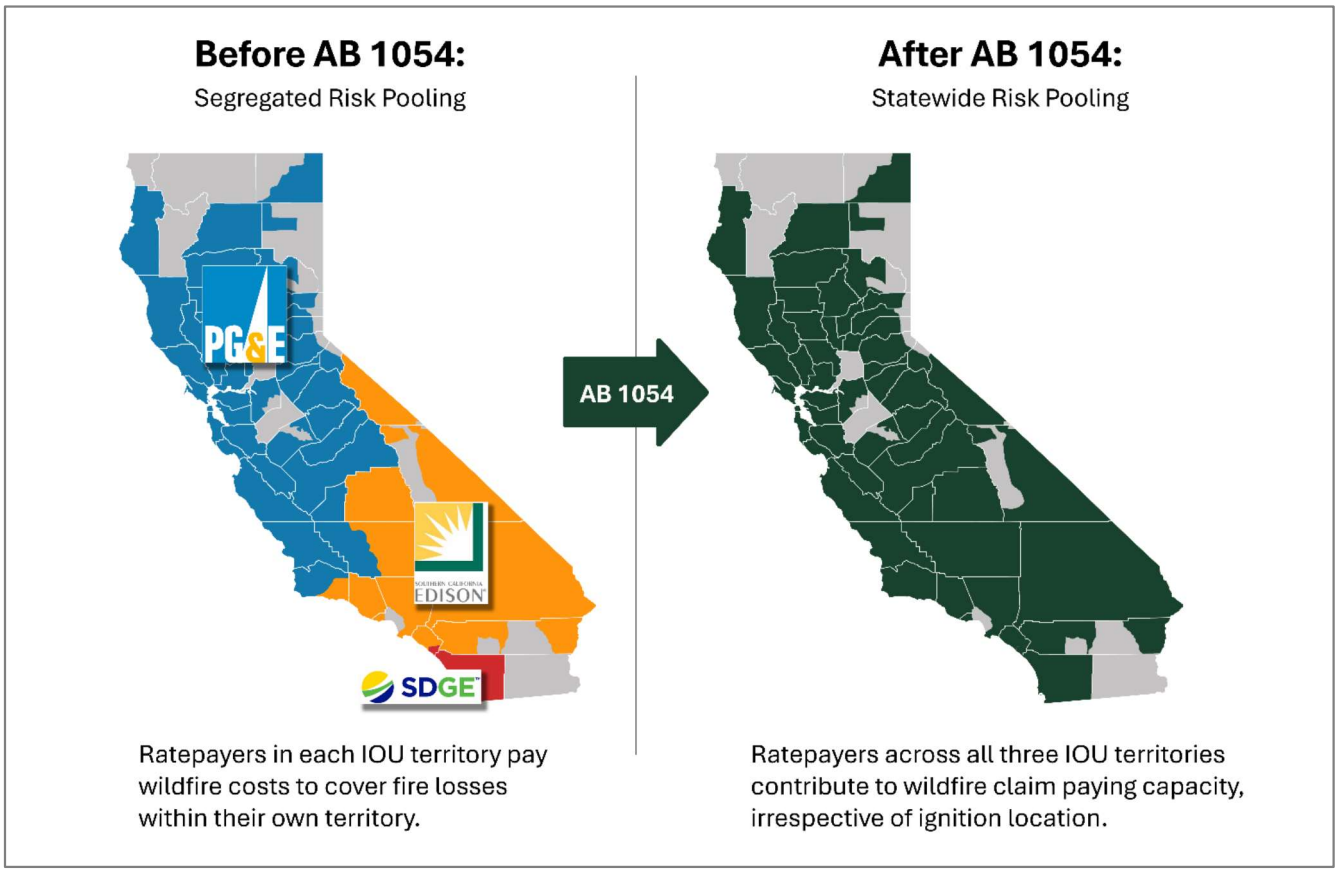
Source: Pacific Northwest National Laboratory. 2026. Current Best Practices on Wildfire Risk Reduction for Electric Transmission and Distribution Systems. https://www.pnnl.gov/sites/default/files/media/file/PNNL-Wildfire-Risk-Mitigation-Best-Practices.pdf.

California Wildfire Fund

The Wildfire Fund was established under AB 1054 to stabilize the IOUs' credit ratings by providing access to $21+ billion in claim-paying capacity—entirely capitalized by equal contributions from IOU shareholders and ratepayers—for liabilities arising from IOU-ignited wildfires. Credit stabilization was essential to allow the IOUs to access capital markets to invest in electric grid enhancements supporting safety and decarbonization, as required by State law, and to moderate the pace of electric bill increases. In the immediate term, the Wildfire Fund paved the way for PG&E to obtain the financing necessary to emerge from bankruptcy less than a year after the Fund was created.

As noted above, the electric utilities are held strictly liable for property damage from wildfires under inverse condemnation. They may also be held liable for non-property damages if the fire's ignition resulted from negligence. Whether ratepayers or utility investors—or both—shoulder wildfire costs is determined by a CPUC prudency review in a Catastrophic Wildfire Proceeding. A finding of prudent operation results in wildfire costs being allocated to all ratepayers within the utility's territory. Before the Wildfire Fund, this cost-spreading was confined to ratepayers within the individual utility's territory. The Wildfire Fund expanded that risk-spreading function by consolidating the ratepayers of all three large IOUs into a single risk-sharing pool.

Figure 2 Expanded Wildfire Risk-Pooling Under AB 1054



Source: California Earthquake Authority.

Collectively, the ratepayers within the three IOUs make up about 75% to 80% of California's population (about 11 million out of 13.8 million households).

Wildfire Fund capitalization was similarly spread across all three large electric IOUs and their territories. The three large IOUs elected to participate; smaller regional IOUs did not, and publicly owned utilities (POUs) were excluded given the shareholder capitalization requirements. IOU shareholders contributed an aggregate of $10.5 billion, allocated among the three large electric IOUs based on a statutory metric incorporating territory size, ratepayer population, and risk-related factors. The balance of funding came from ratepayers through a surcharge—or "non-bypassable charge" (NBC)—on monthly utility bills, approved by the CPUC in 2019 as "just and reasonable" costs, with collection spanning a 15-year period through the end of 2035.

The original goal of the Wildfire Fund was to create sufficient claim-paying capacity and low-cost wildfire insurance to cover the cost of IOU-linked wildfires for approximately 10 to 15 years. During that period, IOU safety investments, implemented under the guidance of Energy Safety and the regulation of the CPUC, were expected to reduce the frequency and severity of IOU-caused catastrophic wildfires. The Wildfire Fund was not originally designed to be a permanent insurance fund for the IOUs.

January 2025 LA Wildfires

The January 2025 Los Angeles Wildfires, simultaneously demonstrated the value of the Wildfire Fund as an interim resiliency tool, and the urgency of enhancing California's broader resiliency. These fires ignited during a single extreme, climate change-induced weather event.[3] Severe Santa Ana winds exceeding 100 miles per hour swept across portions of Southern California, which had received no material rainfall in the preceding nine months. The event ignited more than 14 wildfires. Two—the Eaton Fire and Palisades Fire—became urban conflagrations that exposed the extraordinary risk faced by densely built, sparsely mitigated communities. Together, the two fires killed at least 31 people, left tens of thousands of survivors in need of recovery, caused tens of billions of dollars in property damage, and produced an even greater estimated regional economic losses.

The Palisades Fire destroyed most of Pacific Palisades and much of Malibu, burning more 23,448 acres and destroying approximately 6,837 structures. The fire's origin was determined to be arson, and litigation has been filed against the City and County of Los Angeles under a variety of legal liability theories. The Palisades Fire has not implicated potential coverage from the Wildfire Fund.

[3] Barnes, Clair et al., (2025, January 28) *Climate change increased the likelihood of wildfire disaster in highly exposed Los Angeles area*. Imperial College London. Available: spiral.imperial.ac.uk/entities/https://spiral.imperial.ac.uk/entities/publication/ccd1fe4c-b00d-488c-9adc-b48e531a8172 publication/ccd1fe4c-b00d-488c-9adc-b48e531a8172

The Eaton Fire destroyed a significant portion of Altadena and surrounding communities. Although the investigation remains ongoing, indications emerged following the fire that an idle transmission line owned by Southern California Edison (SCE) may have been the ignition source. In late 2025, SCE initiated a wildfire recovery compensation program and other actions to begin settling liability claims, rendering the Eaton Fire a "covered wildfire" for the Wildfire Fund.

The total cost of the Eaton Fire remains unknown. Early estimates of insured losses exceed $15 billion; total losses are estimated to be well above that figure. Regardless of the final number, the magnitude of this single covered wildfire event raised immediate concerns about the adequacy of the Wildfire Fund's ability to continue performing its stabilizing function.

As with the 2017—2018 wildfires, the January 2025 LA Wildfires drew immediate attention from electric utility credit rating agencies, all of which noted the importance of State action to replenish the Wildfire Fund's claim-paying capacity given the risk of material depletion by Eaton Fire liabilities. The potential loss of claim-paying capacity presented significant near-term and long-term risks to ratepayers and energy affordability.

The insurance industry responded immediately to the massive influx of claims, surging personnel and infusing billions of dollars in insurance benefits to these communities. Insurance Commissioner Ricardo Lara announced that, as of December 31, 2025, the industry had already paid out $22.4 billion in benefits to survivors.[4] That number will continue to increase.

The insurance industry's response, however, has not been without significant challenges for survivors. The volume of claims severely taxed insurers' staffing and administrative capacity, generating a high volume of complaints. For survivors, some of these problems manifested as delayed and denied claims. A survey from the Department of Angels—a non-profit organization formed after the fire—documents numerous survivor complaints involving insurance denials, delays, underpayments, poor communication, and an overly complicated claims process.[5] The Legislature, with support from Insurance Commissioner Lara, responded in several ways, including enacting SB 495 (2025, Allen), which strengthened claims administration obligations and data-gathering requirements, most notably streamlining the process for survivors to obtain benefits for personal property lost in fires. Regulatory and legislative attention on improving survivor experiences with catastrophe claims administration remains an important ongoing focus.

The 2025 LA Wildfires also exposed the continuing problem of underinsurance following catastrophes. The underinsurance problem began emerging in the 1990s, when the insurance industry moved away from automatically providing guaranteed replacement cost coverage. By the 2000s, insurers were capping coverage for reconstruction based on systems and algorithms to

---

[4] California Department of Insurance. (2025, December 31). *$22.4 billion in insurance payments are leading source of multifaceted recovery in Los Angeles* (CA Consumer Alert, 031924). Available: https://www.insurance.ca.gov/0400-news/0102-alerts/2025/$22-4-Billion-in-Insurance-Payments-are.cfm

[5] Department of Angels and Embold Research. 2025 (June). *Survey of Wildfire-Impacted Areas*. Available at: https://static1.squarespace.com/static/6792c245599ed84703227b1e/t/686ed012e352a64a106e5b3d/1752092695458/Dept+of+Angels+Community+Voices+LA+Fire+Recovery+Report_Full+Results_June+2025.pdf

estimate replacement cost.[6] All catastrophe event has produced some degree of underinsurance, driven by post-disaster "demand surge" that increases the cost of labor and materials required to rebuild a disaster area. The 2025 LA Wildfires were no exception.

Insufficient and delayed claim payments following a natural disaster are common and create significant financial burdens for survivors. As financial difficulties mount, some survivors have struggled to make mortgage payments or have opted to walk away from their damaged property rather than rebuilding. Post-catastrophe mortgage forbearance programs can assist to temporarily stave off foreclosures, but that relief alone does not resolve the challenges arising from uncertainty over the timing and sufficiency of insurance benefits.

In addition to claims from their own policyholders, insurers also responded to a capital assessment from the California FAIR Plan Association (FAIR Plan), a residual program that serves as the "insurer of last resort" and had a high concentration of customers in the stricken communities. FAIR Plan was created to provide basic dwelling fire insurance for homeowners unable to secure coverage in the private market. All insurance companies licensed by the Insurance Commissioner to sell insurance in California are automatically "members" of the FAIR Plan Association and are subject to assessment if the FAIR Plan lacks sufficient claim-paying capacity to meet its insurance obligations, as was the case after the 2025 LA Wildfires. FAIR Plan issued a $1 billion assessment on all of California's admitted (i.e., State-licensed) insurers to ensure it could meet its claims obligations, with up to 50% of the assessment passed through to policyholders as "recoupment surcharges." Insurance companies absorb the first $500 million; the remainder of that first assessment, and the full amount of any future assessments exceeding $1 billion, are recoupable from policyholders through surcharges.

In short, the 2025 LA Wildfires were the latest severe shock to California's resiliency systems. The consequences demanded both immediate and long-term responses, which began quickly and remain ongoing.

State Responds Again – SB 254

Against that backdrop, the Legislature and Governor again partnered on legislation to address the consequences of this most recent utility-linked catastrophe by enacting SB 254. The Legislature ordered a natural catastrophe resiliency study and the preparation of this Report, recognizing the need to view resiliency more broadly than just utility-caused conflagrations. The scope of the problem touches the entire fabric of California society. Section 2 discusses the scope of the Study Mandate and the holistic, All of Government, All of Society approach taken to produce this Report and supporting study materials.

[6] Klein, K. S. 2023. "The Unnatural Disaster of Insurance, Underinsurance, and Natural Disasters." *Connecticut Insurance Law Journal* 30(1): 1-57.

SB 254 also addressed the immediate need for the Wildfire Fund to continue performing its utility financial stabilization function, establishing a segregated replenishment claim-paying account of up to $18 billion (the Continuation Account) to cover IOU-linked wildfires ignited on or after September 19, 2025, the effective date of SB 254.

When SB 254 is read in its context—as one step in the State's continuing effort to manage the new reality first revealed by the 2017-2018 wildfire season—the leading goals are clear. The State is seeking pathways to a future where Californians have:

1. Affordable, safe, reliable, and clean energy, provided by stable utilities able to meet long-range climate and energy goals;
2. Access to a robust, competitive, and fairly regulated property insurance market able to meet the recovery promise for all policyholders; and
3. Safe, catastrophe-resilient communities.

This Report is the product of intensive study and analysis over a compressed timeframe. It sets forth a spectrum of concrete policy pathways and strategic options for the Governor and Legislature to consider. There are no easy solutions, but there is clear opportunity to enhance California's natural catastrophe resiliency.

2 Study Mandate

The scope of the SB 254 Study is codified in Public Utilities Code section 719(c), which directs the CEA in its capacity as Administrator of the Wildfire Fund, to prepare and submit to the Legislature, and to the Governor, a "report that evaluates and sets forth recommendations on new models or approaches that mitigate damage, accelerate recovery, and responsibly and equitably allocate the burdens from natural catastrophes, including catastrophic wildfires, earthquakes, and other natural disasters, across stakeholders, including insurers, communities, homeowners, landowners, governments, electrical corporations, and local publicly owned electric utilities, to complement or replace the (Wildfire) Fund."

Given the expansive scope of the Study Mandate, CEA adopted a structured study approach. The approach was designed to seek out and consider information, feedback, market analyses, and financial modeling from a broad cross-section of stakeholders, government agencies, market participants, and natural catastrophe subject matter experts. CEA has endeavored to capture all sources and written materials gathered in the development of this Report and will assemble those materials into volumes of Study Materials to be posted to SB 254 Natural Catastrophe Resilience Study | CA Wildfire Fund. This Report is intended to stand as the response to the Study Mandate, including the Policy Pathways, Strategies and Options set forth in Section 5.

Study Team Structure and Scope

SB 254 specified that the Study provide recommendations on at least 10 topics (listed below). CEA divided these topics into five workstreams, each charged with conducting research and stakeholder engagement. The workstreams drew appropriate subject matter expertise to each element of the Study. After completing their research and stakeholder engagement, each workstream contributed its findings and expertise to inform this Report and assist CEA, as the Wildfire Fund Administrator, in developing the Policy Pathways described in Section 5.

- **Risk Reduction and Financing Workstream:** Focused on options for wildfire risk reduction programs, particularly to mitigate wildfires from becoming conflagrations, additional mitigation measures and technology solutions to reduce wildfire risks, and the nexus between risk reduction, insurance pricing, land use planning, and mitigation funding.
- **Utilities Liability Workstream:** Focused on evaluating the liability and compensation system for utility-caused wildfires, the current liability regime in California as compared with other states and countries, and the financial impacts of liability exposure on utilities and their ratepayers.
- **Utilities Risk Reduction Workstream:** Focused on evaluating the frameworks, investments, and institutional arrangements governing utility-specific wildfire risk reduction and identifying opportunities to strengthen how utility mitigation measures are assessed, deployed, and measured within a broader, statewide response to catastrophic wildfire risk.

- **Property Insurance Workstream:** Focused on evaluating the availability of property insurance in California, closing coverage gaps and speeding recovery, tightening the link between insurance risk reduction, and supporting the recovery of vulnerable populations.
- **Financing Catastrophe Recovery Workstream:** Focused on evaluating alternative structures to social risk of damage from natural catastrophes, financing, insurance, and other mechanisms to expedite community recovery and compensation for property loss, and options for new models to complement or replace the Wildfire Fund.

Stakeholder Engagement

SB 254 directed CEA to solicit feedback from stakeholders including, but not limited to, ratepayer advocates, insurance policyholder advocates, electrical corporations, insurance companies, and claimant attorneys. The legislation also identified communities, homeowners, landowners, governments, and publicly owned electric utilities as important stakeholder groups. Recognizing the short timeline, CEA developed a three-part, multi-modal engagement strategy.

Open Call for Stakeholder Contributions

CEA began the Study process with an open call for written contributions to identify and gather opinions and recommendations from subject-matter-experts (SMEs) and interested parties for subsequent engagement efforts on the broad range of Study topics.

In response to the open call, CEA received over 80 early abstracts, final submissions, and supplemental materials from a total of 65 unique organizations or individuals, covering all the stakeholder groups named in SB 254. The full suite of submissions was posted to the Wildfire Fund website and will be archived there as part of the Study materials. The submissions also became a foundational element of the workstreams' efforts.

Workstream Research, Engagement and Synthesis

Each workstream developed research and engagement plans centered on analysis of the written submissions and collection of more detailed views and suggestions. Engagement approaches varied: some workstreams focused on individual and small-group interviews, while others hosted subject-focused group discussions supplemented with SME input and additional research. CEA and the workstreams tracked stakeholder touchpoints. Table 1 summarizes touchpoints for key stakeholder groups and a list of all contributing organizations is available in Appendix A.

Public Utilities Code Section 719(c)

The report shall include specific recommendations, including, but not limited to, on all of the following:

1. **Accessibility and affordability of property insurance** in light of the accelerating costs of climate change-induced and other natural catastrophes.
2. **An evaluation of alternative structures to socialize risk of damage from natural catastrophes**, that most efficiently and expeditiously compensate those harmed while maintaining accessibility to property insurance and access to safe, affordable, and reliable energy for Californians.
3. **Additional mitigation measures and technology solutions** to reduce the risk of ignition of wildfires and limit the spread of and damage from wildfires.
4. **Financing, insurance, and other mechanisms to expedite recovery** for communities impacted by natural catastrophes, including wildfires, and to expedite compensation for property loss.
5. **Additional measures to benefit ratepayers** through reducing costs caused by fiscal uncertainty while holding electrical corporations accountable for improving safety and reducing the risk of catastrophic wildfires.
6. **Options for enactment of a streamlined, low-cost mechanism** to provide injured parties full compensation for damages resulting from wildfires.
7. **An analysis of the potential benefits and potential negative impacts on homeowners** related to reasonable limitations on changes to recoveries in wildfire litigation arising from ignitions caused by electrical or gas utility infrastructure, including, but not limited to, restrictions on the recovery of attorney's fees, limitations on economic and noneconomic damages, including claims by insurers, limitations on public entity claims, limitations on claims by those outside the fire perimeter, and aggregate limitations on liability per event.
8. **Options for enactment of programs to reduce the risk of wildfires spreading** and becoming high-severity catastrophes, including improved state and local catastrophic event response capability, home fire risk reduction standards, vegetation management practices, and communitywide wildfire hardening requirements.
9. **Options for reducing the economic damage resulting from wildfires** and potentially other catastrophic natural disasters, including minimum insurance requirements, mechanisms to ensure insurance rates appropriately account for home and community hardening measures taken, special assessments to support infrastructure investments and emergency response, and improved land use planning.
10. **Options for new models to complement or replace the fund**, such as state-supported property insurance, or reinsurance, or both insurance and reinsurance, for wildfires and potential catastrophic natural disasters; a mutual wildfire insurance fund; a publicly supported financial safety net to enhance long-term resilience and utility and insurance rate affordability; and improvements to the fund to enhance its durability.

Informational Webinars

CEA also hosted three informational webinars—on December 10, 2025, February 6, 2026, and March 6, 2026—to provide updates on Study progress, gather additional input, and answer questions about the process. Nearly 1,000 participants attended across all three sessions; slide decks and recordings are available at SB 254 Natural Catastrophe Resilience Study | CA Wildfire Fund.

Table 1 Touchpoints with Key Stakeholder Groups

SB 254 Mandated Stakeholder Groups

Engagement Type	Ratepayer Advocates	Insurance Policyholder Advocates	Electric Corporations	Insurance Companies	Claimant Attorneys
Open Call Submissions	11	8	8	6	1
Workstream Engagements (Meetings, Focus Groups, Written)	8	12	20	21	2
Total 97	**19**	**20**	**28**	**27**	**3**

Other Key Stakeholder Groups

Engagement Type	Other Legal + Regulatory Advocates	Survivor Orgs/Reps	Local Gov't/ Tribes	Public Utilities	Gas Utilities	Financial Sector	Industry/ Technology	Other Private Enterprise	Climate Resilience/ environment	Philanthropy
Open Call Submissions	24	9	9	6	2	1	9	9	13	0
Engagements (Meetings, Written)	34	7	9	10	8	15	2	7	24	4
Total 202	**58**	**16**	**18**	**16**	**10**	**16**	**11**	**16**	**37**	**4**

State Government Involvement in the Study

SB 254 directed CEA to work in consultation with the California Public Utilities Commission (CPUC), the Office of Energy Infrastructure Safety (Energy Safety), the California Department of Insurance (CDI), the Governor's Office of Emergency Services (Cal OES), and the Department of Forestry and Fire Protection (CAL FIRE). Governor Newsom's Executive Order (N-34-25), issued on September 30, 2025, called for a "whole-of-government response" and requested that the agencies and departments collaborate with one another, and provide information and recommendations to the Wildfire Fund Administrator on a continuous and ongoing basis, and no later than January 30, 2026.

CEA invited each named State agency or department to appoint two representatives to a Study steering committee to coordinate with CEA on agency contributions and advise on the Study approach and process. The steering committee met regularly over the roughly seven-month Study period, and agency representatives also contributed as SMEs throughout. The final written statements submitted by each of the five named agencies and departments are archived at the Wildfire Fund website.

3 Current State of California's Catastrophe Resiliency

Call to Action

This Report starts with a candid description of the current state of California's catastrophe resiliency, with an emphasis on the financial systems we have used for socialization of the cost of recovering from catastrophic wildfire—the insurance industry and electric utilities sector. As already noted, the current state of the utilities sector is unstable and at risk. Similarly, the property insurance market's willingness to serve higher risk areas of the State is limited and fragile. And while the State has made progress on reducing our risk, much more needs to be done.

Before diving deeply into the current state of catastrophe resiliency in California, we must first acknowledge the impact of climate change. Much of the western United States is prone to wildfire, and many of its landscapes rely on periodic low-intensity fire for ecological health and regeneration. But the fire problem the region faces today is not the historical norm. Climate change is producing hotter, drier conditions, compressing precipitation into shorter windows, and extending the period each year during which fire ignites readily and resists suppression. These shifts, compounded by a century of fuel accumulation in fire-adapted landscapes and decades of development in the wildland-urban interface (WUI), have driven a sharp increase in the frequency and destructive scale of wildfire events across the West. The speed and spread of fires is increasing, and so is the risk of damage. Recently, no state has felt more of that impact than California, where the fires that now threaten communities are not primarily backcountry vegetation fires but events capable of destroying thousands of structures in a matter of hours.

The consequences for Californians are already severe and worsening. Catastrophic wildfire is imperiling more communities, making property insurance increasingly inaccessible for millions of homeowners in high-risk areas, and driving electricity costs that have diverged sharply from the national trend. Wildfire survivors face years of delayed recovery, compounded by widespread underinsurance and, where utility liability is involved, protracted litigation. These burdens fall most heavily on lower-income households.

The financial systems the State relies on to manage these consequences must be stable enough to absorb them. It is not in California's or ratepayers' interest to have a financially weakened or bankrupt utility providing our electricity, regardless of whether that utility is publicly owned or investor owned. There are many reasons, including:

- A financially distressed utility has fewer resources to support safe operations, potentially compromising service, responsiveness and attention to long-term needs like investing in clean energy goals;
- A financially distressed or bankrupt utility also faces higher costs to operate, to borrow, to attract capital and to execute long-term contracts (e.g., for power), and all those costs are passed on to ratepayers;

- A bankrupt utility must answer to and operate under the direction of a bankruptcy judge whose principal responsibility is to impaired creditors, not utility customers, the Legislature, or regulators. To every extent possible, the State should avoid testing the viability of an electric utility attempting to operate for an extended period while in bankruptcy.
- Wildfire survivors are directly harmed by the prolonged uncertainty and diminished recoveries that inherently result from a bankruptcy reorganization.

To avoid these consequences, the State must develop a durable way for utilities to avoid bankruptcy if possible, and to promptly exit if bankruptcy becomes unavoidable.

California's property insurance market acts as the "financial first responder" after catastrophic loss events, yet admitted market insurers have contracted sharply from high-risk areas, and the FAIR Plan, which was never designed to take a primary role in the California property insurance market, has become the de facto primary market in the communities most exposed to catastrophic wildfire. Its $370 million surplus was a fraction of the $2.35 billion in net claims from the January 2025 Los Angeles wildfires, costs that will be partially borne by policyholders across the state. Widespread underinsurance compounds the problem: post-disaster assessments consistently find that a majority of homeowners in total-loss wildfire events lack adequate coverage to rebuild,[7] leaving survivors to bridge the gap with personal resources many do not have. Regulatory reforms are underway and are providing limited stability, but should the risk profile change with the climate and admitted insurers start to exit the market, the remaining insurers' share of future FAIR Plan assessments will rise with each departure, accelerating the cycle. A residual program operating as the de facto primary insurer in high-risk communities cannot fulfill the recovery promise that property insurance exists to make.

The starting point for consideration of pathways and strategies for greater resiliency is acknowledging the status quo is not working. California has confronted systemic challenges of comparable complexity before and has built durable institutional responses.[8] The question is whether the State will act with the same resolve now or wait for the next catastrophic fire season to respond.

Compounding Risks: Climate, Development, and the Anatomy of Catastrophic Wildfire

California's wildfire problem is not a single phenomenon with a single cause. It is the product of compounding forces increasing the risks: a changing climate, a century of suppression-oriented

[7] *A brief history of post-wildfire underinsurance; Attempted and potential solutions: Hearing on Wildfire Disaster Relief and Recovery Status,* State Board of Equalization (2025, May 28) (testimony of Amy Bach, United Policyholders). Available: https://uphelp.org/wp-content/uploads/2025/06/BACH-Underinsurance-Panel-5-28-25.pdf

[8] As an example, after the 1994 Northridge earthquake, insurers suffered unprecedented residential earthquake losses, pulled back from writing homeowners policies, and triggered a similar availability crisis. In response, the Legislature created the California Earthquake Authority in 1996, as a publicly managed, privately funded earthquake insurer that effectively stabilized the home insurance market.

land management that has loaded fire-adapted landscapes with fuel, development patterns that have placed growing concentrations of people and property in fire-prone areas, and the physical dynamics by which ignitions escalate into urban conflagrations. How these forces interact is essential context for the policy and financial challenges this Report addresses.

Climate Change is Systematically Worsening Fire Conditions

As noted above, climate change is systematically worsening fire conditions across the western United States and in fire-prone regions globally.[9] Rising temperatures, prolonged drought, and compressed cool-season precipitation are lengthening the annual window during which fuels are dry enough to ignite easily and fire spreads faster than suppression resources can contain it.[10] The pattern is not confined to any single state. Large wildfires have become more frequent and larger across the West, with states including Oregon and Colorado experiencing record-setting fire seasons since 2020.[11] The same climate-driven signal appears internationally: Australia's 2019-2020 "Black Summer" bushfires and Canada's record 2023 fire season have both been linked by attribution studies to human-caused warming.[12]

In California, the onset of the summer fire season has shifted earlier by at least one month[13] across much of the state since the 1990s, and by roughly two and a half months in some northern mountain regions.[14] Average annual acres burned have increased by a factor of four or more relative to the 1990s baseline.[15] These changes reflect both local and global structural shifts in fire-prone landscapes,

---

[9] Abatzoglou, J.T., A. Park Williams. 2016 (October) "Impact of anthropogenic climate change on wildfire across western U.S. forests." PNAS. National Academy of Sciences. Available: https://www.climatesignals.org/sites/default/files/reports/climate_signals_abatzoglou_and_williams_2016_pnas.pdf; U.S. Global Change Research Program. 2023. Fifth National Climate Assessment. Available: https://toolkit.climate.gov/NCA5.

[10] Higuera, P., et al. 2023 (March). "Shifting social-ecological fire regimes explain increasing structure loss from Western wildfires." *PNAS Nexus*. National Academy of Sciences.; U.S. Global Change Research Program. 2023. Fifth National Climate Assessment. Available: https://toolkit.climate.gov/NCA5.; Williams, J.N., et al. 2023 (January 15). "High-severity burned area and proportion exceed historic conditions in Sierra Nevada, California, and adjacent ranges." Ecosphere. Vol 14. Issue 1. Ecological Society of America.

[11] Gifford, T., E. Barbier. 2025 (March). *Battle Scars: Trends in Wildfire Size and Impact across Colorado*. Regional Economic Development Institute Report. Colorado State University. Available: https://csuredi.org/wp-content/uploads/2025/04/REDI_Fire_March25.pdf.; Oregon Department of Forestry. 2022. *Oregon's Wildfire Risk: A Statewide Assessment*. Available: https://www.oregon.gov/odf/Documents/wildfire/oregon-wildfire-risk-statewide-assessment.pdf. Accessed: March 2026.

[12] Canadell, J.G., Meyer, C.P.(., Cook, G.D. et al. "Multi-decadal increase of forest burned area in Australia is linked to climate change." Nat Commun 12, 6921 (2021). Available: http://www.nature.com/articles/s41467-021-27225-4.; Kirchmeier-Young, M.C., et al. 2024 (December 20). "Human driven climate change increased the likelihood of the 2023 record area burned in Canada." npj Climate and Atmospheric Science. Vol 7: 316. Available: https://doi.org/10.1038/s41612-024-00841-9.

[13] Madakumbura, G., et al. 2025 (August 6). "Anthropogenic warming drives earlier wildfire season onset in California." Sci. Adv. Vol 11, Issue 32. Available: http://www.science.org/doi/10.1126/sciadv.adt2041.

[14] Madakumbura, G.D., A. Hall. 2025 (August 9). "New study shows how climate change is driving wildfire season to start earlier in California." PBS NewsHour. Available: https://www.pbs.org/newshour/science/new-study-shows-how-climate-change-is-driving-wildfire-season-to-start-earlier-in-california. Accessed: April 3, 2026.

[15] Office Of Environmental Health Hazard Assessment. 2022 (November 1). *2022 Report: Indicators of Climate Change in California*. Pgs V-34 through V-49. Available: https://oehha.ca.gov/sites/default/files/media/downloads/climate-change/document/04wildfires.pdf. Accessed: April 2, 2026.

driven by rising temperatures and increasing aridity, that scientific research projects indicate and will continue and intensify as the climate warms.[16]

Legacy Fuel Accumulation

California's fire environment has been shaped in part by a century of suppression-oriented forest policy. Beginning in 1935, the U.S. Forest Service's "10 a.m. policy" directed that wildfires be controlled by the morning following initial report.[17] While effective at limiting short-term burn acreage, sustained suppression contributed to long-term fuel accumulation in some fire-adapted forests. Increased vegetation density and surface fuels elevate fire intensity, complicate suppression, and reduce the operational viability of using prescribed fire as a management tool.

The images in Figure 3, showing fuel accumulation in Yosemite Valley over the past 120 years, illustrate the consequence of sustained suppression policy.

Figure 3 Historical and Recent Fuel Accumulation in Yosemite Valley

Source: Boisramé et al. 2022.

Yosemite Valley in California from 1892.

Source: Photo B by Gabrielle Boisrame.

Yosemite Valley in California from 2011 showing denser forest and shrub growth.

Expanding landscape-level fuel treatment through managed and prescribed fire is widely recognized as necessary to address long-term fuel accumulation. However, the use of prescribed fire near WUI communities remains constrained by concerns regarding containment failure and potential liability. Although escape rates are low, with Federal data indicating that fewer than one percent of prescribed burns result in loss of control, the consequences of rare failures can be

[16] Abatzoglou, J.T., A. Park Williams. 2016 (October) "Impact of anthropogenic climate change on wildfire across western U.S. forests." PNAS. National Academy of Sciences. Available: https://www.climatesignals.org/sites/default/files/reports/climate_signals_abatzoglou_and_williams_2016_pnas.pdf.; Office Of Environmental Health Hazard Assessment. 2022 (November 1). 2022 Report: Indicators of Climate Change in California. Pgs V-34 through V-49. Available: https://oehha.ca.gov/sites/default/files/media/downloads/climate-change/document/2022caindicatorsreport.pdf. Accessed: April 2, 2026.; U.S. Global Change Research Program. 2023. Fifth National Climate Assessment. Available: https://toolkit.climate.gov/NCA5. Accessed April 3, 2026; Williams, J.N., et al. 2023 (January 15). "High-severity burned area and proportion exceed historic conditions in Sierre Nevada, California, and adjacent ranges." *Ecoshpere*. Vol 14. Issue 1. Ecological Society of America.

[17] Forest History Society. n.d. *U.S. Forest Service Fire Suppression*. Available: https://foresthistory.org/research-explore/us-forest-service-history/policy-and-law/fire-u-s-forest-service/u-s-forest-service-fire-suppression/. Accessed: February 10, 2026.

significant, particularly when treatments occur near populated areas.[18] This tension illustrates a broader challenge: achieving landscape-scale fuel reduction goals requires confidence that adjacent communities are resilient to fire exposure. In addition, many landscapes require thinning or other treatment to reduce fuel density before prescribed fire can be safely applied.

The Wildland-Urban Interface Amplifies Exposure

Climate change does not operate in isolation. Decades of housing development in the wildland-urban interface (WUI, zones where human-built infrastructure meets wildland vegetation) have placed growing numbers of homes and residents directly in the path of fire. Between 1990 and 2020, housing units in WUI areas increased by over40%.[19] The WUI's expansion reflects population pressure and longstanding land use and housing policy decisions, not climate change alone. The combination of a warming climate, accumulated fuels, and decades of development in fire-prone landscapes has produced conditions in which ignitions that once would have remained manageable and caused little damage to structures and communities now carry catastrophic potential.

Transition from Ignition to Conflagration

The transition from a vegetation fire to a mass-casualty, mass-destruction event is not automatic. It depends on specific conditions converging: extreme wind, low humidity, dry fuel loads, and a built environment whose structure separation distances, construction materials, and defensible space allow fire to propagate from structure to structure. When these conditions align, a localized ignition can produce an urban conflagration, spreading not through wildland vegetation but through neighborhoods, destroying structures faster than suppression resources can respond. The January 2025 Palisades and Eaton fires are the clearest recent illustration. Driven by extreme Santa Ana winds and record dry conditions, the Palisades Fire destroyed nearly 7,000 structures and killed 12 people; the Eaton Fire destroyed more than 9,400 structures, caused 19 fatalities,[20] and together forced evacuation of well over 100,000 residents.

---

[18] U.S. Government Accountability Office. 2024 (June 5). Forest Service: Fully Following Leading Practices. GAO-24-106239. Appendix I. Available: https://www.gao.gov/products/gao-24-106239. Accessed: April 4, 2026. (Appendix I reports 43 escapes out of almost 50,000 prescribed fire projects, less than 1 percent, between 2012 and 2021.)

[19] Mockrin, M.H., B. McGuinness, D.P. Helmers, V.C. Radeloff. 2023. "Understanding the Wildland-Urban Interface (1990-2020)." US Department of Agriculture, Forest Service, Northern Research Station. Available: https://storymaps.arcgis.com/stories/6b2050a0ded0498c863ce30d73460c9e. Accessed: March 12, 2026. (Figure 4 reports 1990 and 2020 housing unit values in WUI areas; percent change derived therefrom.)

[20] California Department of Forestry and Fire Protection. 2025-a (October). *Top 20 Most Destructive California Wildfires*. Available: https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/calfire-website/our-impact/fire-statistics/top-20-destructive-ca-wildfires.pdf?rev=737a1073f76947b4a3bfb960b19f44c7&hash=7CA02D30D9BF46A32D5D98BD108BA26A. Accessed February 20, 2026.; California Department of Forestry and Fire Protection. 2025-b (October). Top 20 Deadliest California Wildfires. Available: https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/calfire-website/our-impact/fire-statistics/top-20-deadliest-ca-wildfires.pdf?rev=0d4612ff0cb447fb827fa0ac6c309d3d&hash=34718653A215C315C5E3CB5BB6A4E550. Accessed February 20, 2026.

Scale of Financial Loss Over the Past Decade Reflects the Compounding Dynamic

The financial toll of California's wildfire crisis has escalated sharply. In the 2017-2018 wildfire seasons alone, insured gross catastrophe losses in California exceeded $30 billion across lines of business.[21&22] The 2025 Los Angeles fires have surpassed even that threshold; Munich Re has identified them as the most expensive wildfire disaster on record, with total economic losses estimated at approximately $53 billion and ultimate insured losses projected near $40 billion.[23]

A significant share of these losses has flowed through the utility liability system. PG&E's bankruptcy resolved approximately $25.5 billion in wildfire liabilities arising from the 2017-2018 Northern California wildfires and the 2018 Camp Fire: $13.5 billion to injured parties through the Fire Victim Trust, $11 billion in subrogation settlements with insurers, and approximately $1 billion in settlements with public entities.[24] Beyond the PG&E bankruptcy, settled utility liability claims for the Thomas, Woolsey, Kincade, and Dixie fires totaled approximately $12.9 billion in combined claim payments and defense costs.[25]

---

[21] Evans, D., C. Webb, and E. Xu. 2019 (October 28). “Wildfire Catastrophic Models Could Spark the Changes California Needs.” Milliman. Available: https://www.milliman.com/en/insight/wildfire-catastrophe-models-could-spark-the-changes-california-needs. Accessed March 11, 2026.

[22] The $30 billion figure reflects gross insured losses before subrogation recoveries. In utility-caused wildfire events, insurers typically recover a substantial portion of those losses through subrogation settlements with responsible utilities; offsets have been estimated at 50% to 60% of gross insured losses.

[23] Aggregate economic loss estimates for California wildfires over 2015-2025, constructed from NOAA event-level "Western/California" wildfire losses and Munich Re/Swiss Re catastrophe reviews, are on the order of $200-260 billion, with insured losses around $140-170 billion. These figures are necessarily approximate and rely on combining multiple datasets; no single authoritative source publishes a unified California-only wildfire total for this period.; See Munich Re. 2026 (January 12*). Climate Change Presses On: Devastating Wildfires and Intense Thunderstorms Exacerbate Losses for Insurers.* Available: https://www.munichre.com/en/company/media-relations/media-information-and-corporate-news/media-information/2026/natural-disaster-figures-2025.html. Accessed March 11, 2026.

[24] Pacific Gas & Electric. 2019 (September 23). "PG&E Executes Definitive Agreement Resolving Insurance Subrogation Claims Relating to 2017 and 2018 Wildfires." Available: https://investor.pgecorp.com/news-events/press-releases/press-release-details/2019/PGE-Executes-Definitive-Agreement-Resolving-Insurance-Subrogation-Claims-Relating-to-2017-and-2018-Wildfires/default.aspx. Accessed March 21, 2026.; *Fire Victim Trust*. 2025 (January 10). Distribution Update. Available: https://www.firevictimtrust.com/. Accessed March 21, 2026.; Courthouse News Service. 2019 (September 13). "PG&E Reaches $11B Wildfire Settlement With Insurers." Available: https://www.courthousenews.com/pge-reaches-11b-wildfire-settlement-with-insurers/. Accessed April 2, 2026.

[25] Total reflects the sum of settled claims and defense costs across the Thomas, Woolsey, Kincade, and Dixie proceedings as reported in the cited CPUC filings; no single document presents a consolidated figure.; See Southern California Edison. 2023 (August 23). *A.23-08-013, SCE-06: Thomas Fire and Debris Flow Cost Recovery Application—Claims Resolution Testimony*. Available: https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/A2308013/6608/518155572.pdf. Accessed March 12, 2026.; Southern California Edison. 2024-a (July 12). *A.23-08-013, SCE-06: Thomas Fire and Debris Flow Cost Recovery Application—Information-Only Update on Cost Incurred After July 31, 2023*. Available: https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/A2308013/7658/538617453.pdf. Accessed March 12, 2026.; Southern California Edison. 2024-b (October 8). *A.24-10-002, SCE-05: Woolsey Fire Cost Recovery Application—Claims Resolution Testimony*. Available: https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/A2410002/8126/566244723.pdf. Accessed March 12, 2026.; Southern California Edison. 2025-a (December 18). *A.24-10-002: Decision Adopting Settlement on the Request by Southern California Edison Company for Cost Recovery Related to the 2018 Woolsey Fire*. Available: https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M592/K453/592453458.PDF. Accessed March 12, 2026.; Southern California Edison. 2025-b (July 15). *A.24-10-002, SCE-14: Woolsey Fire Cost Recovery Application—Cost Recovery Update*. Available: https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/A2410002/8327/573391728.pdf. Accessed March 12, 2026.; Pacific Gas & Electric. 2025 (November 14). *Kincade and Dixie AB 1054 Wildfire Cost Review and Recovery Proceeding: Prepared Testimony, Volume 1 of 2*. CPUC Application A.25-11-001. Available: https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/A2511001/8737/587328304.pdf. Accessed April 3, 2026.

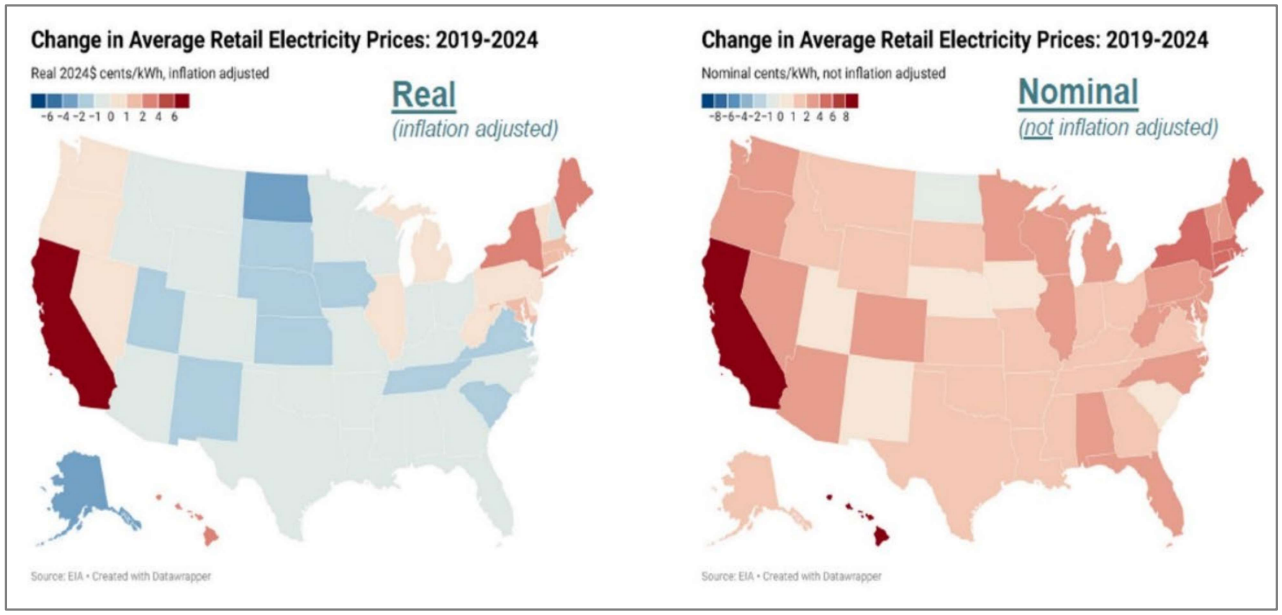
None of the underlying drivers—a warming climate marked by longer droughts and more volatile precipitation, accumulated fuel loads, an expanding WUI, and the increasing interaction of fire with the built environment—will simply disappear on their own. The question this Report addresses is not whether California will continue to face catastrophic wildfires, but whether its financial, legal, and institutional systems are structured to manage that reality without compounding harm to the communities, ratepayers, survivors, and markets that bear the consequences.

Ratepayers, Policyholders, and Survivors

The pressures described above reach California households as concrete, recurring costs—on the monthly electricity bill, in the search for insurance coverage, and in the long aftermath of a catastrophic fire. The enormous impact on survivors, of course, cannot be adequately measured in financial terms alone.

Electricity costs in California have increased at a pace that has materially outpaced inflation and diverged sharply from the national trend. Nationwide, recent retail electricity price increases have roughly tracked inflation, but state-level trends vary substantially; California stands out as a pronounced outlier: where wildfire risk mitigation and liability insurance have been major contributors to rapid price growth alongside other cost drivers nationwide, retail electricity prices have on average held steady with inflation. This is a pattern widely attributed to the accumulation of wildfire-related costs in utility rates.[26]

Figure 4 Changes in Electricity Rates by State



Source: Fox-Penner 2025; Wiser et al. 2025.

[26] Wiser, R., O'Shaughnessy, E., Barbose, G., Cappers, P., and Gorman, W. 2025 (December). "Factors Influencing Recent Trends in Retail Electricity Prices in the United States." The Electricity Journal 38(4). Available: https://www.sciencedirect.com/science/article/pii/S1040619025000612?via%3Dihub. Accessed March 17, 2026.

Wildfire-related charges now add approximately $41 per month to the average PG&E residential bill (approximately 19% of the total bill), $27 for SCE (approximately 17%), and $21 for SDG&E (approximately 14%), comprising both wildfire liability costs and mitigation costs authorized for ratepayer recovery.[27] These costs fall regressively: lower-income Californians pay a higher share of their income for utility service, and wildfire-related charges represent two to five times the share of income for lower-income households compared to higher-income households.[28] The rate trajectory also creates direct tension with the State's climate goals, diminishing the economic case for electrifying transportation, heating, and industrial processes.[29]

POUs and smaller multi-jurisdictional utilities (SMJUs) face related but distinct cost pressures. These utilities also lack access to the Wildfire Fund and CPUC wildfire cost-recovery mechanisms, meaning that uninsured wildfire losses would ultimately be borne by their ratepayers through locally controlled rate increases or utility debt issuance. As of 2019, the Los Angeles Department of Water & Power (LADWP), the state's largest POU, carried approximately $360 million in combined wildfire liability coverage and self-insurance reserves;[30] its exposure to pending litigation arising from the January 2025 Palisades Fire may substantially exceed that coverage. For smaller utilities with narrower rate bases, wildfire-related cost pressure can be acute; at least one reported that wildfire liability insurance alone consumes approximately 40% of its operating expenses.

Access to property insurance in high-fire-risk areas has also deteriorated significantly since the 2017-2018 wildfire seasons. Admitted market insurers have non-renewed policies, restricted new business, and in some cases exited the state entirely, concentrating the remaining admitted market among a smaller number of insurers. In the highest-risk ZIP Codes, a growing share of policyholders have been forced into the FAIR Plan, paying more for coverage that is less comprehensive than standard market policies. For households that do obtain coverage, policy limits frequently do not keep pace with post-fire rebuilding costs, leaving many insured homeowners effectively

---

[27] The $41/$27/$21 combined monthly figures and approximate bill-share percentages are derived from two components reported separately in SB 254 Information and Recommendations, pp. 22-24: wildfire liability costs ($10/month for each IOU) and wildfire mitigation costs (PG&E $31, SCE $17, SDG&E $11), as of year-end 2024 for bundled residential non-CARE customers; combined totals are not stated as such in the source. The SB 695 Report, p. 38, provides the underlying revenue-requirement basis.; See California Public Utilities Commission. 2026 (January 30). Senate Bill 254 Information and Recommendations. Available: https://www.cawildfirefund.com/sites/wildfire/files/documents/2026/cpuc-sb-254-study-information-and-recommendations_30jan2026-final.pdf.; California Public Utilities Commission. 2025 (September 30). 2025 SB 695 Report. Available: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2025/2025-sb-695-report_093025.pdf.

[28] Public Policy Institute of California. 2025 (September). Low-Income Households Struggle with the Cost of Electricity Bills. Available: https://www.ppic.org/blog/low-income-households-struggle-with-the-cost-of-electricity-bills/. Accessed: April 2, 2026.

[29] California Public Utilities Commission. 2026 (January 30). Senate Bill 254 Information and Recommendations, p. 27. Available: https://www.cawildfirefund.com/sites/wildfire/files/documents/2026/cpuc-sb-254-study-information-and-recommendations_30jan2026-final.pdf.

[30] The 2019 City Controller audit (Galperin 2019) is the most recent publicly available source known to the study team that quantifies LADWP's wildfire liability coverage and self-insurance reserves.; See Galperin, Ron. 2019. *It Only Takes a Spark: Enhancing DWP's Wildfire Prevention Strategy*. Los Angeles: Office of the Controller, City of Los Angeles. https://controller.lacity.gov/audits/dwps-wildfire-prevention..

underinsured. Renters, who often lack comprehensive coverage and have limited recourse for loss of use or contents, and uninsured households, who have few clear routes to compensation, face the widest gaps.

For the families and communities in the path of catastrophic wildfire, the event itself is only the beginning. The months and years that follow are shaped by a set of interconnected systems, including insurance, utility liability, and public programs, whose collective performance determines whether recovery is possible and how long it takes—past experience demonstrates that the recovery process is protracted and uneven.

Many will face years of delay rebuilding, if they can rebuild at all. Of the five most destructive California wildfires from 2017 to 2020, which burned nearly 22,500 homes, just 38% had been rebuilt as of spring 2025.[31] Rebuild rates are influenced by many factors, including location and access to builders and supplies, but they always depend on individual homeowners having quick and certain access to the funds they need to rebuild their homes.

Underinsurance has emerged as a significant barrier to recovery for survivors of wildfires. According to United Policyholders, up to two-thirds of homeowners are inadequately insured for wildfire total-loss events, typically by around 20% and in some cases by as much as 60% relative to actual rebuild costs.[32] Underinsurance is a major barrier to post-disaster recovery; the funding gap between insurance payouts and the actual cost to rebuild delays reconstruction, causes financial distress, and traps survivors in long-term recovery, particularly low-to-moderate income households who do not have other resources to fill the gap.

In cases where a utility or other actor is potentially liable for causing or contributing to wildfire losses, survivors face years of litigations delays. Litigation is inherently slow and uncertain. Wildfire survivors often wait several years for settlement payments, with many cases taking up to five years to resolve. Additionally, attorney contingency fee arrangements, which commonly range from one-third to 40% of total recovery in California wildfire cases, substantially reduce the net compensation available to rebuild their homes and their lives.[33]

These conditions are not isolated to any single fire or community. They describe a system whose performance under catastrophic conditions has become a recurring concern, and whose trajectory under continued stress is a central subject of this Study.

---

[31] Dillon, l., B. Poston, D. Smith, J. Garrison. 2025 (September 30). “22,500 homes lost. Over five years later, only 38% rebuilt: What California fire survivors face.” *Los Angeles Times*. Available: https://www.latimes.com/homeless-housing/story/2025-09-30/rebuilding-california-after-major-wildfires

[32] United Policyholders. n.d.-a. A Guide to Underinsurance. Available: https://uphelp.org/underinsurance-help-were-you-lulled-into-a-false-sense-of-security-or-did-you-intentionally-underinsure-your-biggest-asset/Accessed March 11, 2026.; United Policyholders. n.d.-b. Insurance Bad Faith in California. Available: https://uphelp.org/claim-guidance-publications/a-guide-to-your-insurance-legal-rights-in-california/. Accessed March 12, 2026.

[33] California Coalition for Utility Employees. 2018 (August 13). "Reducing Excessive Attorney Fees and Maximizing Legal Settlements for Wildfire Victims." Available: https://ibew1245.com/wp-content/uploads/2018/08/Reducing-Attorney-Fees-Paper-CCUE.pdf. Accessed: March 2026.

Electric Utility System

California's regulatory framework for electric utility wildfire risk reduction is the most mature in the nation, and the costs it has generated are among the most consequential financial pressures facing the state's households and energy sector. The Wildfire Mitigation Plan process, the Office of Energy Infrastructure Safety, and six years of sustained investment have produced genuine improvements in how utilities identify, model, and address ignition risk. That progress is real. It is also accompanied by conditions that the current framework has limited ability to resolve on its own.

Wildfire-related charges now represent a material and growing share of California residential electricity bills. The capital-intensive investments authorized in prior rate cases are only beginning to enter rates and will be recovered over decades. Current regulatory proceedings have not established a threshold at which wildfire-related cost recovery would be expected to stabilize.

The financial mechanisms established to stabilize the electric utility sector following the 2017-2018 fire seasons are under strain. The Wildfire Fund was designed to cover multiple catastrophic fire events; the Eaton Fire has likely critically impaired or exhausted it. The Continuation Account created by SB 254 (2025) is an acknowledged stopgap, established to maintain stability while the State develops a more durable solution. The liability exposure these mechanisms were designed to absorb has not diminished. If these mechanisms prove insufficient, the utilities they were designed to protect would face the same credit deterioration and potential insolvency that prompted the creation of those mechanisms.

The consequences of utility financial instability extend well beyond the utility sector. Credit downgrades raise borrowing costs that flow directly into rates. PG&E's corporate credit rating has remained below investment grade since its 2020 emergence from bankruptcy, and S&P downgraded SCE to BBB-minus in September 2025, citing a smaller than expected Wildfire Fund as a primary factor. Rating agencies have stated explicitly that the outcomes of the SB 254 Study are a watch factor for further action. A utility operating under financial stress has diminished capacity to attract the capital required for grid modernization and the infrastructure investments necessary to meet the State's clean energy and electrification goals. For wildfire survivors, utility financial distress translates directly into delayed compensation, as the PG&E bankruptcy demonstrated when survivor claims were automatically stayed and subjected to the uncertainty and delay of a court-supervised reorganization.

The composition of the investment portfolio raises a further set of questions. Many of the most cost-effective electric utility mitigations have already been implemented—wildfire cameras and weather monitoring stations installed, protection systems reconfigured, public safety power shutoff programs developed. There is an increasing acknowledgement across regulatory agencies, utilities, and stakeholders that the marginal risk-reduction returns available from utility-specific spending may be declining relative to earlier investment cycles. Electric utility mitigation addresses only utility infrastructure to reduce utility-caused ignition risk, which accounts for a minority of ignitions statewide. The conditions that determine whether an ignition becomes a

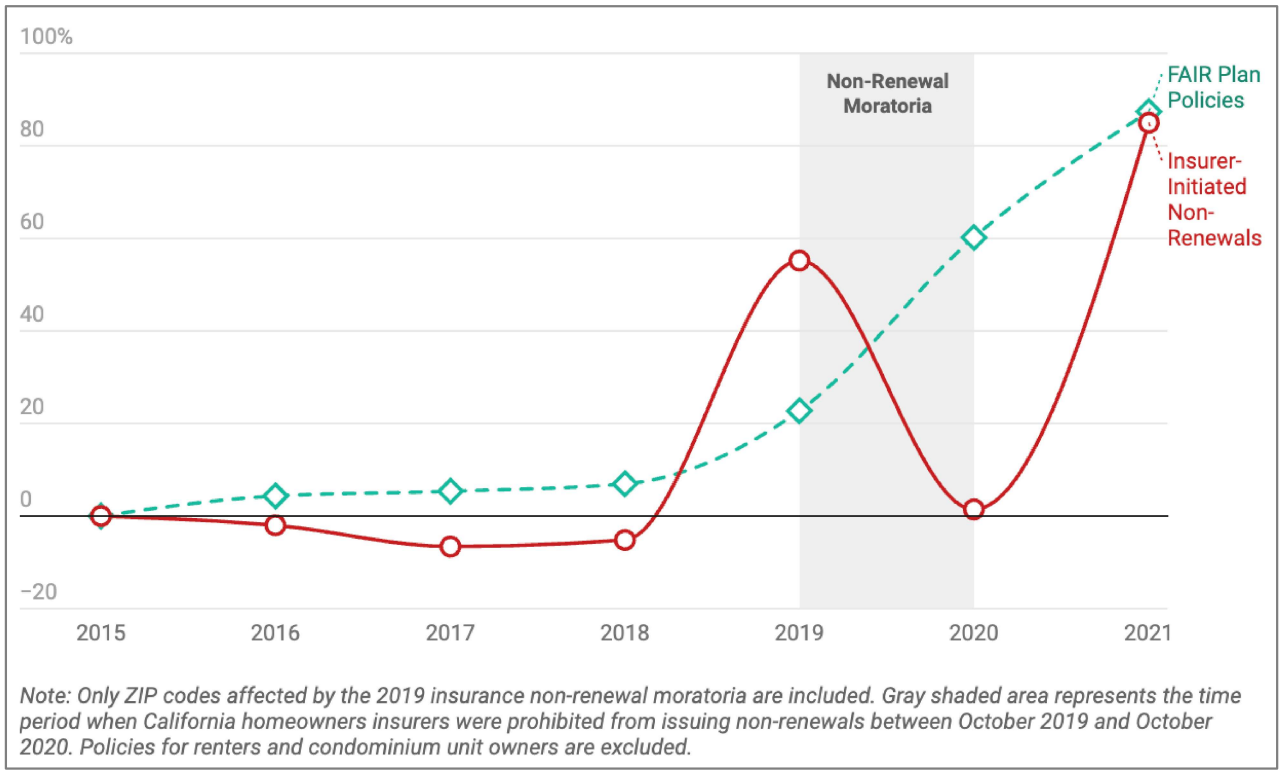
catastrophe—accumulated fuels, community vulnerability, and building stock—lie largely outside the utilities' direct control and outside of the purview of utility mitigation investments.

Property Insurance Market

A vibrant, healthy, and competitive property insurance market is the underpinning of a healthy residential real estate market and a functional housing finance system. Without access to insurance, there is no ability to obtain a home mortgage, which, for most Californians, is the only way to achieve the dream of home ownership. Catastrophes have demonstrated the ability to deeply disrupt that integrated system.

California's property insurance market has undergone a structural shift since the 2017-2018 wildfire season that statewide averages obscure. More than 90% of California policyholders retain admitted market coverage, and average premiums remain below the national mean. In the highest-risk communities, the picture is fundamentally different. Admitted market insurers have non-renewed policies, restricted new business, and in some cases exited the state entirely, concentrating what remains of the admitted market among a smaller number of insurers and pushing a growing share of policyholders into the FAIR Plan, a residual program created as a market of last resort that now functions as the primary insurer in the communities most exposed to catastrophic wildfire. It was not designed for this role, and its financial position reflects that.

Figure 5 Growth in Insurer-Initiated Non-Renewals and California FAIR Plan Policies since 2015 in ZIP Codes Facing 2019 Moratoria(2015-2021)



Note: Only ZIP codes affected by the 2019 insurance non-renewal moratoria are included. Gray shaded area represents the time period when California homeowners insurers were prohibited from issuing non-renewals between October 2019 and October 2020. Policies for renters and condominium unit owners are excluded.

Data Source: 2015-2021 Annual Residential Insurance Policy Count Data at the ZIP-code level and the list of ZIP Codes covered by the insurance non-renewal moratoria from the California Department of Insurance.

The consequences of FAIR Plan losses do not stay within the residual market. When losses exceed the plan's surplus and reinsurance, admitted insurers are assessed in proportion to their market share, and those costs flow through to policyholders statewide. By way of illustration, the SIS has established that for the first $1 billion of assessment in a given line of business, insurers may recoup up to 50% from their own policyholders through temporary surcharges; for amounts above $1 billion, insurers may recoup 100%.[34] The same dynamic connects insurance to utility financial exposure: insurers who pay wildfire claims routinely pursue subrogation recovery against responsible utilities, and those recoveries flow through the Wildfire Fund. As the Fund's capacity is strained, the reliability of that recovery channel becomes less certain, creating pressure that neither system was designed to absorb independently.

Regulatory reforms are underway. Insurance Commissioner Ricardo Lara's Sustainable Insurance Strategy (SIS) permits catastrophe models in rate-setting, allows partial inclusion of reinsurance costs in rates filed with and approved by the California Department of Insurance (CDI), and requires insurers to write a minimum share of policies in wildfire-distressed areas. The Commissioner's SIS was effective in resolving a market dynamic that could have devolved, without this prompt intervention, into a statewide insurance availability crisis that could have quickly spilled over into and disrupted the residential real estate and mortgage markets.

The SIS improved the trajectory of the property insurance dynamics for about 90% of the market. The remaining portion of the market—the roughly 10% in high- and very-high wildfire risk areas—remains largely unserved by the admitted market. The SIS is providing a longer-duration pathway for assisting Californians who reside in those high-risk areas. The benefits from the SIS are developing more slowly in these areas. As of April 2026, only 12 insurers have filed rate applications under the SIS process.[35] The full market impact in higher risk areas may take years to materialize and will depend in part on the trajectory of underlying wildfire risk. If the frequency and severity of catastrophic wildfire events continue on the current trajectory, the conditions that produced market contraction persist despite the regulatory response.

Community, Landscape, and Property-Level Mitigation

As part of legislation packages in 2018 and 2019, California invested billions of dollars in fire protection, forest and land management, and community hardening. The State doubled CAL FIRE's fire protection staff to over 12,000 positions, transitioned to year-round staffing, created the world's largest aerial firefighting fleet, and deployed drones, satellites, AI tools, LiDAR, and other technologies for fire detection, real-time mapping, and fire spread modeling. California also

[34] For the first $1 billion in assessment, insurers can recoup up to 50% from policyholders; for amounts above $1 billion, insurers can recoup 100%.; See CDI Bulletin 2025-4 (2025, February 11). Available: https://www.insurance.ca.gov/0250-insurers/0300-insurers/0200-bulletins/bulletin-notices-commiss-opinion/upload/Bulletin-2025-4-Updated-Guidance-regarding-Insurer-Recoupment-Procedures-in-Response-to-Assessment-by-the-FAIR-Plan.pdf

[35] California Department of Insurance. 2026 (January). Natural Catastrophe Resiliency Study: Information and Recommendations. SB 254 CDI Contribution. Available: https://www.cawildfirefund.com/sites/wildfire/files/documents/2026/california-department-of-insurance-contribution-to-the-sb-254-natural-catastrophe-resiliency-study-2026.pdf.

expanded its investments in forest and land management and prescribed burns to reduce the fuel buildup in California's fire-adapted forests, investing $2.5 billion to increase the pace of fuel reduction, prescribed fire, and forest health treatments.[36] The State set a goal with the U.S. Forest Service to collectively treat 1 million acres per year[37] and is now treating approximately 700,000 acres annually.[38]

Through these initiatives, California has developed substantial capacity to manage wildfire behavior in the landscape. But the state is comparatively less prepared to prevent and contain large-scale, structure-to-structure fire spread once wildfire enters WUI communities. Nationally, 78% of wildfire structure loss occurs in just 2.7% of wildfire events.[39] Catastrophic financial losses are driven primarily by these urban conflagration dynamics, not by backcountry fire alone.

Reducing risk in WUI communities requires approaching wildfire not solely as a vegetation management problem but as a structure ignition problem that spans both the landscape and the built environment. Managing fire up to the edge of a community is not sufficient if homes within that community remain vulnerable to ignition. Likewise, hardening individual structures without improving surrounding landscape conditions will not meaningfully reduce extreme-event risk. Effective risk reduction requires an integrated approach across both domains. Community and home hardening is particularly challenging because it relies on action, often voluntary, by multiple actors, including local governments, landowners, and individual businesses and homeowners.

The scale of the unfinished work is considerable. Up to approximately 2 million existing residential structures in Very High Fire Hazard Severity Zones require some level of home hardening and defensible space mitigation (CAL FIRE 2025).[40] Costs vary materially depending on scope: targeted hardening to voluntary standards, like the Institute of Building & Home Safety (IBHS) Wildfire Prepared Home standard, is expensive. The cost varies based on location, age of the home, and surrounding conditions. Comprehensive mitigation as delivered through the California Wildfire Mitigation Program has averaged approximately $45,000 per structure. Most homes in high-risk areas were built before modern fire-resistant construction standards took effect; the regulatory requirements that exist largely apply to new development. In the 2025-2026 State budget, California directed approximately $350 million toward wildfire prevention and mitigation

---

[36] California Wildfire and Forest Resilience Task Force. 2025. California's Progress on Wildfire Resilience. Available: https://wildfiretaskforce.org/progress-on-wildfire/.

[37] Governor of California. 2020 (August 12). Agreement for Shared Stewardship of California's Forest and Rangelands. Available: https://www.gov.ca.gov/wp-content/uploads/2020/08/8.12.20-CA-Shared-Stewardship-MOU.pdf.

[38] Governor of California. 2024 (October 10). "California's New, Cutting-Edge Dashboards Map the Progress of Wildfire Resilience Work." Available: https://www.gov.ca.gov/2024/10/10/californias-new-cutting-edge-dashboards-map-the-progress-of-wildfire-resilience-work/. (Treatment data as of 2023.)

[39] Balch, J. K., V. Iglesias, A. L. Mahood, et al. 2024. "The Fastest-Growing and Most Destructive Fires in the U.S. (2001 to 2020)." *Science* 386(6720): 425-431. https://www.science.org/doi/10.1126/science.adk5737. Accessed February 20, 2026.

[40] Approximately 2.12 million structures are located in Very High Fire Hazard Severity Zones statewide per CAL FIRE mapping data. The number of structures requiring mitigation is lower after accounting for those already meeting current standards; study analysis estimates between approximately 825,000 and 1.75 million structures remain unmitigated.

against an estimated statewide annual prevention need of $4 to $7 billion.[41] Federal spending is heavily oriented toward suppression. Federal mitigation grant programs under the Stafford Act are competitive, episodic, and exposed to political risk. No dedicated and consistent financing mechanism to support residential wildfire mitigation-at-scale currently exists.

Governance over community and landscape mitigation is distributed across multiple agencies, programs, and funding streams at the Federal, State, and local levels, without a single institution holding a statewide mandate or the budgetary authority or capacity to sequence investment systematically. Implementation is uneven, with significant variation in local capacity, funding stability, and program uptake. Many communities continue to rely on short-term grants or volunteer-driven efforts. The degree to which completed mitigations translate into insurance market recognition remains limited, and no statewide mechanism tracks property-level mitigation conditions in a way that supports coordinated investment or outcome measurement.

The State's Growing Natural Catastrophe Loss Problem

The California wildfire problem has evolved from a localized hazard into a systemic, growing risk for the state's residents, businesses, and insurers. Table 2 presents modeled estimates of how much damage wildfires can cause to structures in California, divided into homes (residential property damage) and businesses (commercial property damage), under different levels of wildfire severity. Rather than showing exact predictions, the figures are ranges meant to illustrate the scale of possible outcomes in both typical and extreme wildfire years.

At the "mean" level, the table suggests that, averaged over the long run, wildfire damage to buildings alone can amount to several billion dollars per year, with most of those losses being to homes rather than businesses. This highlights that wildfire risk is not just an occasional catastrophe, but a recurring cost embedded in the state's economy, affecting homeowners' equity, insurance availability and affordability, local tax bases, and the stability of mortgage and insurance markets.

The "1-in-250" and "1-in-1,000" modeled loss estimates put into perspective how dramatically losses can escalate in very severe or extreme wildfire years. A 1-in-250-year event (or 0.4% annual probability event) is rare but plausible wildfire year within a working lifetime, and the ranges in the table indicate that total property damage in such a year could jump by an order of magnitude compared to the average wildfire year. A 1-in-1,000-year event (or 0.001% annual probability event) represents an even more extreme, "tail-risk" scenario, in which destruction of residential and

[41] The $350 million figure reflects the 9% of California's 2025-2026 wildfire budget directed toward prevention and mitigation, with the remaining 91% ($3.75 billion) directed toward suppression (Uden 2026). A continuous $200 million annual allocation from cap-and-invest proceeds provides an additional source of prevention funding. The $4-7 billion annual prevention need estimate is derived from the State's established goal of treating 1 million to 2.3 million acres of forests and wildlands per year at an estimated $2-5 billion annually, combined with a comparable rough estimate for WUI community mitigation needs; See Uden, S. 2026 (January 26). "The Troubled State of Wildfire Prevention in California." *Net-Zero California*. Available: https://www.netzerocalifornia.org/blog/the-troubled-state-of-wildfire-prevention-in-california. Accessed February 20, 2026.

commercial structures would reach levels that could strain or overwhelm existing financial protections.

Table 2 All Wildfire Property Damage Losses

All Wildfire Losses	Residential Property Damage	Commercial Property Damage	Total Property Damage
Mean	$4 -$7 billion	$1 - $2 billion	$5 - $9 billion
1-in-250-year	$60 - $70 billion	$10 - $20 billion	$70 - $90 billion
1-in-1,000-year	$80 - $90 billion	$20 - $20 billion	$90 - $120 billion

* Property Damage: Physical loss of or physical damage to property caused by an insured event

California's Growing Natural Catastrophe "Tail Risk"

Although wildfire has been at the forefront of public attention recently, flood and earthquake are also key perils that threaten California. California's statewide flood exposure is similar to its wildfire exposure, as noted in Table 3, with mean annualized losses for flood-related property damages statewide estimated at $8 billion compared to $7 billion for statewide wildfire exposure. Extreme flood losses are estimated at $90 billion at a 1-in-250-year modeled loss level and $140 billion at a 1-in-1,000- year modeled loss level. This is comparatively higher than the same modeled loss levels for statewide wildfire exposure at $80 billion and $105 billion, respectively.

Earthquake risk is materially much larger with mean annualized losses for earthquake-related property damages estimated at $15 billion (nearly two times the mean for statewide wildfire exposure). Extreme earthquake event losses increase to an estimated $350 billion at 1-in-250-year modeled loss levels and $600 billion at 1-in-1,000-year modeled loss levels.

With these figures in mind, addressing statewide wildfire exposure as part of a broader, multi-peril problem may seem appealing at first glance; however, given the very high costs associated with simultaneously solving for earthquake and flood, this approach would introduce a challenge of near-insurmountable scale. Unlike wildfire risk, the insurance gaps for statewide earthquake and flood exposures are much larger. While the majority of statewide wildfire losses are currently insured, nearly all flood and earthquake losses are uninsured: the mean statewide insurance gap for earthquake and flood combined is estimated at $10 billion, which is four times the statewide insurance gap for wildfire exposure.

Covering this massive gap would require financing a larger unfunded cost that could result in additional burden on the already fragile housing market in California. For these reasons, while flood and earthquake risks remain important, the scale of the problem and the cost of solving for these perils by developing a financing solution to cover the insurance gap is too large to tackle alongside the wildfire problem, and would dwarf prioritizing for the California wildfire problem that is still at a level where effective financing solutions can have a meaningful impact.

Table 3 California's Earthquake, Flood, Wildfire Property Damage Losses and Insurance Gap

California's Potential Natural Catastrophe Losses	Flood Total Property Damage | Insurance Gap	Earthquake + Fire Following Earthquake Total Property Damage | Insurance Gap	Wildfire Total Property Damage | Insurance Gap
Mean	~$8 billion | ~$5 billion	~$15 billion | ~$10 billion	$5 - $9 billion | $2 - $3 billion
1-in-250-year	~$90 billion | ~$80 billion	~$350 billion | ~$300 billion	$70 - $90 billion | $20 - $40 billion
1-in-1,000-year	~$140 billion | ~$130 billion	~$600 billion | ~$500 billion	$90 - $120 billion | $30 - $50 billion

Synthesis - An Interconnected System Under Compounding Strain

These are not separate problems. The state's property insurance market, electric utility financial system, and our community mitigation infrastructure form a single interconnected system. Each is under strain independently, yet stress in any one domain amplifies pressure on the others.

The most direct illustration of that interconnection is the relationship between insurance, utility liability, and catastrophe financing for catastrophic fires ignited by utility equipment. When a covered wildfire occurs, insurers pay claims to policyholders and then pursue subrogation recovery against the responsible utility. Those recoveries flow through to the Wildfire Fund, which was capitalized in part by ratepayers. As Fund balances decline, utility credit ratings come under pressure, raising borrowing costs that flow back to ratepayers, many of whom are the same policyholders who filed the original claims. The system socializes catastrophic loss across ratepayers and policyholders through mechanisms that were designed for a fundamentally different loss environment.

The current state of each domain—specifically, a property insurance market contracting from the highest-risk areas, a FAIR Plan carrying exposure it was not built for, rising utility costs with no defined endpoint, and a community mitigation infrastructure that is fragmented and undersized—reflects a system that has reached the limits of what incremental adjustment can resolve. The trajectory without intervention is not stable. Section 4 describes the likely consequences of inaction in detail.

4 The Cost of Inaction

The mandate in SB 254 to undertake this catastrophe resiliency study, on a very short timeline, is evidence of a broadly held view that the *status quo is not working*—not for consumers, who are paying among the highest energy rates in the country; not for the private insurance market, which is retreating rapidly from making property insurance readily accessible in high-risk areas; and not for survivors, who are often underinsured, and in some cases uninsured, and thus lack access to timely, certain and adequate resources to recover.

As the climate continues to change, the risk has grown faster than current mitigation measures can be implemented. As discussed in **Section 5**, the pathway that leads to catastrophe resilience starts with an improved *All of Government & All of Society* approach to wildfire risk reduction. Dedication to shrinking the size of the consequences of catastrophes is foundational.

Failure to act, or a conscious decision not to act, on risk reduction and on opportunities to enhance the functionality of our insurance markets and electric utilities will have large near-term and severe long-term adverse consequences for Californians. To provide context for the balance of this Report, we start with a discussion of the potential cost of inaction.

Impacts on California Communities and Survivors

The pace of climate change is accelerating, and a growing number of communities are at risk of conflagration. Historically, the cause of this problem was framed as the result of the decision to "move into the WUI." Increasingly, this problem is viewed as a climate change phenomenon, with the WUI expanding and absorbing communities that were not previously seen as being at high risk from wildfires. This topic reveals significant tensions among interconnected and competing policy goals. The need for more affordable housing, for example, is pushing development to areas with lower cost but with higher wildfire risk—the ever-expanding WUI. These land use planning and development trends, in turn, require electric utilities to build new infrastructure in those high wildfire risk areas to meet their obligation to serve all customers in their territory. Expanding infrastructure not only increases operating costs for the electric utility but also increases its exposure to wildfire liability and, thus, its cost of insuring against the now increased risk—with those increased costs borne by all ratepayers through higher electric bills. Moreover, the generally higher construction costs associated with building wildfire resistant homes undermines attaining the goal of an increased supply of affordable housing. All these conflicts among policy goals swirl around the reality of a rapidly changing climate.

In this light, mitigation measures become a primary tool to help reconcile the conflicts. Given the pace of climate changes and the expansion of populated communities into new territories already subject to wildfire risk, inaction at this junction, particularly the failure to drive investments in community and home level risk reduction at scale, will expose California communities to constant and even exponentially increased risk. The risk is not static; it will not reduce without intervention;

it will continue to grow. Deciding not to intervene to reduce the growing risk is thus the knowing acceptance that more and more California homes and lives are placed at risk with each passing month and year.

For survivors and communities, the consequences of inaction would also be significant. Compensation for injuries, property losses, and other damages remains slow, relying too heavily on protracted litigation, rather than administrative or streamlined claim processes. Legal and transaction costs for both plaintiffs and defendants consume substantial resources. Without the claim-paying capacity provided by the Wildfire Fund or another source of liquidity to pay claims, utilities would be less inclined to set up voluntary compensation programs intended to expedite payments after catastrophic events. As a result, survivors would continue to experience even longer periods of hardship while awaiting recovery of damages, delaying community rebuilding and prolonging the economic and social disruption caused by wildfires.

Impacts on Electric Utility Ratepayers

The Wildfire Fund was capitalized in part by $10.5 billion in ratepayer non-bypassable charges collected from 2020 through 2035, equal to approximately $2.50-3.00 per month per residential customer.[42] If the SB 254 Continuation Account is drawn upon, an additional $9 billion in ratepayer NBC obligations extends that charge through 2045.[43] On top of these fund contributions approximately $27 billion in wildfire-related revenue requirements were authorized by the CPUC from 2019 to 2024,[44] accounting for a substantial portion of IOU ratepayer bills.[45]

The rate trajectory that produced these charges is not decelerating. Study team analysis indicates average monthly residential electricity bills increased over 37% across the three large IOUs from 2020 to 2025.[46] Annual average rate increases from 2016 to 2024 ran at approximately 11% for PG&E, 8% for SCE, and 7% for SDG&E—against inflation of approximately 3.5% over the same period.[47]

---

[42] The $2.50-3.00 per month range reflects authors' analysis of U.S. Energy Information Administration Form EIA-861 data applying the adopted 2026 NBC rate of $0.00591/kWh to a typical IOU residential customer using approximately 400 to 500 kWh per month.; See California Public Utilities Commission. 2025 (December 4). Decision Adopting Timing and Amount of 2026 Wildfire Fund Non-Bypassable Charge. Decision No. 25-12-006; Rulemaking No. 23-03-007. Available: https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M588/K941/588941005.PDF.

[43] SB 254 authorizes DWR to issue up to $9 billion in new bonds backed by an additional ratepayer NBC, matched by $9 billion from utility shareholders, for a total $18 billion recapitalization; See Senate Committee on Energy, Utilities and Communications. (2025, September 10). *SB 254 bill analysis* (2025-2026 Reg. Sess.; amended version; Senator Josh Becker, Chair). Available: https://seuc.senate.ca.gov/system/files/2025-09/sb-254-analysis-9-10-25.pdf

[44] California Public Utilities Commission. (2025, September). 2025 Senate Bill 695 report. Available: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2025/2025-sb-695-report_093025.pdf

[45] See discussion above in Section 3, *Current State of California's Catastrophe Resiliency: Ratepayers, Policyholders and Survivors*

[46] Authors' analysis of U.S. Energy Information Administration Form EIA-861 Annual Electric Power Industry Report data, 2020-2025. Bundled residential system-wide weighted average rates across PG&E, SCE, and SDG&E service territories. Available: https://www.eia.gov/electricity/data/eia861/.

[47] California Public Utilities Commission. 2025 (September 30). 2025 SB 695 Report. Available: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2025/2025-sb-695-report_093025.pdf.

Forward CPUC projections forecast continued annual increases of approximately 6% for PG&E and SDG&E and approximately 7% for SCE through 2028, against an assumed inflation rate of 2.6%.[48] California's IOU residential rates—PG&E at approximately 41 cents per kilowatt-hour, SCE at approximately 35 cents, and SDG&E at approximately 46 cents—are already roughly double to triple the national average of approximately 16 cents per kilowatt-hour.[49] These projections likely represent a floor, not a ceiling: capital-related wildfire mitigation costs are only beginning to enter rates and will be recovered over decades, and without a risk tolerance framework that defines how much mitigation spending is enough, this trajectory has no structurally determined endpoint. In short, as credit ratings degrade due to concerns over exponential strict liability for wildfire damages, cost of capital increases and ratepayer bills go even higher, bringing the inequity of the load placed on utility ratepayers into stark focus.

Impacts on Electric Utilities

Even in combination, the original AB 1054 Wildfire Fund and the SBA 254 Continuation Account are neither durable nor sustainable solutions. In the absence of both those solutions and given utility imprudence, the full weight of unlimited liability for a utility-involved wildfire falls directly on the utility's ratepayers. There is no aggregate liability cap on costs that would be passed to ratepayers, no loss absorbing mechanism, no mechanism to spread cost across time or stakeholders. A wildfire producing losses at the scale California has now experienced twice in seven years (i.e., the 2018 Camp Fire, the 2025 Eaton Fire) is simply not a manageable challenge for an IOU. Bankruptcy will remain the only option. The conditions that drove PG&E into bankruptcy in January 2019 will be present, unresolved, and operating without the intended AB 1054 protections.

In light of this, the credit consequence follows directly. For Southern California Edison (SCE), it has already begun. S&P downgraded SCE from 'BBB' to 'BBB-' on September 17, 2025, citing a smaller-than-expected Wildfire Fund as a primary reason.[50] BBB- is the floor of investment grade at S&P. One further notch places SCE in speculative territory. Without a structural solution, that action is a more immediate risk. Rating agencies have stated explicitly that SB 254 outcomes are a watch factor; fund exhaustion produces a mechanical downgrade trigger, not a discretionary 100 to 200 basis point adjustment. PG&E's corporate credit rating remained sub-investment-grade

[48] Ibid.

[49] Pacific Gas and Electric Company. 2026 (January 1). Electric Rate Advisory — January 2026 (Advice Letter 7797-E). Available: https://www.pge.com/assets/pge/docs/account/rate-plans/electric-rate-advisory-0126.pdf. (41.46¢/kWh bundled residential non-CARE average, effective January 1, 2026.); Southern California Edison. 2025 (October 1). SCE Rate Advisory. Available: https://www.sce.com/save-money/rates-financing/sce-rate-advisory/20251001. (35.3¢/kWh average residential, effective October 1, 2025.); San Diego Gas & Electric. 2026 (January). Bundled Electric Rate Change Alert — January 2026. Available: https://www.sdge.com/sites/default/files/January%202026%20Electric%20Rate%20Change%20Alert.pdf. (45.7¢/kWh bundled residential average, effective January 1, 2026.); U.S. Energy Information Administration. 2025. Electric Power Monthly, Table 5.3. Available: https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=table_5_03. (U.S. residential average 15.94¢/kWh, 2025 annual.)

[50] S&P Global Ratings. (2025, September 17). *Edison International and subsidiary downgraded to BBB- on smaller-than-expected wildfire fund; outlook is negative*.

across major rating agencies for over five years following its 2020 bankruptcy emergence, with Fitch becoming the first to raise it to investment grade in September 2025; Moody's and S&P had not yet followed as of that date.[51] Absent structural reform, both PG&E and SCE face the risk of multi-notch downgrades. For SCE, the trajectory leads to non-investment grade.

Ratepayers will suffer the consequences through their increasing monthly bills and the quality of service a utility can provide with limited access to the capital markets. The Assembly Committee on Utilities & Energy's backgrounder on SB 254 reports that each 1 percentage-point increase in IOU financing costs translates to approximately $5 per month in additional rate increases per residential customer.[52] Typical corporate speculative-grade spreads are 1%-2% above investment-grade levels and have been even higher under periods of extreme economic distress.[53] These spreads imply a potential additional rate impact of $5 to $10 per month on top of existing wildfire-related charges already averaging $13 to $24 per month per utility.[54]

Impacts on the Insurance Market

The same future fire that triggers the utility credit concern simultaneously triggers a parallel consequence in the insurance market, with costs falling not just on those in the fire zone but on every Californian holding an admitted-market homeowners policy. The FAIR Plan, created to operate as the state's insurer of last resort, now holds approximately $725 billion in total exposure across almost 670,000 policies, making it among the largest residual market insurer in the country, if not the largest.[55]

As of January 2025, its surplus stood at only approximately $370 million, less than 10% of the $4.1 billion in estimated losses from the January 2025 LA Wildfires, and required a $1 billion emergency assessment on all admitted insurers.[56] The FAIR Plan was not designed for this role. It was created as a narrow residual market for otherwise uninsurable properties. While this remains the case in

---

[51] Bloomberg. 2025 (September 26). "PG&E Raised to Investment Grade Six Years After Bankruptcy." Available: https://www.bloomberg.com/news/articles/2025-09-26/pg-e-raised-to-investment-grade-six-years-after-bankruptcy.

[52] Each 1 percentage-point increase in IOU financing costs equates to approximately $5 per month in additional rate increases per residential customer; See California State Assembly, Committee on Utilities and Energy. (2025, September 10). SB 254 (Becker): Committee backgrounder (Version R1). Available: https://autl.assembly.ca.gov/system/files/2025-09/sb-254-becker-r1.pdf

[53] Authors' analysis of FRED data indicates BB–BBB Option-Adjusted Spread differential ranged approximately 100-150 bps under normal conditions 2019-2025, peaking between 175-350 bps during times of financial distress.; See Federal Reserve Bank of St. Louis. ICE BofA BBB US Corporate Index Option-Adjusted Spread (BAMLC0A4CBBB) and ICE BofA BB US High Yield Index Option-Adjusted Spread (BAMLH0A1HYBB). https://fred.stlouisfed.org/series/BAMLC0A4CBBB; https://fred.stlouisfed.org/series/BAMLH0A1HYBB.

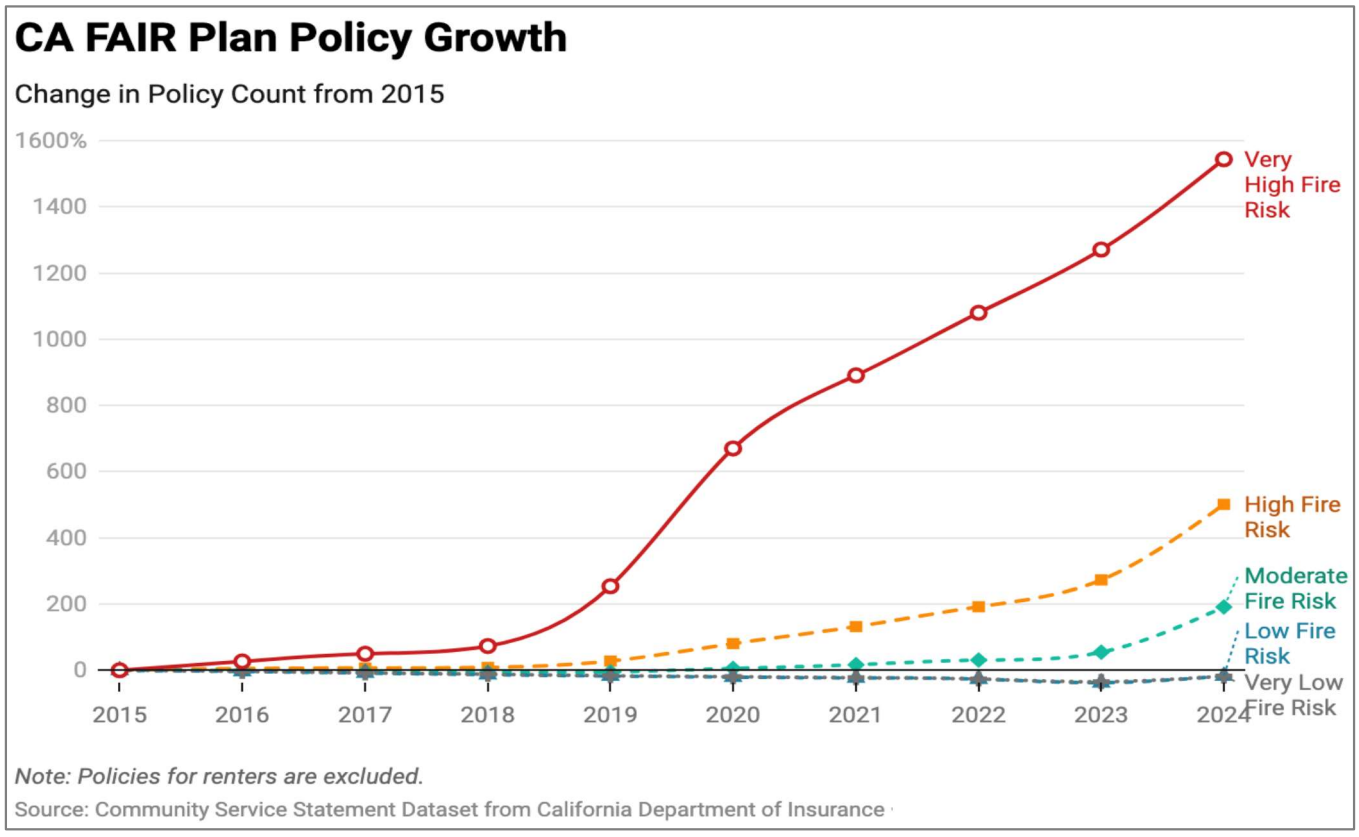
[54] The $5-$10/month range is derived by applying a 1.0-2.0 percentage point (100-200 bps) spread range to the $5/month-per-1pp estimate—it is not a figure adopted in any CPUC decision or statute.

[55] As of December 2025.; See California FAIR Plan. n.d. Key Statistics & Data. Available: https://www.cfpnet.com/key-statistics-data/

[56] California FAIR Plan Association. 2025 (February 11). Request to Issue Assessment. Available: https://www.cfpnet.com/wp-content/uploads/2025/02/CaliforniaFAIRPlanAssessmentRequest-February2025.pdf; California Department of Insurance. 2025 (February 11). Order No. 2025-1: Approving the California FAIR Plan Association's Request to Issue Assessment. Available: https://www.insurance.ca.gov/0250-insurers/0500-legal-info/0700-commissioners-orders/upload/Order-No-2025-1-Approving-the-California-FAIR-Plan-Association-s-Request-to-Issue-Assessment.pdf.

lower-risk areas where competition has strengthened, the FAIR Plan has become, in the highest-risk areas of California, the primary insurer. In ZIP Codes with the highest wildfire risk, its market share has exceeded 40 percent after growing more than 15 times from 2015 to 2024 (see Figure 5), indicating a substantial withdrawal of private insurers from these fire-prone areas. Without structural risk reduction that reverses that retreat, the FAIR Plan will continue to absorb the market that private insurers are abandoning—concentrating risk in a mechanism that was never designed, governed, or capitalized to operate at this scale. -In very high fire risk ZIP Codes, 43% of policyholders are already on the FAIR Plan.[57] The FAIR Plan's market share has grown 165% since 2019.; statewide, the FAIR Plan's share of residential policies is approaching 6% and is still growing (see Figure 6). In the highest-risk areas, the admitted market has contracted sharply, and without structural risk reduction that reverses that retreat, the FAIR Plan will continue to absorb the market these insurers are abandoning—concentrating risk in a mechanism that was never capitalized, governed, or intended to serve as a primary wildfire insurer.

Figure 6 FAIR Plan policy growth since 2015



[57] FAIR Plan market share in very high wildfire-risk ZIP codes: 43% in 2024, up from 2.8% in 2015. 43% figure reflects authors' analysis of CDI data; ZIP-code fire risk classification from CDI Wildfire Risk Information Report.; See California Department of Insurance. n.d. Community Service Statement Dataset. Available: https://www.insurance.ca.gov/01-consumers/200-wrr/.

Notably, during the period when statutory non-renewal moratoria were in effect, the FAIR Plan enrollment continued to rise in areas protected by these moratoria, despite a reduction in non-renewal activities. This may indicate that some insurers have also restricted new business or exited the region altogether.[58] Even in the face of moratoria, and with the benefits emerging from the SIS, solving for FAIR Plan's exorbitant exposure and outsized and unsettling role in the high- and very-high-risk areas of California remains an open issue.

This has consequences for consumers. The mechanism by which FAIR Plan losses become costs for admitted-market policyholders operates automatically and without geographic limit. Under California law, when FAIR Plan losses exceed its surplus and reinsurance, the Plan assesses its member insurers—every admitted insurer operating in the state—in proportion to their market share. This is a typical capital structure for residual market insurers in the U.S., but it is also a structure that becomes problematic when dysfunction in the underlying market generates sudden growth in the residual insurer—in this case FAIR Plan—and the admitted insurers' exposure to large assessments start to ripple through the market.

The 2025 assessment of $1 billion translated to surcharges of 1% to 3% of policy premiums on admitted-market policyholders across California—not just those in fire-prone areas. A future wildfire event generating $5 to $10 billion in FAIR Plan losses would, based on the statutory assessment mechanics and current admitted-market premium base, produce estimated per-policy assessments on admitted-market policyholders on the order of $300 to $630.[59] Those charges fall on a homeowner in Sacramento, a renter in San Jose, a small business in San Diego—anyone who holds an admitted-market policy, regardless of their exposure to wildfire. The mechanism is imbedded in law and effectively automatic. The only variables are the size of the next event and the remaining capacity of the admitted market to absorb it.

That capacity has been eroding. California homeowners insurers have not achieved underwriting profitability as a group since the 2017-2018 wildfire season, with combined ratios averaging approximately 109.7 between 2014 and 2023.[60] The 2025 LA Wildfires, of course, added losses that further challenge the industry's ability to earn its cost of capital in California. Insurers entered 2026 simultaneously absorbing their own direct losses and 50% of the FAIR Plan assessment obligations from the 2025 wildfires. A second major event in the near term—within the range that

---

[58] Taylor, R., Turland, M., & Weill, J. (2025, March). *Last resort insurance: Wildfires and the regulation of a crashing market* (Working Paper No. 2510). Federal Reserve Bank of Dallas.

[59] Authors' derived estimate. The $5-$10 billion assessment range is divided across California's admitted-market residential premium base. Consistent with the $1 billion assessment translating to temporary supplemental fees of approximately 1-3% of policy premiums, as authorized under CDI Bulletin 2025-4 and approved in Order No. 2025-1. See California Department of Insurance. 2025 (February 11). Bulletin 2025-4: Updated Guidance Regarding Insurer Recoupment Procedures in Response to Assessment by the FAIR Plan. Available: https://www.insurance.ca.gov/0250-insurers/0300-insurers/0200-bulletins/bulletin-notices-commiss-opinion/upload/Bulletin-2025-4-Updated-Guidance-regarding-Insurer-Recoupment-Procedures-in-Response-to-Assessment-by-the-FAIR-Plan.pdf. Figures are illustrative.

[60] California homeowners combined ratio 10-year average 2014-2023: 109.7; source data from Best's Market Share Reports, Homeowners Multi-peril.; See Insurance Information Institute (Triple-I) / AM Best. 2025 (April). Trends and Insights: California Homeowners Insurance Issues Brief. Available: https://www.iii.org/sites/default/files/docs/pdf/triple-i_trends_and_insights_california_homeowners_issues_brief_04102025.pdf.

catastrophe modeling indicates is both serious and plausible, not extreme—could trigger another FAIR Plan assessment on an insurance market whose financial resilience has already been reduced, but shows signs of resilience. One California homeowners insurer—Merced Property & Casualty—became insolvent following the 2018 Camp Fire.[61] The 2025 LA Wildfires were substantially larger but did not result in any insurer insolvencies, nor did they drive an immediate increase in reinsurance pricing. The industry thus demonstrated its resiliency to this large catastrophe, even in the face of increases in the risk environment. Even with those hopeful data points, the market fragility remains.

If insurer investment capital starts to retreat from supporting the California market, the negative feedback loop could become self-reinforcing. As remaining insurers exit the market, their market share must be absorbed either by other admitted insurers or the FAIR Plan. By growing market share, admitted insurers increase their own risk and their risk of FAIR Plan assessments. FAIR Plan's market share growth similarly increases the potential size of that assessment risk. The core risk is contagion—if capital starts to depart, it may trigger a cascading cycle that ultimately leave the state without a viable private insurance market. While that scenario seems remote, natural catastrophes would be a trigger for an exodus of insurance capital and thus cannot be ignored.

In 2023, the State intervened to address the need for regulatory changes to settle the market. The Governor collaborated with the Insurance Commissioner and the insurance industry to create the Sustainable Insurance Strategy (SIS) framework. The immediate benefit of the SIS was that it started to stabilize the market by creating a path for longer-term regulatory reforms. Insurers loosened pre-SIS restrictions on new policies, leading to a healthier and competitive market in lower-risk areas of the state. A capital exodus was avoided. As noted, the longer-range prospects for improvements in the high-risk areas remain uncertain. Portions of the SIS have been challenged in court as running afoul of Proposition 103, potentially slowing market adoption of these reforms.[62] In the interim, the risk of future FAIR Plan assessments and recoupments remains.

---

[61] 2018 Camp Fire identified as sole proximate cause of insolvency.; See California Department of Insurance. 2018 (November 30). Press Release No. 141-18: "Regulator Takes Control of Small Failing Insurer." https://www.insurance.ca.gov/0400-news/0100-press-releases/2018/release141-18.cfm; California Department of Insurance. 2018 (November 30). *Frequently Asked Questions About Merced Property & Casualty in Liquidation.*

[62] *Consumer Watchdog, etc., v. Insurance Commissioner Ricardo Lara, et al.* (LA County Superior Court Case No. 25STCP01367)

Synthesis – The Cost of Inaction is High and Growing

The following table summarizes the key mechanisms through which financial and market pressures flow ultimately to Californians in the absence of actions to change the status quo:

Table 4 Triggers, Mechanisms, and Consequences

Trigger	Mechanism	Consequence
Wildfire Fund Exhaustion	Utility credit downgrades; higher financing costs	Rates rise; mitigation slows; credit worsens further
Utility Credit Downgrades	Higher debt/equity costs passed to ratepayers	Each 1 percentage-point increase = ~$5 per month per customer; affordability crisis deepens
Utility Rate Increases	Reduced investment capacity; electrification slows	Climate goals deferred; competitiveness erodes; low-income burden grows
Insurance Market Contraction	FAIR Plan growth; assessment surcharges on all California policyholders	Insurer pull-back accelerates; protection gap widens; market recovery slows
Stalled Mitigation	Risk accrues faster than reduction	Next event is larger; fund exhaustion recurs; cycle restarts
Utility Insolvency	State forced into ownership or restructuring	Grid maintenance and capital costs shift to taxpayers; climate investment constrained

In sum, the cost of inaction is high. Inaction perpetuates unaffordability for consumers, both as ratepayers and insurance policyholders—if they can find insurance. Utility companies become increasingly unattractive to investors and lenders, limiting their ability to attract the capital required to maintain safe, clean, and reliable infrastructure, let alone the capital needed to finance the improvements needed to reach California's electrification and clean energy goals.

Inaction always remains an option. But it should be a decision made with awareness of the high costs to Californians.

5 Pathways to Catastrophe Resiliency

The research, analysis, and stakeholder engagement described in this Report generated an array of policy options worthy of consideration by the Legislature and Governor. The breadth of the Study scope introduced complexity in how best to organize and present options in a way that is meaningful for policymakers. From the outset, the Study team emphasized developing options that are **actionable**, **viable**, and **durable**—sufficiently complete to assist policymakers in balancing the unavoidable trade-offs required to implement long-term catastrophe resiliency solutions.

In organizing the policy options into Pathways, the Study drew upon the framework established by the Legislature and Governor in SB 254. The options are organized around the three primary goals in the Study scope. The report mandate is to evaluate and set forth "new models or approaches" along these three Policy Pathways:

Pathway 1 | Commit to Community Wildfire Risk Reduction – Reducing the risk of damage from catastrophes is foundational to long-range resiliency. This Pathway presents options to drive "targeted" risk reduction at scale, stimulate local governance responsibility for community and home-level risk reduction, improve underlying insurability, and maintain high-quality electric utility infrastructure safety.

Pathway 2 | Equitably Allocate Catastrophe Burdens – This Report details the systems and financial structures Californians use to socialize catastrophe risk, while demonstrating that the status quo is not working. Pathway 2 offers options to modify, strengthen or realign the allocation of burdens among existing systems, as well as options for new or supplemental systems.

Pathway 3 | State Roles for Addressing Catastrophe Resiliency – The ability of survivors and communities to recover from catastrophes can be enhanced by building new structures to monitor progress, inform future decision-making, and finance the costs of major catastrophes that exceed what current systems can absorb. Pathway 3 presents options for State-sponsored mechanisms to address protection gaps that may persist, particularly for the largest, most "tail risk" events.

There is significant variability in the timelines attached to each Pathway and its strategic options. Risk reduction will yield results years and decades, not months. In the meantime, conditions are not improving and will worsen without intervention. Risk reduction provides benefits by reducing overall financial strain for communities, utilities, and the insurance market—essential for long-term fiscal and economic resilience, but not something that can be achieved in the near-term (1-2 years). Pathway 2 and several elements of Pathway 3 have options with shorter implementation timeframes, as they address near-term fiscal pressures of managing catastrophe financing and liability risk.

The State faces a historic challenge, and the options available require a difficult balancing of interests and coordination and commitment of resources from many stakeholders—from individual homeowners to communities, utilities, insurers and beyond. Within these three Pathways, this Report offers a broad range of policy options that, individually or in combination, could help address the complex challenges facing the State. It identifies potential implementation considerations for each option. This Report does not endorse any specific option; it is intended to assist the Legislature and Governor in the difficult work of enhancing California's catastrophe resiliency.

The chart on the following page provides an outline of the Policy Pathways, Strategies, and Options discussed in this section of the Report.

SB 254 Study Report Policy Pathways, Strategies, and Options

Pathway 1 – Commit to Community Wildfire Risk Reduction	
Strategy 1.1: Enhance the Statewide Approach to Driving Targeted Community Wildfire Risk Reduction.	Option 1.1.1: Strengthen and align statewide coordination for community wildfire mitigation. Option 1.1.2: Develop essential data and analytical infrastructure to identify and assess wildfire risk mitigation needs and track progress statewide. Option 1.1.3: Adopt and implement science-informed standards and programs to guide targeted, high-impact mitigation efforts in communities across the state. Option 1.1.4: Streamline administrative processes and procedures to maximize resources and expedite implementation of standards.
Strategy 1.2: Stimulate Community and Home Level Commitment and Shared Responsibility for Wildfire Risk Reduction and Community Resiliency	Option 1.2.1: Incentivize community wildfire mitigation planning and project-level implementation with financial resources and technical support. Option 1.2.2: Tighten the link between risk reduction and insurance. Option 1.2.3: Incentivize city and county pre-disaster recovery planning with financial resources and technical support.
Strategy 1.3: Continue to Prioritize Electric Utility Safety and Accountability	Option 1.3.1: Develop a risk tolerance standard with binding application to electric utility liability. Option 1.3.2: Preserve safety Certificate accountability and financial stabilization benefits. Option 1.3.3: Establish a statutory minimum safety weighting in electric utility executive compensation. Option 1.3.4: Establish a confidential reporting system with statutory safe-harbor protections.
Pathway 2 – Equitably Allocate Catastrophe Burdens	
Strategy 2.1: Strengthen Access to Residential Property Insurance for all California Homeowners and Renters	Option 2.1.1: Solidify the long-term effectiveness of the Sustainable Insurance Strategy. Option 2.1.2: FAIR Plan Reform - Return the FAIR Plan to a "market of last resort." Option 2.1.3: Institute a statewide insurance market health monitoring program. Option 2.1.4: Solve for underinsurance - Make the standard homeowners insurance product more responsive to catastrophe recovery needs. Option 2.1.5: Enhance market oversight following disasters.
Strategy 2.2: Reform Utility Liability	Option 2.2.1: Eliminate inverse condemnation for electric and gas utility-caused wildfires. Option 2.2.2: Modify the damages for which electric and gas utilities are liable outside of inverse condemnation. Option 2.3.3: Eliminate insurance subrogation.
Strategy 2.3: Efficiency and Compensation Improvements for Utility-caused Wildfires to Accelerate Recovery and Reduce Legal Costs	Option 2.3.1: Create a "fast pay" facility for survivors of utility-caused wildfires.
Strategy 2.4: Make a More Durable, Permanent Wildfire Fund	Option 2.4.1: Create a more durable Wildfire Fund with potential to use risk transfer. Option 2.4.2: Create a more durable Wildfire Fund with diversified funding sources. Option 2.4.3: Establish a more durable Wildfire Fund along with liability reforms.
Pathway 3 – State Roles for Addressing Catastrophe Resiliency	
Strategy 3.1. State Roles to Finance Catastrophe Risk	Option 3.1.1: Establish a State-administered wildfire liability insurance program for electric utilities. Option 3.1.2: Establish a State-backstop for electric utility wildfire liability with a residual utility self-insurance pool. Option 3.1.3: Establish a State-backed catastrophe reinsurance layer for the residential property insurance market. Option 3.1.4: Create a State-sponsored wildfire insurer.
Strategy 3.2: Statewide Funding for Community Wildfire Mitigation	Option 3.2.1: Develop a long-term funding and financing strategy for statewide community wildfire mitigation.

Pathway 1 – Commit to Community Wildfire Risk Reduction

Strategic Context: Since the 2017 Tubbs Fire, California has laid an unprecedented foundation for wildfire risk reduction at scale—responding to record-breaking fire seasons with major institutional, financial, and operational reforms. The State nearly doubled CAL FIRE's firefighting staff, expanded the world's largest aerial firefighting fleet, and deployed new technologies including drones, AI-enabled detection, and real-time intelligence systems to substantially improve fire response and community defense.

California simultaneously shifted toward mitigating fire risk and advancing resilience, directly investing more than $2.5 billion across 40 programs and treating nearly 1.9 million acres of land between 2020 and 2023[63] through forest-health projects, prescribed fire, and community-scale prevention efforts. In 2021, Assembly Bill 9 established the Community Wildfire Preparedness & Mitigation Division within the Office of the State Fire Marshal, providing year-round technical support, resources and financial assistance to communities at risk of wildfire. The State also created the Wildfire and Forest Resilience Task Force, launched the first comprehensive Wildfire and Forest Resilience Action Plan with measurable targets to guide landscape scale investments, and established regional capacity building programs, vegetation-management tracking systems, and public dashboards to improve transparency and coordination.

These actions—paired with emergency proclamations to fast-track projects and expanded wildfire risk standards for communities—have built the core architecture California needs to accelerate wildfire mitigation and protect communities in the face of escalating climate-driven wildfire risk. However, over the last decade California has faced a rapidly shifting wildfire landscape where the primary fuel is no longer just wildland vegetation but communities themselves—housing, infrastructure, and businesses. Pandemic-related budget volatility and shifting Federal priorities have compounded the challenge. Community and home level hardening has remained particularly difficult given evolving climate science, fragmented responsibility, and multiple, sometimes conflicting standards defining the scope and effectiveness of hardening options. While the State has built a solid foundation for managing wildfire risk—including ambitious targets to treat one million acres annually—growing risks in developed areas are outpacing traditional response capabilities.

Nearly one-third of California's residential units sit within the Wildland Urban Interface (WUI) zone, with approximately 90% built before the adoption of the California WUI Code, today known as Part 7 (previously *Chapter 7A)* of the California Building Code in 2008, which for the first time required fire-resistant materials and construction methods for all new homes in designated WUI areas. 2008 marked the shift from voluntary guidance to mandatory, science-based

[63] California Wildfire & Forest Resilience Task Force. (2025, January 23). *California's progress on wildfire resilience.* Available: https://wildfiretaskforce.org/wp-content/uploads/2025/01/Californias-Progress-on-Wildfire-Resilience-01_28_25.pdf.

home-hardening standards for new construction. But nearly 2 million older homes across the state face elevated risk of exposure to devastating "urban conflagrations," where wind- and ember-driven fires turn buildings into the primary fuel source, overwhelming fire suppression efforts. Climate change is further intensifying wildfire hazard, creating exponentially more challenging conditions.

To match the pace and scale of California's wildfire challenge—and to build the State's capacity for community wildfire risk mitigation on par with its leadership in landscape-scale risk reduction—three key strategies (with recommended options) are proposed:

- **Strategy 1.1:** Enhancing and accelerating the State's efforts in community wildfire risk reduction,
- **Strategy 1.2:** Stimulating community and home-level mitigation and advancing shared responsibility for wildfire risk reduction and community resiliency, and
- **Strategy 1.3:** Maintaining high-quality electric utility infrastructure safety and service.

Strategy 1.1: Enhance the Statewide Approach to Driving Targeted Community Wildfire Risk Reduction

Effective risk reduction requires a holistic and integrated approach across both the natural and built environments to maximize risk reduction. Community and home hardening is particularly challenging because it relies on action, often voluntary, by multiple actors, including local governments, landowners, and individual businesses and homeowners. Accelerating cost effective mitigation efforts to reduce risk at the community level requires a comprehensive plan to set clear targets, improve coordination between public and private sector stakeholders, invest in underlying science and modeling, establish clear standards, and scale public and private investments in risk reduction. Investment at scale in community wildfire mitigation will protect California communities and avoid catastrophic losses that are destabilizing the state's insurance and utility sectors.

Option 1.1.1: Strengthen and align statewide coordination for community wildfire mitigation.

Concept: Assign a lead for State coordination on wildfire risk—for both landscapes and communities—to set mitigation goals and standards, coordinate across relevant Federal, State, Tribal, regional, and local partners, and ensure accountability to deliver on community mitigation.

Rationale: Increasing coordination among State agencies, across private sector stakeholders, and with communities across the state will close coordination gaps, promote more efficient stewardship of limited resources, and enable opportunities for additional investment of both

public and private resources to achieve community wildfire mitigation-at-scale. It reinforces a "whole-of-government" approach to a statewide challenge. Strengthening mitigation coordination under one unified entity that has sufficient authority ensures duplication is reduced, operational efficiency and synergies are increased, and speed of deployment of limited resources is attained—all creating a more resilient state.

Features: A statewide entity to:

- Establish clear statewide and regional targets for community- and landscape-scale mitigation.
- Establish standards for performing effective mitigation work at all scales (i.e., parcel, community, and landscape-level).
- Provide transparency and accountability to track progress over time.
- Equip communities with the tools, data, and planning guidance they need to act.
- Coordinate existing funding and resources and identify new funding and financing tools to attend to the highest-priority risks, while pursuing additional resources to close remaining gaps through improved efficiency of existing programs.
- Stimulate innovation in the development of new materials and solutions for home hardening and community risk reduction.

Analysis: Despite extensive and substantial steps taken to improve statewide coordination and efficiency, community wildfire mitigation efforts are fragmented across numerous public, private, and community stakeholders. A more unified governance structure has demonstrated effectiveness in other complex, multi-jurisdictional challenges, such as the rollout of rooftop solar and the shift from incandescent to LED lighting. This approach could help direct limited public resources more efficiently and provide a regulatory and programmatic certainty that will help attract private capital investment. However, establishing a strengthened coordination entity comes with costs—including potential additional funding needs and resistance from entities that may perceive a loss of authority or autonomy. The risk of potential duplication with existing mandates will also need to be addressed. Balancing centralized direction with local flexibility is an important consideration; State-level coordination should not add bureaucratic layers that slow action. Regional planning for implementing centralized direction can help achieve this balance.

Option 1.1.2: Develop essential data and analytical infrastructure to identify and assess wildfire risk mitigation needs and track progress statewide.

Concept: The statewide coordinating entity will oversee the development of a statewide integrated system of wildfire risk data and analytical infrastructure to enable an array of actors, including communities, utilities, and land managers, to forecast and assess risk, proactively identify and prioritize the highest risk areas in need of mitigation, develop mitigation project

portfolios that are based on dynamic risk assessments rather than static hazard exposure mapping, and perform more targeted risk reduction efforts that most effectively and measurably bring down the overall risk curve across California.

Rationale: Wildfire risk in the existing built environment and community domains is still not fully understood across sectors because data, models, and other analytical tools are either not in place or not sufficiently widely available to consistently identify risks and tailor mitigation packages based on local context. In particular, the ability to sufficiently model the propagation of fire within WUI communities necessitates significant increases in both the size and granularity of parcel-level data sets. There are emerging technologies which could enable this outcome through crowdsourcing of data collection by property owners. The State, working in partnership with the private sector and the academic and research community, is already supporting development and innovation around data and utilizing leading edge technologies like AI to create or enhance models and tools, with additional options for continuing these efforts. Continuing to invest in, develop, and deploy world-class tools can help communities, businesses and the State better manage fire risk. Having a shared understanding of risk and capabilities to forecast and assess risk across California is a critical step enabling strategic prioritization of mitigation funding and action to maximize impact and overall risk reduction.

Features: Statewide leadership and funding to support development of:

- **Urban Conflagration Index:** Compares community-level catastrophe risk by benchmarking current conditions against historical wildfire data.
- **Enhanced Fire Modeling:** Evaluates structure-to-structure spread to measure the return-on-investment of parcel and neighborhood-scale mitigations.
- **Statewide Data Commons:** Designed to systematically collect and store previously inaccessible wildfire mitigation and suppression data, providing controlled access to a variety of users, and supporting a wide range of research and operational initiatives by leveraging multiple data sources to address key data gaps. For industries with low-frequency high-consequence events, such as aviation, a shared, multi-stakeholder repository of standardized, de-identified data accessible for collective learning is an established practice.
- **AI-Driven Risk Assessment:** Leverages crowd-sourced parcel data and machine learning to link specific mitigation choices to damage-reduction outcomes.
- **Implement SB 429 (2025) Data and Modeling.** Continue support for State legislation to build a public catastrophe model for use in risk quantification and targeted mitigation planning and funding. The “Request for Expertise (RFE)” announcement, issued on March 25, 2026, describes SB 429’s purpose: “Pursuant to Senate Bill 429 (Chapter 429, Statutes of 2025), CDI is directed to establish and administer the Wildfire Safety and Risk Mitigation Program to fund the development, demonstration, and deployment of a public wildfire catastrophe model (Model), as defined, and to provide grant funding to one or more universities for eligible

projects with specified criteria for the purpose of creating a research and educational center (Center) responsible for developing, demonstrating, and deploying a Model that provides significant wildfire safety benefits to California communities and assists alignment of Federal, State, and local wildfire risk reduction efforts." The RFE period of performance is three years and is funded with $8.5 million.

- **Interactive Risk Mapping:** Provides public tools that visualize how home hardening and defensible space reduce real-world risk.

Analysis: Development and implementation of a data-driven analytical infrastructure for wildfire risk mitigation can enable the prioritization of limited State resources toward the communities with highest physical exposure to wildfire, as well as communities with the most socioeconomically vulnerable neighborhoods. It can also provide transparency for community and parcel-level commitment to mitigation and valuation for potential funding and incentives. This architecture creates a scalable model for assessing risks across all major hazards—fire, flood, and earthquakes.

There will be an upfront cost for data, technology, and architecture development. The political complexity of mapping risk may trigger local concerns regarding property values and insurance eligibility. Such concerns should recognize that property value and insurability decisions are already being made with incomplete data and/or an inability to properly understand the relationship between mitigations and subsequent reductions in risk. Implementation complexities need to be considered, including how to maintain up-to-date information and cross-jurisdictional cooperation across California's diverse local government landscape.

Option 1.1.3: Adopt and implement science-informed standards and programs to guide targeted, high-impact mitigation efforts in communities across the state.

Concept: The State will adopt and implement science-and building industry informed standards and programs, customized to local context and scale, that target high-impact mitigation actions and reduce the current uncertainty and confusion caused by multiple and sometimes unaligned guidance.

Rationale: Prioritizing high impact mitigation actions and ensuring that there are consistent standards and guidance in place is a critical and strategic step to help communities and homeowners understand and receive support for mitigating the highest order of physical risk.

Features:

- **Adopt Zone Zero Requirements.** The Board of Forestry and Fire Protection paused Zone Zero rulemaking in December 2025 to further consider input received on the regulations. The rulemaking process is expected to resume in March 2026. Adopting and implementing Zone Zero requirements will reduce urban conflagration risk.

- **Establish a Statewide Voluntary Wildfire Retrofit Standard and Additional Wildfire Retrofit Tools.** While the Chapter 7 standard for constructing a new wildfire "hardened" home is in the California Building Code, adopting a unified, voluntary home hardening retrofit standard for existing homes would address misalignment and confusion among the variety of voluntary wildfire mitigation retrofit (and new construction) standards and packages that currently exist. CAL FIRE should be tasked with creating additional new tools, providing guidance, and administering financial assistance to help support the retrofitting of existing homes.
- **Align State and Local Mitigation Programs and Guidance.** Aligning mitigation programs to use common terminology and standards will help with statewide coordination, planning, implementation and investment. Successful mitigation program design and deployment depends on an interconnected system of capabilities rather than any single intervention. For example, the California Wildfire Mitigation Program, IBHS Wildfire Prepared home standard, and the CDI Safer From Wildfire guidelines have significant overlap in the specific mitigation elements within these packages, but the coupling of those elements in differing ways generates significant differences in cost, time, workforce, and utility in undertaking mitigation or modeling, and valuing, its effectiveness.

Analysis: A single, commissionable voluntary home hardening retrofit standard can help make mitigation more cost-effective for suppliers and contractors to implement, more affordable for homeowners, provide more certainty of performance for investors and lenders, and support scalability and wider, faster implementation. However, establishing this streamlined approach comes with costs—including educating regulators and building officials about the strategy and the challenge of navigating a complex rulemaking process that has historically faced significant delays even with established and well understood scopes, let alone new building standards. Implementation timing is also a constraint, particularly the need to balance the urgent demand for uniformity and lower costs, with the inherent friction of multi-agency regulatory alignment. Scaling and implementing targeted, high-impact mitigation standards and programs must be sensitive to local context and local market conditions including trained labor availability. Wildfire risk reduction cannot take a one-size-fits-all approach.

Option 1.1.4: Streamline administrative processes and procedures to maximize resources and expedite implementation of standards.

Concept: The State helps to accelerate the pace of wildfire risk reduction statewide by aligning and streamlining wildfire mitigation project environmental review and permitting processes and standards.

Rationale: Wildfire mitigation projects cannot be achieved at scale without confidence in project effectiveness, delivery speed, and predictable outcomes. A predictable regulatory environment lowers transaction costs, accelerates project timelines, and enables investors to underwrite mitigation projects with greater certainty that they will be repaid or will receive returns on their

investments. This leads to increased confidence in the wildfire mitigation market and investment opportunities.

Features:

- **Extend and Expand Fast-Track Environmental Permitting.** The Governor's 2025 emergency proclamations suspending environmental laws for vegetation treatment are temporary and set to expire on May 1, 2026. Establish in statute the authority to facilitate ongoing fast-track environmental permitting for critical, short-term projects.
- **Streamline Environmental Review for Regional and Landscape-scale Wildfire Risk Reduction.** Environmental review may still be required under the California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA), for which continued enhancement of streamlining will help expedite fire-risk reduction projects.
- **Increase Transparency of Permitting Timelines**. Permitting timeframes and requirements for wildfire mitigation projects could be clarified to create transparency, accountability, and investor confidence.

Analysis: A standardized and predictable regulatory environment has demonstrated ability to lower project costs and accelerate timelines, providing the programmatic certainty needed to attract significant private capital to expand the scale and pace of mitigation efforts without requiring equivalent increases in State spending. However, establishing this environment comes with costs, including the challenge of ensuring rules remain consistent "mid-stream" and navigating the political friction of long-term fiscal commitments. Implementation stability is a consideration, particularly the need to balance evolving scientific advancements with the rigid certainty required by investors to secure repayment and returns.

Strategy 1.2: Stimulate Community and Home Level Commitment and Shared Responsibility for Wildfire Risk Reduction and Community Resiliency

Communities and homeowners are essential partners in achieving wildfire risk reduction statewide. A community-forward mitigation strategy focuses on shifting individual responsibility to a collective, expert-supported framework that scales resilience across entire neighborhoods.

Option 1.2.1: Incentivize community wildfire mitigation planning and project-level implementation with financial resources and technical support.

Concept: The State strengthens local government and individual homeowner capabilities and capacity to undertake wildfire mitigation through a series of investments in guidance and technical support, workforce development, strategic partnerships, and public education.

Rationale: Wildfire risk is inherently a collective problem and requires a collective response. In more densely developed areas, neighborhood-wide or block-level mitigation is essential to significantly lower the risk of structure-to-structure ignition and urban conflagration; isolated improvements on a single home in the same setting will have limited community-wide impact.

This reality points toward collective application models, district-scale programs, and other tools that allow communities to act together rather than relying on fragmented individual efforts. Enabling California communities and homeowners to more collectively undertake mitigation shifts the financial and logistical burden from the individual homeowner to the collective community with a neighborhood-scale strategy that maximizes and builds upon the protective effect of home hardening and defensible space. The State's financial investments and policy reforms for wildfire mitigation need Californians to understand wildfire risk, know what to do to mitigate risk and how to do it, and be empowered to navigate mitigation programs as economically, quickly, and effectively as possible.

Features:

- **State supports community mitigation planning and implementation** through programs like CAL FIRE's Wildfire County Coordinator initiative, a partnership between CAL FIRE and the California Fire Safe Council to build local capacity for wildfire mitigation.
- **State links funding to implementation of coordinated regional and local planning efforts such as block grants,** as an incentive for planning that optimizes mitigation projects based on community risk and highest needs (e.g., community wildfire protection plans, local hazard mitigation plans, regional priority plans).
- **Develop pre-qualified contractor networks.** The State creates statewide or regional lists of qualified contractors and best-practice prescriptive measures, so local governments can plug-and-play rather than renegotiate every procurement, as well as identify benchmark costs and reduce the potential for price fixing and price gouging, especially following disasters.
- **Evaluate existing State mitigation programs for efficiency and opportunities to scale impact.** The State reviews current mitigation programs to assess effectiveness and consumer uptake and identify opportunities for better alignment on standards and ways to improve efficiency and utilization across programs—enabling limited public resources to go further and expand the reach of existing investments.
- **Establish wildfire resilience job classifications.** The State formalizes wildfire resilience and risk reduction as recognized job classifications under the California Labor Code—creating a defined career pathway that enables targeted workforce development, training investments, and apprenticeship programs. Standardized classifications signals to workers, employers, and training programs that this is a viable and valued career pathway, helping build the skilled workforce California needs to scale mitigation efforts statewide.

- **Partnerships with Community-Based Organizations.** The State maintains and strengthens partnerships with organizations like the California Fire Safe Council and individual or regional local safe councils, providing training and professional development for fire-prevention practitioners, homebuilders, and communities, and helping local agencies and community groups strengthen their technical capacity to advance fire mitigation.
- **Campaign to Accelerate Home and Community Mitigation.** The State undertakes a public education campaign—paired with strong inter-agency coordination—to build public trust, accelerate adoption of mitigation measures, and create the predictable policy and regulatory environment needed for private capital to scale.

Analysis: Proactive community-centered wildfire mitigation-at-scale can be a powerful economic driver. It can lower per-property costs through bulk-purchasing of retrofits and shared contractor labor. It can address "the neighbor factor," where one unmitigated property can endanger an entire block. And research studies show positive returns on the investment: home hardening combined with defensible space yields can yield a 52% reduction in potential wildfire losses,[64] and each dollar invested in retrofitting homes ripples throughout the economy and returns about $1.70 to total economic activity.[65] A formalized, pre-qualified workforce also has demonstrated effectiveness in keeping mitigation dollars local and expanding the scale of job creation. A unified, accessible statewide wildfire-mitigation campaign, paired with a hybrid public–private funding model, can help to socialize and normalize mitigation as a standard part of homeownership and community planning.

Potential costs include the administrative challenge of shifting from individual property incentives to a model where success depends on the collective hardening of adjacent properties to protect the local tax base. Aligning municipal administrative burdens with a unified statewide standard can help ensure property owners can reliably secure insurance, but it also requires that local goals be well aligned with State goals.

Option 1.2.2: Tighten the link between risk reduction and insurance.

Concept: California homeowners who invest in risk reduction measures consistent with standards adopted by the State should see tangible and transparent reductions in insurance premiums. This can be achieved through amendments to the CDI Safer from Wildfires regulations.

---

[64] Zamanialaei, M., San Martin, D., Theodori, M. *et al.* "Fire risk to structures in California's Wildland-Urban Interface." *Nat Commun* 16, 8041 (2025). https://doi.org/10.1038/s41467-025-63386-2

[65] Risner, C., G. Delaney, et al., (2025, May 19) "California's Home Hardening Economy: Investing in a Resilient Future." *Earth Economics.* Tacoma, WA. Available:https://static1.squarespace.com/static/66ece4944d42cc7b2e864ad0/t/68b055ba300618081e32b2ba/1756386746684/Risner+etal+2025.05.19+California%27s+home+hardening+economy.pdf.

Rationale: Property insurance rates should consistently reflect loss reduction investments. The current property insurance system fails to systematically do so. By aligning insurance pricing with demonstrated risk mitigation efforts, the insurance market can better reflect underlying risk and incentivize resilience.

Features:

- The State sustainably funds a mitigation grant program that targets areas of high FAIR Plan concentration and policyholders of limited financial resources to improve insurability for these populations. Even in the absence of current budget flexibility to appropriate funds into mitigation grant programs, the State can establish a mitigation fund into which future appropriations or non-governmental capital could be contributed to finance targeted community and parcel-level risk reduction projects (see Option 3.2.1).
- The State creates a new community wildfire loss reduction standard that could be incorporated into the Safer from Wildfires regulations and that is directly tied to loss reduction. Existing community standards do not always or demonstrably equate with actual changes in risk since they can be established with little or no changes in risk levels in the community.
- CDI revises the existing Safer from Wildfires regulations to better reflect groups of measures that are known to lower future losses. Instead of requiring premium discounts for one-off measures, CDI creates tiers of investment (such as bronze, silver, gold, and platinum) that receive increasing levels of insurance premium discounts. Some of these tiers could equate to existing certification programs, such as the IBHS Wildfire Prepared Home (+) program. These should draw on recent wildfire science, such as the initial tier being maintenance of defensible space.

Analysis: Homeowners should be incentivized to invest in defensible space and mitigations that comply with a State-adopted voluntary home-hardening retrofit standard (see Option 1.1.4) and through mandatory premium discounts, both of which are widely supported by wildfire experts. Some insurers are already voluntarily offering premium discounts for the IBHS Wildfire Prepared Home standard on their own given their confidence in the standard's impact on losses.

Option 1.2.3: Incentivize city and county pre-disaster recovery planning with financial resources and technical support.

Concept: The State strengthens local government capabilities and capacity to manage and coordinate community recovery from wildfires or other natural catastrophes through investments in planning, technical support, and strategic partnerships.

Rationale: Recovery from large-scale disasters like the 2025 Los Angeles wildfires requires "whole of society" collaboration. The California Disaster Recovery Framework[66] aligns with the National Disaster Recovery Framework[67] to establish a disaster recovery coordination structure that builds on the State's extensive disaster experience and facilitates the delivery of State and Federal disaster assistance and an array of resources provided by non-governmental organizations (NGOs), Voluntary Organizations Active in Disaster (VOAD), long-term recovery groups, and philanthropic partners to address unmet needs and sustain long-term community recovery.

California has adopted six Recovery Support Functions (RSFs), each of which is led by a State coordinating agency that works with Cal OES to provide State support to local jurisdictions based on their disaster recovery needs. The RSFs also coordinate with the State's response structure to support the transition into recovery to ensure communities receive the support needed to develop and implement long-term recovery plans and projects. Recent catastrophes across California have shown that a lynchpin to the success of disaster-impacted cities, counties and Tribal governments in managing the challenges of post-disaster recovery is their ability to nimbly align key local departments and staff with this collaborative multi-level public-private operational structure. Unlike other Federal and State emergency management doctrines such as hazard mitigation or emergency operations planning, there are no mandates for the State's localities to prepare pre-disaster recovery plans and funds or other incentives for local pre-disaster recovery plans are limited.

Features:

- **State supports local pre-disaster recovery planning and training** through programs like Cal OES' Interagency Recovery Coordination, Recovery Planning and Quality Control Division to assist California communities with recovery planning and coordination.
- **State requires implementation of a coordinated State, regional and local recovery management structure following major disasters,** as an incentive for pre-disaster recovery planning that aligns with the California Disaster Recovery Framework as well as key local General Plan (e.g., land use, safety, and housing elements) and other local hazard and disaster plans (e.g., community wildfire protection plans and local hazard mitigation plans).

Analysis: California cities, counties, and Tribal governments can benefit from creating a Local Disaster Recovery Framework (LDRF) ahead of a disaster impacting their communities. LDRFs help pre-identify community recovery priorities; strategic public, private and non-profit partnerships with a role in recovery; and a jurisdiction's plan for post-disaster recovery

---

[66] California Governor's Office of Emergency Services. (2019, January). *California disaster recovery framework*. Available: https://www.caloes.ca.gov/wp-content/uploads/Recovery/Documents/2019-California-Disaster-Recovery-Framework.pdf

[67] Federal Emergency Management Agency. (2024, December 10). *National disaster recovery framework* (3rd ed., amended). Available: https://www.fema.gov/sites/default/files/documents/fema_national-disaster-recovery-framework-third-edition_05062025_0.pdf

organizational structure, expedited decision-making processes, and key department and staff roles and responsibilities. Studies of community recovery efforts across the U.S. and around the world consistently show that effective recovery planning and implementation delivers more than a return to normal: it can strengthen social capital and community cohesion, reduce displacement, accelerate physical and economic recovery, and even stimulate private investment.

However, implementing this policy option comes with costs, most notably the fiscal commitments at both the State and local levels to undertake planning, train staff on roles and responsibilities, regularly exercise and maintain the plans, and provide the technical support to ensure plan quality and alignment with the State's recovery framework.

Strategy 1.3: Continue to Prioritize Electric Utility Safety and Accountability

Strategic Context: California has built one of the most rigorous electric utility wildfire risk management systems in the country, including the nation's first mandatory Wildfire Mitigation Plans (WMPs), a dedicated oversight agency in the Office of Energy Infrastructure Safety (OEIS or "Energy Safety"), and continued regulatory oversight at the California Public Utilities Commission (CPUC). The regulatory framework established by SB 901 and AB 1054 has driven material gains in asset awareness, vegetation management, situational awareness, and risk modeling across all three large IOUs, while AB 1054's conditioning of Wildfire Fund access and liability caps on compliance with Certificate requirements have helped foster improved IOU safety cultures.

The three large electric IOUs and their ratepayers have made large investments in reducing the risk of utility wildfire ignitions. Total IOU expenditures on wildfire mitigation costs were more than $40 billion from 2019-2024 and are projected to average approximately $9 billion per year through 2028.[68] This has led to increasing concern about the affordability of electricity rates, with wildfire liability and mitigation costs driving approximately $20-40 per month in ratepayer costs and accounting for as much of 27% of monthly bills (depending on IOU – see discussion in Section 3, *Current State*). In recent years rate increases for California IOUs have significantly outpaced inflation, with wildfire-related costs identified by the CPUC as the single-largest contributing factor. Ratepayer-funded wildfire costs disproportionately burden lower-income Californians who pay a higher share of their income for utility bills and undermine California's climate goals by increasing the relative cost of electrification and decreasing the availability of capital for investment in grid modernization and expansion.

Transmission and distribution of high-voltage electricity is inherently dangerous, and the risk of utility-caused ignitions cannot be fully eliminated. Utility equipment accounts for a minority of total wildfire ignitions statewide, and the factors that transform ignitions into catastrophes—

[68] OEIS Quarterly Data Report WMP Tabular Data filings, available at https://efiling.energysafety.ca.gov/Dockets.aspx?caseId=1252.

accumulated fuels, vulnerable building stock, development density in the WUI, and extreme wind conditions—fall largely outside the utilities' control. As utilities have appropriately prioritized their highest-return safety investments, each additional dollar of grid-specific mitigation produces less incremental risk reduction than the dollar before.

The current approach does not provide a formal definition of risk tolerance—the acceptable further cost relative to incremental risk reduction or what constitutes acceptable residual risk at any level. Faced with potentially unlimited liability and with a societal and regulatory mandate to reduce wildfire risk, utilities inevitably pursue incremental risk reduction with further upward cost pressure on rates and affordability. Societally and from a regulatory perspective, there is not currently a formal objective basis to determine whether such further spending is warranted.

The Options outlined in Strategy 1.3 are designed to **maintain the safety incentives and progress in utility wildfire risk management** that California has achieved **while calling for enhanced non-utility wildfire mitigation efforts and an increased focus on the cost effectiveness and societal impact** of wildfire risk reduction. The options presented generally apply to the state's three large IOUs (except Option 1.3.4, which includes all utilities). Publicly owned utilities operate under separate governance structures and are not subject to CPUC rate regulation. Small investor-owned utilities, while subject to CPUC regulation, operate under different financial considerations and risk profiles; harmonizing the application of these strategies will be subject to legislative consideration and direction.

Option 1.3.1: Develop a risk tolerance standard with binding application to electric utility liability.

Concept: Establish a formal risk tolerance standard that defines the threshold of acceptable residual electric utility-caused wildfire risk with binding application to WMP approvals and General Rate Case (GRC) cost recovery proceedings.

Rationale: A defined risk tolerance standard resolves the open-ended risk reduction incentive that currently drives utility mitigation spending, and it could reduce ratepayer costs caused by fiscal uncertainty while maintaining safety accountability. The approach draws on established 'As Low As Reasonably Practicable' (ALARP) policy precedents in high-hazard industries, e.g. nuclear, offshore petroleum, and chemical process safety regimes, which recognize a zone of residual risk where further investment is no longer reasonably practicable. A formal utility risk tolerance standard that builds on the benefit-cost[69] and risk scaling[70] methodologies in the CPUC's Risk-

[69] California Public Utilities Commission. 2022. Phase II Decision Adopting Modifications to the Risk-Based Decision-Making Framework Adopted in Decision 18-12-014 and Directing Environmental and Social Justice Pilots. Decision (D.) 22-12-027. Available https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M500/K014/500014668.PDF. Accessed March 21, 2026.

[70] California Public Utilities Commission. 2024. Phase 3 Decision. Decision (D.) 24-05-064. Available https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M533/K099/533099839.PDF. Accessed March 21, 2026.

Based Decision-Making Framework (RDF)[71] would define the appropriate balance between incremental ratepayer cost vs. residual risk as a societally determined policy choice, help moderate rate trajectories, and enable a focus on mitigation effectiveness across the whole of societal wildfire risk.

Features:

- CPUC opens and completes a dedicated rulemaking, building on the groundwork laid in the Phase 4 RDF.[72]
- A transparent standard-setting process that surfaces societal risk preference tradeoffs, including regarding the evaluative weight assigned to low-probability catastrophic events ('risk scaling'), as public policy choices.
- In cost recovery proceedings, including catastrophic wildfire proceedings, evidence that a utility operating in compliance with the standard will, absent evidence of gross negligence or willful or intentional misconduct (including in development and implementation of a WMP), be deemed to have met its duty of care, providing a statutory basis for prudency determinations without eliminating inverse condemnation liability.
- Authorize electric utilities to use evidence of compliance with the acceptable risk standard and WMP requirements as an affirmative defense to negligence claims.

Analysis: California's electric utility wildfire mitigation framework operates without a definition of how much residual wildfire ignition risk is acceptable or when further mitigation spending by the utility is no longer justified relative to its incremental benefit. This could lead to an overallocation of societal resources to rate-funded utility risk reduction, depleting overall societal capacity to invest via other funding mechanisms in potentially higher-effectiveness non-utility risk reductions.

Utilities and the CPUC have both expressed support for moving toward a formal risk tolerance standard, though consumer advocates are divided: some support the rate moderation a defined endpoint would enable, while others argue that portfolio optimization can achieve the same goals without a formal standard. Enactment must make clear that the standard establishes a minimum performance obligation, not permission to do less or execute less well, and that utilities remain fully accountable for meeting it by successfully meeting their WMP commitments. One practical consequence of defining a formal risk tolerance standard, including an acceptable cost effectiveness threshold, could be greater continued reliance on operational mitigations such as Public Safety Power Shutoffs (PSPS), which are among the most financially cost-effective risk reduction tools available but impose real and unevenly distributed burdens, and may require an

[71] Risk Assessment and Safety Analytics. N.d. Risk-Based Decision-Making Framework (RDF): R. 20-07-013. California Public Utilities Commission, Safety Policy Division. Available https://www.cpuc.ca.gov/about-cpuc/divisions/safety-policy-division/risk-assessment-and-safety-analytics/r-20-07-013. Accessed March 21, 2026.

[72] California Public Utilities Commission. 2025. Phase 4 Decision. Decision (D.) 25-08-032. Available https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M578/K198/578198350.PDF. Accessed March 21, 2026.

evaluation of continued investment in cost-effective technologies and programs that reduce the impact of shutoffs on affected communities.

Option 1.3.2: Preserve safety Certificate accountability and financial stabilization benefits.

Concept: Codify the safety conditions currently required for a Certificate (formerly Safety Certification) under AB 1054 to the extent not already established in statute, and ensure that meaningful, stabilizing financial incentives remain tied to those conditions regardless of the continuation of the Wildfire Fund.

Rationale: Under AB 1054, possession of a Certificate (formerly a Safety Certification) provides financial protections in the event of a covered wildfire that are critical to stabilizing IOU credit ratings and financial viability. The requirement to file a WMP has been independently codified, but other Certificate conditions, including approved executive compensation structures promoting safety, board-level safety committee reporting, and implementation of safety culture assessment findings, are not technically required but rather are incentivized by the benefits conveyed by earning the Certificate, primarily the presumption of prudency in a catastrophic wildfire proceeding. If the Wildfire Fund's structure changes or the Fund is exhausted such that these benefits cease to exist, the incentive for utilities to meet the non-codified conditions diminishes significantly, as do the financial stabilization benefits conferred by compliance with those conditions.

Features:

- Statutory codification of all Certificate conditions not already established in law, preserving them as permanent requirements independent of the Fund's financial status.
- Durable financial protections tied to satisfaction of those conditions preserving meaningful financial stabilization benefits if the current Wildfire Fund structure changes.

Analysis: Codifying and extending existing requirements is low-cost and minimally disruptive. If the current Wildfire Fund structure is modified or replaced in a way that removes the existing financial protections and supporting incentive for utilities to obtain the Certificate, potential substitutes could take the form of a conditional statutory liability limitation, a cost recovery presumption, or other mechanisms as policymakers deem appropriate.

Option 1.3.3: Establish a statutory minimum safety weighting in electric utility executive compensation.

Concept: Establish a statutory minimum floor for safety weighting in electric utility executive compensation, covering both short-term and long-term incentive structures.

Rationale: Long-term safety weighting in executive compensation creates financial accountability at the executive level. Executive compensation at some electric utilities remains tied primarily to periodic, near-term financial results that do not reflect the multi-year outcomes of wildfire risk management decisions. A minimum safety weighting standard would allow for consistent application for all electric utility executive compensation.

Features:

- Statutory minimum floor for both short-term and long-term incentive programs, with the specific percentage set through OEIS rulemaking.
- OEIS near-term administrative action available under existing Section 8389 authority.

Analysis: This approach is consistent with governance practices in the oil and gas industry, where some executive compensation structures explicitly link long-term financial outcomes to multi-year safety performance. Without meaningful safety weighting, executives' long-term financial outcomes are calibrated primarily to financial performance metrics that operate on annual cycles rather than to the multi-year character of wildfire risk management decisions. As part of the conditions for obtaining a Certificate (formerly a Safety Certification), AB 1054 established the requirement that electrical corporations' compensation structures promote safety as a priority, which has led electrical corporations to add a safety weighting to executives' short-term incentive programs (Pub. Util. Code § 8389(a)(4). However, OEIS identifies that only PG&E has incorporated safety weighting into long-term incentive programs. OEIS could potentially address requirements through the Certificate approval process in advance of legislation, but explicit legislative guidance would be more appropriate and provide clearer direction.

Option 1.3.4: Establish a confidential reporting system with statutory safe-harbor protections.

Concept: Establish a confidential, de-identified near-miss and precursor-event reporting system for California electric utilities, modeled on the NASA Aviation Safety Reporting System (ASRS),[73] with statutory safe-harbor protections shielding good-faith reports from use in civil litigation and regulatory enforcement proceedings.[74]

Rationale: The ASRS precedent provides a tested design template with nearly five decades of operational history; voluntary near-miss reporting is widely credited as a significant contributor to aviation safety improvement over that period, and the mechanism through which it operates, bringing information about near-misses to regulators and practitioners earlier and more

[73] Aviation Safety Reporting System. N.d. *Program Briefing*. National Aeronautics and Space Administration, Ames Research Center. Available https://asrs.arc.nasa.gov/overview/summary.html. Accessed April 3, 2026.

[74] Aviation Safety Reporting System. N.d. *Immunity Policies*. National Aeronautics and Space Administration, Ames Research Center. Available https://asrs.arc.nasa.gov/overview/immunity.html. Accessed April 3, 2026.

completely than accident reports, enabling interventions before the progression from near-miss to ignition event, and is directly applicable to utility wildfire safety.

Features:

- Statutory safe-harbor provision: immunity for good-faith reports submitted within a defined timeframe, with no protection for deliberate violations or criminal conduct.
- A de-identification and analysis process that converts raw reports into cross-utility safety intelligence while preserving reporter anonymity.
- Preservation of all independent investigative and enforcement channels—the safe harbor protects the reporting pathway, not the underlying conduct.
- Coverage extends to front-line utility personnel as well as utility organizations.

Analysis: California's regulatory and legal environment creates a structural disincentive for sharing safety information; utilities that share near-miss data with peer utilities or regulators risk having that information used against them in enforcement actions or civil proceedings, as well as potential competitive disadvantages and loss of intellectual property. The result is that valuable intelligence about emerging hazard patterns moves less freely than it should across utility boundaries, and lessons learned at one utility are not systematically available to others operating in similar conditions. Consumer advocates have expressed conditional support, with the consistent caveat that safe-harbor protections must not shield negligent conduct; the aviation model's boundary between good-faith reports and deliberate violations directly addresses this condition and should be treated as a drafting requirement, not an objection to the strategy itself. The principal implementation risk is that protections are perceived as insufficiently durable against litigation-driven circumvention: if submitted reports can be obtained through alternative discovery channels, participation will be limited and the safety value of the system will not be realized. As a collaborative, trust-based system, this policy option is likely to have a longer adoption runway than other utility safety policy options.

Pathway 2 – Equitably Allocate Catastrophe Burdens

Strategic Context: The Legislature's mandate for the Study requested evaluation of options that balance and responsibly and equitably allocate catastrophe burdens between and among stakeholders. A central finding of this Report is that the current state is not working for those stakeholders. Given that the benefits of the mitigation strategies discussed in Pathway 1 will take time to fully realize, the strategies in Pathway 2 focus on strengthening the systems and structures currently in place to better serve communities and more equitably share the financial burdens associated with catastrophes.

The status quo is not working—for utility ratepayers, insurance policyholders or wildfire survivors. California's electric utility ratepayers are bearing an increasingly heavy burden, amounting to billions of dollars annually, for wildfire liabilities and mitigation expenses. A utility must provide electric service to all customers throughout its California service territory and cannot on its own reasonably mitigate the risks of catastrophic wildfires. While many of the factors that contribute to catastrophic wildfires are outside the utilities' control, the existing liability scheme requires utility shareholders or ratepayers to pay billions in liability costs even if the utility acted prudently. This incentivizes continued wildfire mitigation spending by utilities to attempt to minimize the risk of any fire ignition even at extraordinary costs to ratepayers. Together, these liability and mitigation costs are driving up California's electric utilities bills, harming both energy affordability and critical State goals on climate and electrification.

Property owners in the WUI continue to face significant challenges obtaining access to adequate insurance to protect their homes. FAIR Plan enrollment has continued to grow, adding 50,000 policies in the fourth quarter of 2025, alone, and underinsurance remains a pervasive problem, creating substantial post-disaster coverage gaps that impede rebuilding and recovery. These continued challenges reflect an insurance industry that remains fragile, even as regulatory reforms designed to address rate adequacy and stabilize the industry go into effect.

The current recovery systems for communities impacted by fires too often yield slow, uneven, and incomplete recovery. Many fire survivors are not fully or adequately insured, leaving them exposed to significant obstacles and delays to finance their recoveries. Many have struggled with frustratingly slow insurance claims processing that further delays recovery. Survivors of fires sparked by electric utility equipment can seek compensation from the utility that ignited the fire, but the litigation process is inherently drawn out and uncertain. Survivors frequently wait many years for compensation, and the compensation provided is often insufficient to rebuild after litigation costs and attorneys' fees are paid. These realities have implications not only for individuals and their families, but also for the broader community that requires the return of residents to thrive.

Four policy strategies are presented in this Pathway.

Strategy 2.1 focuses on strengthening the accessibility and affordability of residential property insurance for all California homeowners and renters.

Other strategies in this Pathway focus on options to address the unsustainable ratepayer burdens and unequal recoveries resulting from California's current approach to utility liability:

- **Strategy 2.2:** Litigation and liability reform to balance survivor and ratepayer interests.
- **Strategy 2.3:** Efficiency and compensation improvements to accelerate recovery and reduce legal costs for survivors of utility-caused wildfires.
- **Strategy 2.4:** Financing and stability measures to ensure durable funding for utility wildfire costs.

Together, these strategies support California's five overarching statewide goals: safeguarding a safe, clean, affordable, and reliable energy system; driving climate-emissions reduction; restoring stability to the insurance market; accelerating wildfire and disaster-mitigation efforts; and ensuring that when disasters do occur, compensation is rapid, fair, and accessible to every community.

Absent reforms, each major wildfire presents the risk of repeating the same pattern: depleting funds, delaying survivor recovery, increasing ratepayer costs, and renewing fiscal pressure on utilities. This Pathway therefore provides strategies for building the durable, efficient, and equitable mechanisms needed to sustain California's long-term catastrophe resilience.

Strategy 2.1: Strengthen Access to Residential Property Insurance for all California Homeowners and Renters

Strategic Context: Following the catastrophic 2017-2018 wildfire season, California's property insurance industry fundamentally reassessed its wildfire exposure, recognizing the potential for climate change to increase insured losses at a time when they also struggled with the adequacy of the rate they were receiving to insure that risk. Insurers stopped or limited writing new policies and began to non-renew existing policyholders living in high fire risk areas.

In the years following those fires, the property insurance market in high-risk areas was showing serious signs of unraveling. In lower risk parts of California, market competition, consumer choice and overall availability remained high, with prices relatively low. However, in areas with higher fire risk the insurance market contracted: insurers stopped or limited writing new policies and began to non-renew existing policyholders living in high fire risk areas. Admitted insurers pulled back from offering coverage in those areas, and they have not yet fully returned to serving those higher-risk areas. California's insurance market is now effectively bifurcated into two distinct markets—a

healthy and competitive market in in lower risk regions, but a dysfunctional market in higher risk areas, with falling admitted coverage, limited availability, and high reliance on the FAIR Plan as the insurer of last resort.

From 2015 to 2024, the number of residential policies in the FAIR Plan more than tripled, and residential policy exposure increased by over seven times, ballooning to $356 billion. Most of this growth has been concentrated in high-risk areas. In ZIP Codes with the highest wildfire risk, the number of FAIR Plan policies grew by over 15 times in just under 10 years. By 2024, the FAIR Plan was covering nearly 39% of homes in very high fire risk areas. By comparison, in the lowest risk areas of California, the growth in the FAIR plan has seen a slight decline of 18%.

Limited insurance availability and rising costs in high-risk areas of the state is a significant burden for existing residents. It also undermines the attainment of affordable housing goals—much needed development of additional housing stock cannot occur without the availability of property insurance.

Developed in response to these mounting pressures, Insurance Commissioner Lara's SIS is designed to stimulate a return to a competitive and healthy insurance market better able to serve California consumers. Under the SIS regulatory framework, insurers can now use wildfire catastrophe models and include the net costs of reinsurance in rates, both of which are widely regarded as necessary elements to catastrophic peril underwriting but previously not permitted in California. Insurers wanting to use these approaches in rate approval filings must commit to a target to write and maintain policies in wildfire-distressed areas (as defined by CDI) at a level of at least 85% of their statewide market share, with a requirement to increase this share by 5% every two years until the target is met. The SIS provides a path for admitted insurers to follow if they elect to meet the insurance needs of Californians who have relied on the FAIR Plan. CDI has also taken concrete steps to speed rate filings for insurers, as rate decisions have historically been slower in California than in the rest of the country.

These reforms have begun to stabilize the broader California insurance market. A number of admitted market insurers have lifted their limits on writing new policies in California, and 12 insurers have made rate approval filings under the SIS regulations. However, the SIS has not yet widely increased access to insurance in high-risk areas; the FAIR Plan has continued to grow, albeit at a slower pace, and remains the primary insurer in the highest-risk areas of California. CDI and Commissioner Lara have estimated that it will take several years for the SIS reforms to produce full benefits as insurers shift their risk strategies. Improvements in accessibility of insurance in high-risk areas and the depopulation of the FAIR Plan must wait for those strategic shifts to be adopted. In the meantime, millions of property owners are left with limited options to fully insure their properties, and affordable housing projects can remain stalled for lack of access to insurance.

The January 2025 LA Wildfires also highlighted the continuing problem of underinsurance, where policyholders' insurance coverage is insufficient to rebuild. Underinsurance is a persistent challenge for many survivors after catastrophes. A common and consistent consequence of catastrophic wildfires is that large shares of homeowners are underinsured, sometimes substantially so. Underinsurance can trap survivors in long-term recovery mode, particularly low-to-moderate income households that lack resources to fill the gap between insurance proceeds and full rebuilding costs. When survivors are unable to rebuild, it produces negative spillover effects on community recovery. There are several possible drivers of chronic underinsurance following catastrophes: changes in insurance policy terms that limit insurer exposure, persistent underestimates in the third-party replacement cost estimation tools used by the industry, and policyholders seeking lower premiums without regard for, or ability to understand, the adequacy of their coverage.

While the insurance industry has channeled more than $22.4 billion in insurance benefits into the areas affected by the January 2025 wildfires, many survivors indicate that insurance challenges remain among the more significant barriers to rebuilding. In addition to underinsurance, claims administration and communication deficits and uncertainty over coverage for smoke and ash damage have created barriers to survivor recovery. Many of these issues are not relevant just to wildfires, but also to flood and earthquake events.

Strategy 2.1 provides options to continue and accelerate ongoing efforts to improve consumer access to home insurance, address the persistent underinsurance that can create significant barriers to recovery, and implement reforms to ensure transparent, timely and fair handling of claims after disasters.

Option 2.1.1: Solidify the long-term effectiveness of the Sustainable Insurance Strategy.

Concept: Codify portions of the SIS to solidify those reforms and implement additional reforms to strengthen the long-term impact of regulatory improvements.

Rationale: The SIS has created a strong reform foundation but has been implemented by a combination of rulemaking and Bulletins issued by the Commissioner, with certain aspects being challenged in court. The rationale underpinning the SIS is that insurers will write homeowners insurance statewide, including in high-risk areas, if they are able to charge adequate rates, use modern risk tools, and have faster rate approvals. The SIS reforms are designed to improve the regulatory environment while maintaining consumer safeguards, but insurers need certainty in the regulatory process to attract new risk capital and increase insurance availability. Codifying the SIS would provide that certainty and give the SIS time to achieve broader policy objectives. Codifying the SIS could also be combined with additional reforms to accelerate realization of SIS policy objectives for market stability and insurance availability.

Features:

- **Codify Commissioner's Bulletin 2024-7:** This Bulletin was issued by the Commissioner on August 9, 2024, and provides for increased speed of rate approvals and enhanced transparency in the process. Under the Bulletin, if a rate filing is not approved within 60 days, CDI will provide an explanation of the status to the insurer, and if it remains unapproved at 90 days, further updates will be posted publicly along with a binding offer for approval at 120 days. Codification of the provisions of this Bulletin and applying the provisions to both admitted insurers and statutory entities like FAIR Plan and CEA writing insurance with rates subject to CDI's prior approval, would make the rate review process timeline improvements more durable.
- **Establish Default "Trend Factor" for Rate Filings:** The speed of processing insurer rate filings could be accelerated by creating clarity on a technical element of filings that have been a source of dispute and delays—the "trend factors" utilized by insurers in developing their proposed rates. Trend factors selected by insurers may be contested by the regulator or draw objections from intervenors, and resolving trend factor disputes can materially extend the timeline for action on a rate filing. A new feature in this SIS strategy could be enacting a requirement that the CDI promulgate a regulation to establish and periodically update default CDI trend factors that, if used by an insurer in a rate filing, would be approved and not contested by the regulator and would be exempt from intervenor challenge.
- **Develop and Implement Balanced Mandates to Serve High-Risk areas:** Codification of the SIS and other reforms to accelerate rate filings could be coupled with strengthened, balanced obligations for insurance companies to increase market share in high-risk areas if they opt into improved rate regulatory processes. For example, the current SIS requirement to write more policies in distressed areas (as defined by CDI) to achieve 85% of an insurer's statewide market share, allows an insurer to reach this participation level by increasing its market share in the high-risk areas by 5% every two years. For insurers, that currently have very low market share in distressed areas as compared to their statewide market share, reaching 85% could take decades. Strengthening this coverage mandate, paired with codification of the SIS and reforms to improve rate filing review, could accelerate increased insurance access in high-risk areas. The SIS coverage mandates were developed to balance potential solvency risks arising from increased concentration of losses in high-risk areas, and any reforms to those mandates should likewise consider and balance those risks. Coverage mandates should also be enforceable to the extent not currently so under the SIS. An option for consideration would be to provide for a sunset of an insurer's rates approved under the SIS if the insurer fails to attain its SIS-based market share requirements. In implementing any underwriting mandates, great care should be taken to protect against insolvency from concentration of exposure in high-risk areas. Insuring a disproportionate share of homes in a high-risk geography exposes insurers to increased risk of insolvency from catastrophic fires, which could lead to significant harm to survivors.

- **Recognition of Certified Home Hardening in Insurance:** The Commissioner should be instructed to update the existing Safer from Wildfires rulemaking to account for any new, evidence-based certifications for wildfire mitigation that are developed and to provide enforceable, carefully structured obligations to expand incentives for improved insurability that align with these new certifications.

Analysis: The lack of access to property insurance in high-risk areas of the state is partially the result of a historical rate regulatory regime that could not provide the tools or flexibility for the industry to adjust to growing climate risk. An inability of insurers to charge rates reflective of risk imperils their solvency and financial stability, can lead to contraction in coverage, and generally will impair the flow of risk capital into the California market to support insurance availability. Increasing availability may however mean higher rates paid by policyholders. While affordability of insurance is also critical for consumers, increasing availability among admitted market coverage is a top priority for consumers in high-risk areas.

Codifying the on-going administrative and regulatory market improvement efforts can cement the progress the SIS has initiated to prevent a broader insurance access crisis beyond the high wildfire areas and should improve access to property insurance in high-risk areas over time. But the current SIS regulatory framework could take years to yield meaningful results in high fire risk areas. The SIS regulations count as a "wildfire distressed" area ZIP Codes that may have a relatively small area of high fire hazard severity zone but do have a high concentration of FAIR Plan policies. Insurers are credited for writing anywhere in those ZIP Codes, although CDI is required to revisit the designation of "distressed" every year and so can refine the designations if realized results are inadequate. Increasing access to insurance requires careful monitoring (Option 2.1.3) and going beyond codifying current regulations. The policy reforms of this Option should be done in conjunction with much expanded investments in household and community loss reduction, without which these regulatory improvements may prove insufficient. These reforms could usefully be undertaken in conjunction with all other Options in this Strategy, particularly Option 2.1.2.

Option 2.1.2: FAIR Plan Reform - Return the FAIR Plan to a "market of last resort."

Concept: Implement reforms to both ensure that the FAIR Plan is not in competition with the admitted market (on rates or coverage options), and to help migrate current FAIR Plan policyholders to the admitted market as SIS regulatory improvements take effect and statewide commitments to loss reduction expand. Insurance producers-of-record (i.e., agents and brokers) representing FAIR Plan customers should be prevented from directly or indirectly impeding the delivery of offers of coverage to replace a FAIR Plan policy.

Rationale: The FAIR Plan has expanded dramatically in areas of high wildfire risk, becoming more a "market of first (or only) resort" in some areas, rather than a "market of last resort." The high concentration of FAIR Plan exposure in high-risk areas of the state is creating fiscal risks for both

admitted insurers and their policyholders from the possibility of post-catastrophe assessments which are recouped from policyholders through surcharges. While the FAIR Plan's growth is attributed to admitted market insurers' retreat from writing insurance in high-risk areas, barriers could impede FAIR Plan depopulation or the movement of policyholders back to the private market as availability improves. The following reforms are designed to remove those potential barriers.

Features:

- **Actuarially Sound Rates, Promptly Approved:** FAIR Plan's statute requires that it maintain actuarially sound rates reflecting its actual risk exposure. This requirement, in addition to being a fundamental principle of prudential insurance regulation, decreases the risk of FAIR Plan operating in price competition with admitted insurers, all of which are members of the FAIR Plan Association. The FAIR Plan is not subject to Proposition 103, but its rates are subject to prior approval by CDI pursuant to its Plan of Operations. CDI should be charged with implementing an expedited rate approval process and timeline for FAIR Plan rate applications, for the purpose of mitigating the risk of FAIR Plan operating for prolonged periods with inadequate rates, which increase the risk that policyholders of admitted insurers will be required to pay surcharges for FAIR Plan assessments on admitted insurers following catastrophic wildfire events, as we saw after the January 2025 Los Angeles wildfires. By way of example, by statute or regulation, an expedited process could provide that proposed FAIR Plan rates could be used in the market within 60 days of the filing if not approved by CDI.
- **Clearinghouse Reforms:** To help transition FAIR Plan policyholders back into the voluntary insurance market, FAIR Plan's Clearinghouse program should be reformed by, among other things, (i) allowing participating admitted insurers access to FAIR Plan policy data to adequately underwrite an offer to replace FAIR Plan coverage with a standard homeowners or commercial property policy, and (ii) permitting admitted insurers to offer replacement coverage directly to the FAIR Plan insured rather than solely through the broker-of-record, or obligate the broker-of-record to deliver a replacement offer, irrespective of whether the broker-of-record will earn a commission from the offering insurer.
- **FAIR Plan Commission Regulation:** The rate of producer commissions paid by FAIR Plan for placement of a FAIR Plan should be statutorily set at an amount that does not incentivize producers to place coverage with FAIR Plan over admitted insurer options. For example, a provision could be enacted to limit commission rates to not more than 50% of the average commission rate paid by admitted market insurers, or to prohibit commissions for FAIR Plan policies altogether.
- **Restoration of Prior Declinations Requirements and Biennial Remarketing at Renewal:** Prior to placing a FAIR Plan policy, the broker-of-record should be required to document not less than three declinations from admitted insurers, and to remarket the policy to admitted insurers not less than every second annual renewal of the FAIR Plan policy.

- **Mandatory Remarketing Following Certified Home Hardening:** Producers of Record for FAIR Plan policyholders must be obligated to remarket to admitted insurers any insured who has completed a certified home hardening process.

Analysis: The combination of the FAIR Plan's increasing market share in high-risk areas, low levels of claim-paying capacity, and the provisions of the SIS that permit admitted insurers to recoup FAIR Plan assessments from their customers, has made all California insurance policyholders the financial "backstop" for the FAIR Plan after catastrophic wildfires. Reducing that risk requires depopulating the FAIR Plan. In addition, this will help FAIR Plan policyholders since private market policies are more comprehensive, facilitating more complete recoveries across all losses, including wildfire losses.

Ultimately, decreasing the FAIR Plan's market share and returning it to the insurer of last resort requires that homeowners have access to coverage from admitted market insurers. While these reforms do not address that barrier, they are designed to remove other structural impediments and misaligned incentives that could prevent FAIR Plan policyholders from receiving offers of coverage from admitted market insurers and should thus be done in combination with the other options to improve the private market.

Option 2.1.3: Institute a statewide insurance market health monitoring program.

Concept: Direct CDI to establish market monitoring whereby CDI proactively tracks key indicators of insurance market health and reports the results publicly in an annual "health of the market" report to supplement CDI's existing market supervision and regulation.

Rationale: Opportunities exist to ensure that market disruptions can be tracked and quantified to facilitate regulatory or policy interventions. In addition, before material changes in policy or regulation are undertaken, policymakers need an ability to assess how well recent updates have or have not worked.

Features:

- **Development of Market Health Metrics:** CDI should be charged with the obligation to develop, in collaboration with insurers and consumer advocates, key metrics of insurance market health. By way of example, key metrics could include FAIR Plan concentration by ZIP Code, the number of admitted insurers writing property insurance in the state, changes in the frequency of non-renewals, changes in the market share of surplus line insurers, and the indicated rate adequacy of insurers from their rate filings.
- **Regular Annual Tracking & Reporting:** After developing market health metrics, CDI should be charged with the obligation to monitor the market against those metrics and publicly report, not less than annually, on the health of the market. This report should be required to be based on data that is no more than six months old.

Analysis: It is important to track how well the SIS and other reforms are working and how the market is responding, relying on current and consistent data metrics. Developing a proactive tracking and early warning system will protect consumers and the market.

Option 2.1.4: Solve for underinsurance – Make the standard homeowners insurance product more responsive to catastrophe recovery needs.

Concept: Strengthen property insurance terms to allow survivors to receive adequate and timely compensation after a wildfire and to make insurance a more reliable mechanism for financial protection and resilient rebuilding after a natural catastrophe. Underinsurance has emerged as a widespread barrier to recovery for homeowners after catastrophic wildfires, which are more likely to result in total loss events. The replacement cost estimation tools used by insurers to set replacement cost limits on property insurance have been shown to chronically produce inadequate estimates. When insurance policies are written based on inaccurate estimates of the cost to replace a home and not updated regularly to reflect increases in building costs, homeowners suffering total loss events face significant insurance gaps that can impede recovery.

Rationale: Widespread underinsurance and a difficult claims process hinder recovery. Adequate insurance is key to recovery, and yet survivors report ongoing struggles that require additional reform.

Features:

- **Reform to Address Systemic Underinsurance:** To avoid insurance gaps that delay fire survivor recovery, insurance replacement cost estimates provided to customers should accurately reflect the actual cost to replace a home and those estimates should be updated regularly to reflect increases in building costs. Reforms should require that insurers disclose not just the replacement cost estimates, but also the home characteristics used by as inputs and allow agents and policyholders to modify as necessary. Reforms should also include strengthening existing statutory requirements for insurers to provide policyholders with an updated replacement cost estimate biennially to reflect increased building costs, that removes or limits alternative compliance options. In addition, CDI could require insurers to report the replacement cost estimate and actual rebuild costs for all total loss properties, especially in the context of disasters, to begin tracking and publicly reporting the error rate over time.
- **Smoke and Ash Claims:** Consider codification of recommendations from CDI's Smoke Claims and Remediation Task Force to establish uniform statewide standards for smoke remediation, certification requirements for testing and remediation professionals, and impartial definition of an impact zone (or ash perimeter) for smoke damage claims.
- **Build Back Better Endorsements:** Require insurers to offer a "build-back-better" endorsement to property policies, with additional premium, to cover above-code reconstruction that lowers future losses from a range of catastrophe perils and improves their insurability post-disaster.

- **Extended Coverages in Catastrophes:** Require insurers to offer Extended Replacement Cost (ERC) coverage and Additional Living Expenses (ALE) coverage for an extra premium. Access to ERC, combined with accurate Coverage A replacement cost coverage, is designed to provide the insurance resources wildfire survivors need to rebuild their homes after a catastrophic wildfire, when concentration of destroyed properties can dramatically increase building costs. This proposal would also require documentation of consumers' election to decline extended coverages.

Analysis: Underinsurance is a persistent problem in catastrophes, in part due to weaknesses in the systems used by insurers to calculate replacement cost estimates. In addition, few homeowners fully understand their property coverage or the need to update it to reflect increased rebuilding costs or changes to the home. Very few homeowners routinely assess their coverage at the time of renewal, probably based on the assumption that the insurer or broker would manage any needed changes. Special circumstances can also dramatically increase the cost of rebuilding, including the loss of many homes in a single incident. These reforms would begin to address the issue by at least providing transparency to property owners about the estimated cost to rebuild their properties.

There is an undisputed need for clear and consistent smoke standards to guide claims and remediation efforts, as well as a scientifically based standard defining the smoke and ash footprint to set coverage eligibility presumptions. This will not only help insurance but also help with broader public health and recovery needs.

Resilient post-disaster rebuilding would be facilitated by an obligation to offer, subject to additional premium, a wildfire "build-back-better" endorsement. This could be accompanied by support services for consumers, such as educational materials about loss reduction and facilitating access to professionals to undertake the needed upgrades.

Options for expanded coverage can also aid recovery, but the consumer benefits of these reforms must be balanced against the impact on the insurance market to avoid driving insurance investment capital away from the market. Ensuring that insurers can charge adequate rates for these increased coverages will be an essential component of this package of reforms. If these reforms are also coupled to stronger SIS-related reforms, that can help ensure a reliable path to fair and adequate rates. Consumers can then make choices about how much extra coverage to purchase.

Option 2.1.5: Enhance market oversight following disasters.

Concept: Adopt a suite of reforms to improve post-disaster claims handling and the recovery process for survivors when it comes to regulatory oversight of insurance claims administration. CDI should be resourced to deploy staff or contractors to undertake additional support for insurance claimants following natural catastrophes.

Rationale: Existing laws and regulations provide for post-hoc audits (market conduct examinations) of closed claim files. Pivoting from retrospective examinations to more proactive regulations and support during the claim adjustment process can accelerate recovery, improve transparency in the determination of loss estimates, encourage insurers to prepare for the surge in resources required by a large disaster, and expand incentives for swift and fair settlements, consistent with existing California law.

Features:

- Require insurers to develop and maintain disaster recovery plans that detail how they will rapidly surge claim-paying capacity in a manner that protects consumers and allows for fair claim adjudication following a catastrophic event.
- Require disclosure of all loss estimates to policyholders in writing, including any revisions to estimates and the reason for those changes and who authorized the changes. Require claim denials to also be made in writing with justifications.
- Require insurers to pay interest to the policyholder for any delay in payment of claims to which the policyholder is entitled.
- In addition to maintaining existing moratoria on non-renewals in catastrophe areas, require insurers to provide longer (i.e., four to six months) advance notice before a non-renewal.

Analysis: Documented challenges with insurance claims administration are abundant after catastrophes, including concerns about unfair treatment post-fire around delays and underpayment. While insurers face challenges in expanding claims handling capacity during disaster, fair claims administration and faster settlements for survivors following disasters, as well as the need for consumers to be informed about their rights, are essential components of catastrophe resiliency. Enhanced, and more timely, post-event oversight of insurer claims administration can improve efficiency of claim handling, and it should also decrease the need for, or scope of, post-catastrophe market conduct examinations by CDI.

Strategy 2.2: Reform Utility Liability

Option 2.2.1: Eliminate inverse condemnation for electric and gas utility-caused wildfires.

This policy option is intended to apply to all electric and gas utilities, including POUs, IOUs, and SMJUs as well as private transmission developers and operators.

Concept: Propose and sponsor a constitutional amendment and companion implementing legislation to eliminate the application of inverse condemnation to utility-caused wildfire damages. Currently, fire survivors seek recovery using both California's current inverse condemnation doctrine (which holds utilities strictly liable for property damage caused by their

infrastructure regardless of negligence) and tort causes of action, such as negligence and trespass. Eliminating inverse condemnation would mean that insurance companies and fire survivors would rely on the fault-based liability framework.

Rationale: Inverse condemnation imposes an immense financial burden on utilities and utility ratepayers, requiring them to pay tens of billions of dollars in wildfire liability costs even when the utilities complied with stringent safety and mitigation requirements and despite the many factors outside utility control that cause wildfires to be catastrophic in scale. A single catastrophic event can threaten utility solvency and credit ratings, ultimately further increasing borrowing costs and electricity prices for Californians. And if the liability costs are distributed across ratepayers, which is the theory of inverse condemnation, these costs dramatically increase electricity rates, harming energy affordability and climate goals. Moving to a negligence-based standard would align California with other states' liability approach; California remains the sole state to apply inverse condemnation to utilities for wildfire losses.

Features:

- **Constitutional reform.** Because California courts have interpreted inverse condemnation as a constitutional requirement under Article I, Section 19 of the State Constitution, a constitutional amendment approved by voters would likely be required to fully eliminate its application to utilities and would be subject to litigation.
- **Transition to negligence.** Following repeal, utilities would remain liable under ordinary tort principles requiring proof of duty, breach, causation, and damages.

Analysis: As discussed above, California is the only state that has applied a strict liability framework to IOUs for all losses caused by utility-caused fires. Strict liability exposes utilities to considerable financial risk. Because they cannot automatically recover costs through rates, large-scale wildfire liabilities can lead to insolvency. PG&E's 2019 bankruptcy exemplifies this dynamic, where billions in claims exceeded the utility's capacity to pay. The resulting uncertainty threatens the stability of California's energy system and may deter investment in infrastructure modernization and undermine investments needed for the state to meet its clean energy goals.

The doctrine assumes that utilities can spread costs among ratepayers, but CPUC's prudence review may deny recovery if the utility's conduct is deemed unreasonable. This creates a disconnect between judicial and regulatory frameworks. Courts impose liability based on public-use principles, while regulators focus on managerial prudence and consumer protection. The result is a system that may neither achieve efficient risk distribution nor incentivize optimal safety investment.

Moving to a negligence or fault-based standard would align California with the rest of the country, potentially improving utility credit ratings, reducing risk premiums on debt and insurance and the resulting increased costs for ratepayers. A negligence-based standard also introduces concepts of comparative fault and proximate causation, which recognizes that many factors contribute to

the destructiveness of a fire once ignited (e.g., wind and weather conditions, land use decisions, lack of community- and household-level hardening, and emergency response). It would remain the case, however, that successful claimants could still recover all economic damages from the utility under California's joint-and-several liability provisions.

It should be recognized that changing to a fault-based standard may not alone address utility exposure to bankruptcy-level loss exposure. As illustrated by Oregon's 2023 *PacifiCorp* case (stemming from the Labor Day 2020 wildfires), there remains large exposure for utilities based solely on tort theories, such as negligence, nuisance, and trespass, despite inverse condemnation being inapplicable.

Eliminating inverse condemnation would also eliminate its risk spreading benefits; losses would no longer automatically be distributed across the community that benefits from the public improvement. Also, inverse condemnation allows survivors to recover attorneys' fees on top of their damage award; thus, survivors would need to pay attorneys' fees out of their award if inverse condemnation were eliminated. For insurance companies and fire survivors that currently assert claims under inverse condemnation, the change to a fault-based system would require proof of negligence to recover for what are now strict liability claims. That said, many wildfire litigants sue under both an inverse condemnation and negligence theory of liability and thus already demonstrate negligence as part of the litigation.

Ultimately, however, there are practical challenges to fully eliminating inverse condemnation given that it would likely require amendment to the State Constitution.

Option 2.2.2: Modify the damages for which electric and gas utilities are liable outside of inverse condemnation.

This policy option is intended to apply to all electric and gas utilities, including POUs, IOUs, and SMJUs as well as private transmission developers and operators.

Concept: Enact a coordinated package of liability reforms to moderate the overall scale of utility wildfire-liability exposure while protecting compensation designed to support survivor rebuilding and recovery. The package would define and modify certain categories of damages that are currently available through California's tort liability system, such as punitive and noneconomic losses, replacement cost for vegetation and landscaping, additional living-expense coverage, and public entity claims for response costs. It would not interfere with a survivor's right to seek replacement cost for structure damage.

Rationale: A liability system for utility-caused wildfire must balance maintaining affordable rates for utility customers, ensuring utility stability, and compensating those who suffer damages. Moreover, it should also consider that many factors contribute to the destructiveness of a fire once ignited (e.g., wind and weather conditions, land use decisions, lack of community- and

household-level hardening, and emergency response). Given these constraints, the liability reforms in this policy option are structured to socialize the risk and prioritize compensation for forms of loss most directly related to recovery: rebuilding homes, restoring infrastructure, and re-establishing community stability. Focusing available resources on enabling affected households and localities to rebuild quickly supports both near-term recovery and longer-term economic resilience, while putting some limits on total costs that could otherwise be passed through to ratepayers.

Features:

- **Punitive-damage limitation.** Eliminates punitive-damage exposure for utilities in actions alleging a wildfire was utility-caused.
- **Cap on noneconomic damages.** Establishes statutory limits for noneconomic damages (e.g., for emotional distress, and pain and suffering) for property, personal-injury, and wrongful-death claims.
- **Diminution-in-value (DIV) standard for vegetation.** Limits recovery for damage to trees, landscaping, and vegetation to DIV rather than replacement cost.
- **Additional-living-expense (ALE) parameters.** Defines and standardizes the post-event period and scope of ALE liability by setting a metrics-based standardized duration and capping recovery for luxury or "high-end" accommodations.
- **Reliance on public entities for cost socialization.** Defines recoverable public entity damages as diminution-in-value (not replacement cost) for property damage (e.g. structures, infrastructure, vegetation). Eliminates recovery for non-property costs such as emergency response and staff overtime costs.

Analysis: The proposed liability-reform package would have important implications for survivors, ratepayers, and public entities and would need to be evaluated as an overall approach to modifying the liability and compensation system for utility-caused wildfires. The existing structure for wildfire liability imposes outsized costs on utility ratepayers. Ratepayers pay much of these costs through charges to support the Wildfire Fund and direct cost recovery. And ratepayers pay the higher costs for California utilities to access the debt and equity markets because the existing system renders utilities unstable. Paying for wildfire recovery through electric utility rates, with their regressive rate structure, imposes a disproportionate burden on lower-income Californians. And higher electric rates conflict with other State priorities, such as regarding clean energy and electrification.

The proposed liability-reform package would lower utility bills by decreasing the costs imposed on utilities and improving utility ability to cost-effectively access debt and equity. Some stakeholders also indicated that capping certain damages and specifying valuation methods would allow more reliable liability estimates and provide clearer expectations for all parties involved in litigation, which could simplify settlement negotiations and reduce transaction costs associated with expert testimony and jury valuation. Limiting noneconomic and punitive damages concentrates

compensation on verifiable economic losses—property repair, rebuilding, and living expenses—aligning payouts with survivors' functional recovery needs. Noneconomic damage limits for utility-caused wildfires have been adopted in a number of other states and could serve as a starting point for limits appropriate for California. Utah, for example, limits noneconomic damages that do not involve bodily injury or death to $100,000 per person, while Montana and Wyoming do not allow noneconomic damages for claims that do not involve bodily injury or death.

Since punitive damages are not available against governmental entities, eliminating them harmonizes the available damages against IOUs and POUs. Setting limits on liability for ALE puts a bound on how much would be paid for high-value homes. Setting a standardized duration (e.g., up to five years) takes into account the prolonged time it takes to rebuild in the aftermath of a mass catastrophe and ensures long-term stability for displaced households—a key concern among some stakeholders.[75] Limiting damages for landscape and vegetation likewise would constrain overall costs borne by ratepayers. Restricting public-entity claims would transfer costs to entities that can socialize costs to taxpayers or ratepayers and could strengthen incentives for local governments to invest in prevention and mitigation measures. The proposed package of liability reforms would need to be paired with other solutions to address potential solvency and rate impacts but can be a sensible part of an overall approach.

Some stakeholders indicated that survivors rely on noneconomic awards to bridge the gap between settlements and actual rebuilding costs, especially when construction inflation raises replacement expenses after a large wildfire and where litigation costs and attorneys' fees can substantially reduce overall recovery. Limiting those awards could thus magnify post-disaster hardship. Some stakeholders argued that eliminating punitive damages would remove a key driver that incentivizes utilities to prevent ignition in the first place. Stakeholders also described how lowering total damage awards may reduce economic incentives for plaintiff attorneys to take complex wildfire cases. Public entity claims account for approximately 5% of total wildfire-settlement costs based on data from recent fires. Restricting public entity claims should be balanced against the potentially significant disruption to localities.

Option 2.2.3: Eliminate insurance subrogation.

This policy option is intended to apply to all electric and gas utilities, including POUs, IOUs, and SMJUs, as well as private transmission developers and operators.

Concept: Enact legislation eliminating insurers' rights to pursue subrogation claims against utilities for utility-caused wildfire losses and modifying the collateral source rule for utility-caused wildfires. Subrogation currently allows insurers, after paying policyholders for covered damages,

[75] This is a common component of a claim against utilities following a utility-caused wildfire. This revision would contain the potential size of certain aspects of a utility's liability for additional living expenses, particularly as it relates to high-end properties.

to seek reimbursement from utilities alleged to have caused a fire. Under this reform, insurers would absorb the full cost of claims paid to homeowners and businesses. Because California's collateral source doctrine currently allows plaintiffs to recover the full value of losses even when an insurer has already paid, the Legislature would also need to modify the law so property owners could not receive double recovery—once from their insurer and again from a utility settlement.

Rationale: Eliminating insurer subrogation would more broadly spread wildfire compensation costs, reduce legal costs incurred by both insurers and utilities in resolving claims, and help stabilize utility credit ratings and moderate ratepayer impacts. It also offers a more efficient and predictable way to manage catastrophic-loss financing than ad-hoc Wildfire Fund replenishments.

Features:

- **Statutory elimination of subrogation rights.** Bars insurers from pursuing subrogation or other derivative recovery actions against utilities for wildfire-related property losses once they have indemnified policyholders.
- **Alignment with the collateral-source rule.** Modifies the collateral-source rule for utility-caused wildfire claims to prevent double recovery by property owners.
- **CDI coordination and oversight.** Directs CDI to accommodate rate filings reflecting the increased expected annual loss and monitor market capacity and solvency impacts.

Analysis: Insurance subrogation payments to insurers represent the largest single source of utility wildfire liability and payments from the Wildfire Fund. Removing insurer subrogation could reduce total wildfire-settlement costs by roughly 35%-40%, substantially lowering the required size of a Wildfire Fund or insurance facility for utilities and the costs ultimately passed on to ratepayers. Ending subrogation would also eliminate the considerable legal expenses utilities and insurers incur in resolving subrogation claims, and absent subrogation, a substantial portion of utility-caused wildfires costs would be spread through a mechanism that is less regressive than utility bills. Another potential advantage is that, unlike utility rates, insurance premiums vary by location and risk-level, allowing wildfire costs to be distributed more proportionately to wildfire risk. Doing so would provide additional incentives for homeowners and communities to reduce risk.

Eliminating subrogation would impose billions of dollars of additional costs on an insurance industry which is already facing capacity shortages and reduced investment appetite. It would also likely mean higher premiums, particularly in high-risk areas, that could create affordability challenges for some households. California's insurance market is still adjusting under the Sustainable Insurance Strategy, and it remains uncertain whether insurers could fully and promptly pass these costs through in approved rates. Failure to do so could well reduce insurance availability in some areas and increase insurance costs particularly in high fire risk areas.

Strategy 2.3: Efficiency and Compensation Improvements for Utility-caused Wildfires to Accelerate Recovery and Reduce Legal Costs

Option 2.3.1: Create a "fast pay" facility for survivors of utility-caused wildfires.

Concept: Create a State-managed fast pay facility to accelerate payments to survivors and reduce litigation costs.

Rationale: Insurance remains the fastest way to receive compensation, paying for fire damage regardless of cause. In contrast, it takes an average of four years to resolve claims against investor-owned and publicly owned utilities with substantial legal costs incurred in the process that ultimately reduce—by 25% to 40%—net survivor recoveries. This option aims to provide a faster path to recovery, with more total compensation going to survivors rather than legal costs.

Features:

- Operated by a publicly-governed entity to increase trust in the program.
- Only available for individual claims, not public entity or insurer claims. Wrongful death and bodily injury would continue to be handled through litigation.
- The amount of compensation available would reflect utility liability as modified by legislative or constitutional reforms.
- Offers would be provided within a specified time period once the applicant submits a complete application. (A time limit somewhere between 90 and 180 days might be sensible.)
- A claims navigator would be available to help applicants submit required documentation and would be paid for by the facility.
- Attorneys' fees for the effort required to prepare the property loss portion of the claim would be provided.
- If an offer is not made within the required time period, the facility would provide the applicant with a right-to-sue letter.
- The applicant could request reconsideration of an initial offer and submit additional documentation in support. If the applicant does not accept the offer, the facility would issue a right-to-sue letter.

Analysis: A common complaint by survivor groups is that the legal process for resolving claims is slow and inefficient, reducing the share compensation that ultimately goes into the pockets of survivors. This type of facility could address those concerns. Establishing a fast-pay system would enable survivors to see what was available without lengthy litigation and with low legal costs. It also avoids the current challenge that some attorneys advise their clients not to even apply to

fast-pay programs. There would likely be suspicion by some stakeholders that such a facility would not result in the same level of compensation as in the regular litigation process. Some argue that these types of facilities take advantage of lower-income households who do not have the resources to wait for full compensation in the tort system.

Success of this type of facility depends on effective implementation. Program construction would need to be developed to avoid infringing on constitutionally protected rights of claimants to timely access to a jury trial. Careful attention would need to be paid to the governance and oversight of the facility.

Strategy 2.4: Make a More Durable, Permanent Wildfire Fund

The Eaton Fire may well deplete the $21 billion Wildfire Fund. The Continuation Account established by SB 254 adds $18 billion in funds, covering only IOU ignited wildfires occurring on or after September 19, 2025, and is an acknowledged stop-gap measure to provide time for the State to develop a permanent solution. The start of the process for capitalizing the Continuation Account is in the discretion of the Wildfire Fund Administrator, and the Continuation Account will "sunset" if the Administrator does not activate capitalization prior to December 31, 2028. If the Continuation Account is not funded and sunsets, this will leave IOUs with limited liquidity to pay wildfire claims, increasing investor risk and debt and equity costs, and threatening electric ratepayers, wildfire survivors, progress on the state's clean energy goals, and the wider economy.

This policy option first considers the capital requirements to construct a more durable Wildfire Fund with similar statutory terms and constructs as the AB1054 Wildfire Fund. Within that, alternative funding arrangements are also discussed. The second option looks at the impacts that a package of liability reforms (based on utility liability reform options presented in Strategy 2.2) would have on capital requirements for a more durable Wildfire Fund.

The following discussion of options includes catastrophe risk modeling estimates of capitalization costs and fund performance. Appendix D contains additional background information on the catastrophe risk modeling performed, its intended use, limitations and disclaimers.

A major consideration in developing a catastrophe risk financing structure like the Wildfire Fund is fund durability. Durability is defined as the ability of a catastrophe financing structure to remain solvent not only for singular large events, but multiple events, and for sequences of years with multiple events. A fund must be able to not only to pay for a single large event, but for a series of large events that may occur in close succession. A fund that can respond once but is then effectively exhausted is not durable over time. Durability is therefore critical, as it provides a way to assess whether the committed funding sources are likely to be sufficient to meet losses on an ongoing, multi-event basis.

For the SB 254 Study, the foundation of analysis considers fund durability over 20 years and shows what funding is necessary to ensure a funding structure has a 75% probability of being solvent over a 20-year period. The probability is determined by using thousands of simulations of realistic 20-year loss patterns and evaluating how much funding is needed so that the fund is solvent for 75% of the 20-year simulations. However, there is a wide variability in the modeled frequency and severity of wildfires used for durability modeling. There can be multi-year periods with low wildfire activity and losses or there can be years with high activity and losses.

The following three policy options are variations on a Wildfire Fund. Any of these recommended options will significantly increase the capital required from utility ratepayers over the previous Wildfire Fund, but the size of the Fund requirements can vary if risk transfer is applied or if there are liability reforms or other modifications that change the "out-flows" related to claims. The amount of capital required from utility ratepayers can also vary if additional funding sources are identified.

Option 2.4.1: Create a more durable Wildfire Fund with potential to use risk transfer.

Concept: Build on the construct of the current Wildfire Fund but increase its durability to withstand multiple fire seasons through the expansion of the capital inflows to the Fund and option to use risk transfer. This option capitalizes the Wildfire Fund at a level projected to last for 20 years with 75% probability. It would leave in place current caps on utility outlays that are important in credit and equity markets. The SB 254 Continuation Account would be superseded by this option. This option could be expanded to include other utilities, including POUs and SMJUs.

Rationale: The capitalization constructs for the original Wildfire Fund (created under AB 1054), were based on a capitalization of $21 billion with a 75% probability of being durable for ten years. The Eaton fire is likely to deplete the Fund before the 10-year period has elapsed. By reinforcing the Wildfire Fund's durability, this option protects IOU stability and reduces the changes of bankruptcy, potentially reducing equity and debt risk premium costs that are passed onto ratepayers.

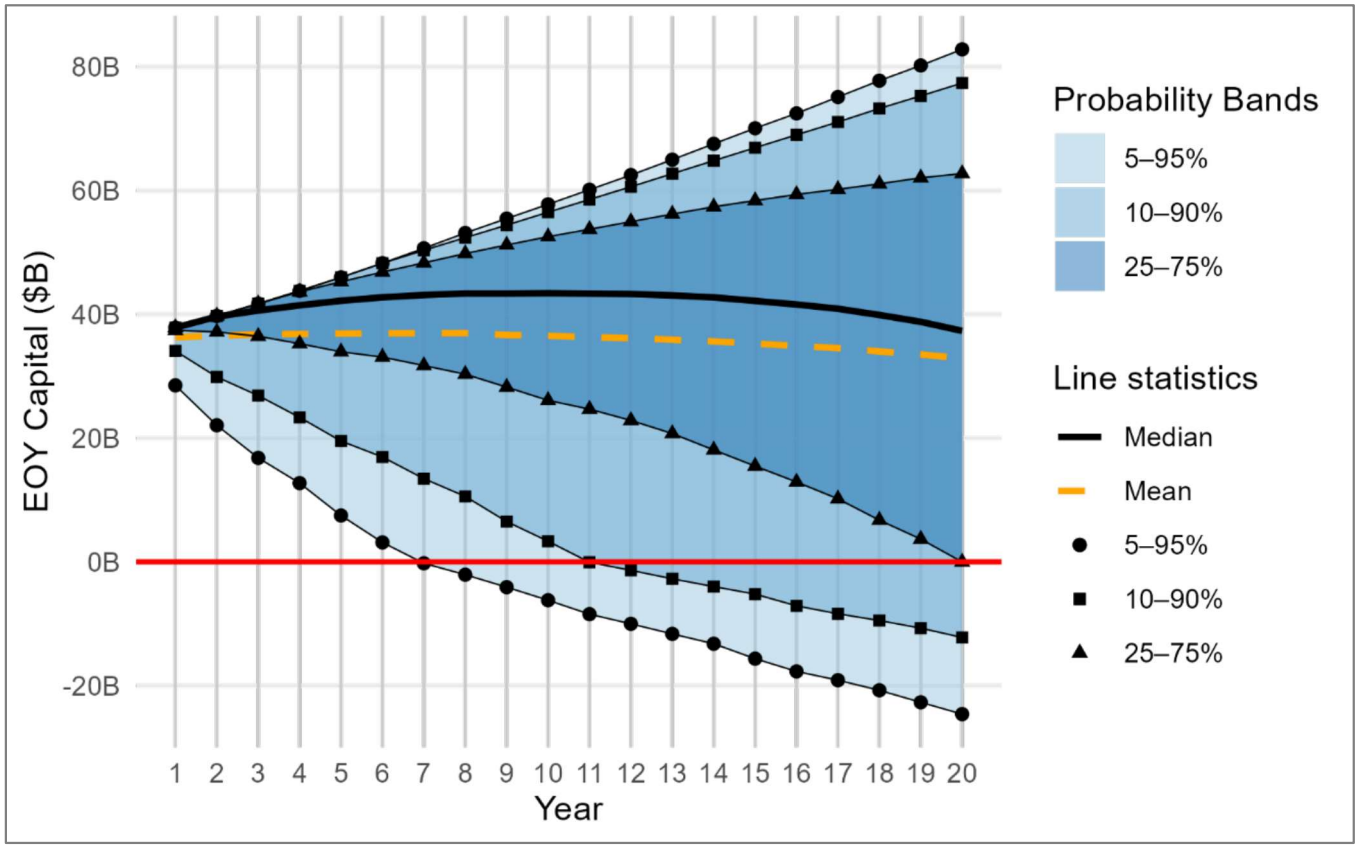
Features:

- Capitalizes the Wildfire Fund at a level projected to last for 20 years with 75% probability.
- Expands capital inflows to the Fund.
- Uses risk transfer such as traditional reinsurance, parametric insurance or insurance linked securities to increase claim-paying capacity of the Fund.
- Maintain the AB 1054 safety Certificate framework and require full compliance with all statutory conditions as a prerequisite for participating in the Fund.
- Maintain the AB 1054 cap on required utility reimbursement to the Fund, limiting shareholder responsibility for disallowed wildfire costs to no more than 20% of the utility's total transmission and distribution equity rate base, subject to statutory exceptions.

Analysis: Recharging the Wildfire Fund to achieve the 75% target durability for 20 years is estimated to require $36 billion in capital, more than double the size of the capital commitments made to the SB 254 Continuation Account.

Figure 7 illustrates the range of modeled durability for a more durable Wildfire Fund. In the mean and median scenarios shown with the dashed yellow line and solid black line, respectively, the Fund is expected to maintain its capital over the 20-year forecast period. There are scenarios above this line with low loss activity that show the Fund accumulating to $80 billion. But there are also scenarios where the Fund is depleted before the end of the 20-year forecast period.

Figure 7 Probabilistic range of modeled outcomes for a More Durable Wildfire Fund, no risk transfer purchased



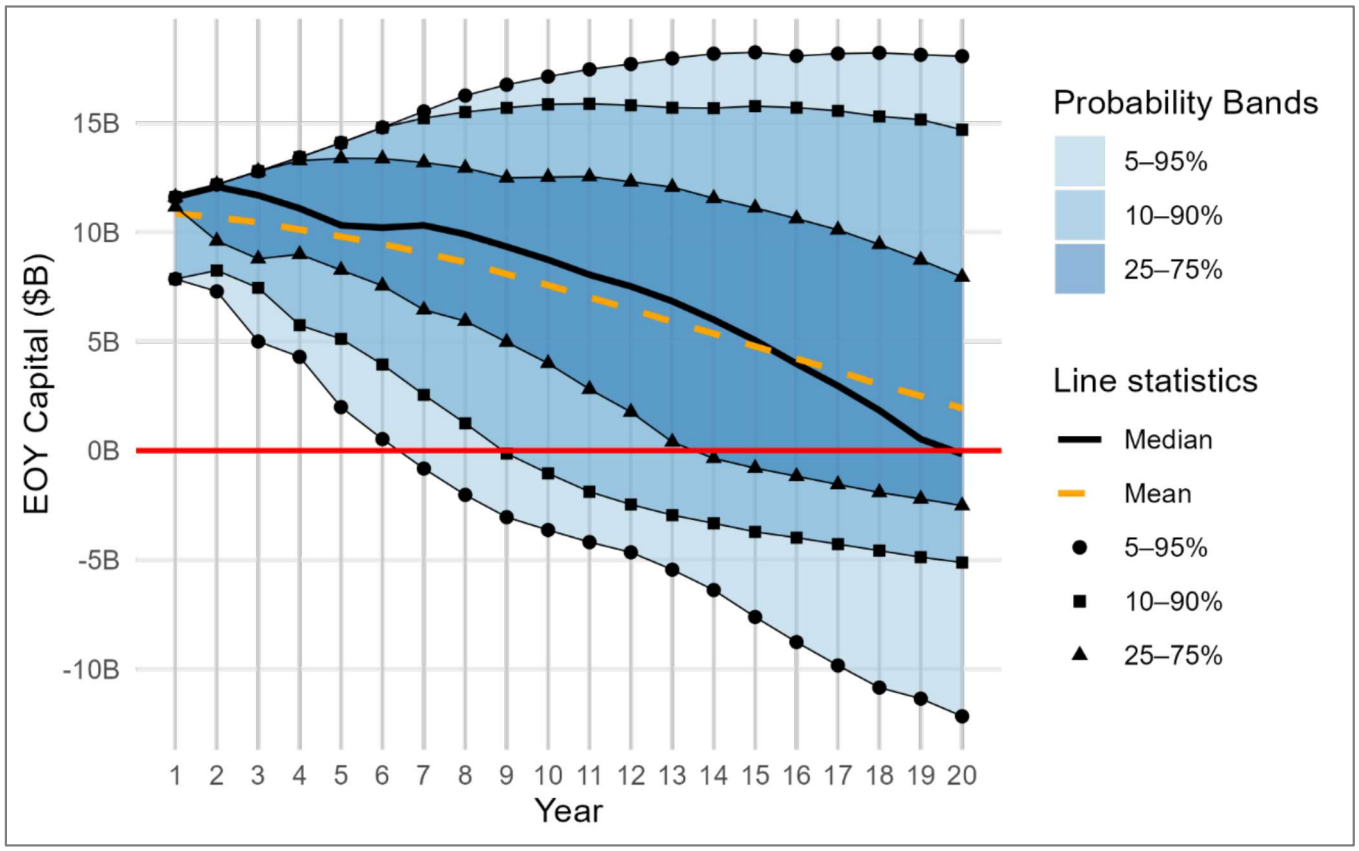
Thus, it is important to note that a capital commitment of $36 billion, for example, could still be fully eroded by large or frequent wildfires, which would then require the Fund to be replenished again. Without an automatic replenishment mechanism, it is not clear that the solution will effectively address capital market concerns about utility solvency. Considering the range of outcomes illustrated in Figure 7, there is a 10% probability of needing to replenish the Fund after 11 years (following the lower line (with square markers) on Figure 7 to the $0 billion red line). There is a 5% probability of needing to replenish the Fund after only 7 years (following the lower line (with circle markers) on Figure 7 to the $0 billion red line).

While this option has the advantage of building on the existing Wildfire Fund framework, it also presents gaps in holistically addressing the wildfire problem:

- **POU & SMJU liability**: This option does not address POUs or SMJUs that face similar wildfire liability risks as the IOUs and are subject to inverse condemnation and mitigation requirements. Written submissions to the SB 254 Study by some smaller IOUs support modifications to the Wildfire Fund design to better suit their circumstances as they face similar challenges under inverse condemnation but do not have the protection of the Wildfire Fund. However, it is important that their contribution requirements and other provisions reflect their risk profile, size and financial capacity. Stakeholders have stated the need for more flexible participation terms, scaled capital contributions, coverage terms and tailored eligibility criteria that would align with differentiated needs of smaller IOUs rather than a one-size-fits-all model. Although Options 2.4.1 and 2.4.2 do not explicitly assume participation of smaller IOUs, this feature can be integrated into durable Fund designs under appropriate legal and logistical considerations.
- **Lack of replenishment mechanism:** If the Fund runs short of money, it will need a replenishment mechanism, potentially much sooner than 20 years if there is a single extremely large event or successive large events. Without a replenishment mechanism it is not clear that the capital markets will entirely remove the risk premium charged to California utilities, which translates into higher capital costs borne by ratepayers indefinitely.

Use of risk transfer to reduce initial capital costs: Risk transfer such as reinsurance, catastrophe bonds and parametric insurance could reduce initial capitalization costs and protect against this erosion but would require billions of dollars each year for risk transfer premiums. To add risk transfer to cover the 1-in-10-year to 1-in-100-year modeled losses, initial capital requirements for the Fund would be reduced to $11 billion to cover losses below the 1-in-10-year attachment point for risk transfer. Figure 8 shows the range of modeled outcomes for a Fund with risk transfer. There is a high likelihood the Fund will need to be replenished before the end of 20 years. Notably, the Wildfire Fund Administrator did not utilize such risk transfer tools in managing the AB 1054 Wildfire Fund because it was determined to not be cost effective based on similar analyses.

Figure 8 Probabilistic range of modeled outcomes for a More Durable Wildfire Fund, with risk transfer



Cost to ratepayers: Submissions to the SB 254 Study offer a range of views of the appropriate contributions of shareholders and ratepayers to the Fund. The underlying cost spreading rationale of inverse condemnation is that the costs of damage from public improvements should be socialized among those receiving the benefit, here utility ratepayers. On the other hand, automatically passing the full costs of wildfire losses to ratepayers exacerbates affordability challenges and bypasses the traditional CPUC prudence review process, under which costs can only be passed on to ratepayers if the utility demonstrates it acted prudently in incurring the cost.

Continued major shareholder contributions would be viewed as a negative in credit and equity markets as it continues the departure from the "cost of service" model, likely resulting in ongoing increases in cost of capital, which ultimately is borne by ratepayers. Shareholder contributions could also be structured to be reduced over time as an incentive for risk reduction and maintaining strong wildfire-risk performance.

For comparative purposes, the following estimates were developed to show what the costs to ratepayers would be to fund a more durable Wildfire Fund with and without risk transfer. The estimates are anchored in the analog of the 15-year AB 1054 structure with a nominal fund target of $36 billion. Scaling the AB 1054 structure proportionally (i.e., $900 million per year of non-

bypassable surcharges to fund $10.5 billion), implies approximately $3.09 billion per year for a $36 billion target.

- **A more durable Wildfire Fund** of $36 billion would equate to an approximately $8.50 surcharge per month per ratepayer, which would be added onto the existing AB 1054 $2.50 surcharge,[76] for a total of $11.00 in monthly Fund-related charges for an average ratepayer. If the Fund was exhausted, a comparable replenishment would require an additional $8.50 surcharge per month for an average ratepayer, for a total of $19.50 per month for the average ratepayer.
- **A more durable Wildfire Fund with risk transfer** has initial capital requirements of $11 billion, which equates to at least another $2.50 monthly surcharge for an average ratepayer. In addition to the capitalization costs, risk transfer premiums are estimated to be at least $3.5 billion per year. To pay for risk transfer with non-bypassable surcharges would result in non-bypassable surcharges of approximately $9.75 per month for the average ratepayer. Thus, combined with the original AB 1054 surcharge of $2.50 per month and the initial capitalization fund surcharge of $2.50 per month, the total average non-bypassable surcharge for a more durable Wildfire Fund with risk transfer would result in non-bypassable surcharges of approximately $14.75 per month for the average ratepayer and would protect against large replenishments. One caveat is that risk transfer costs are not static and could increase materially over time.

In conclusion, a more durable Wildfire Fund would require significantly higher ratepayer surcharges. The surcharge estimates could be adjusted if shareholder contributions were required, or other funding sources were identified. Funding a capital commitment of this size solely through contributions from ratepayers and shareholders would be an excessive cost with significant risks, including credit worthiness and high capital costs for utilities and reduced capacity of the energy sector to achieve the state's climate goals. Other funding sources outside of the current base need to be considered.

Option 2.4.2: Create a more durable Wildfire Fund with diversified funding sources.

Concept: Build on the construct of the current Wildfire Fund but increase its durability to withstand multiple fire seasons with a capitalization cost of $36 billion funded through the expansion and diversification of the capital inflows to the Fund. This option would leave in place current caps on utility outlays that are important in credit and equity markets. The SB 254 Continuation Account would be superseded by this option. Additional funding could be obtained either before wildfires occur (pre-event) in anticipation of future losses or after wildfires occur (post-event) to replenish the Wildfire Fund.

[76] Lower end of the estimated current Fund-related bill impact applied for conservatism

Rationale: More diversified and increased funding sources can create a more flexible capital base than possible under the current Fund design. It would also spread that the cost of wildfire risk more broadly.

Features:

- Capitalizes the Wildfire Fund at a level projected to last for 20 years with 75% probability.
- Expands and diversifies capital inflows to the Fund.
- Maintains the AB 1054 safety Certificate framework and require full compliance with all statutory conditions as a prerequisite for participating in the Fund.
- Maintains the AB 1054 cap on required utility reimbursement to the Fund, limiting shareholder responsibility for disallowed wildfire costs to no more than 20% of the utility's total transmission and distribution equity rate base, subject to statutory exceptions.

Analysis: Without expanded and diversified funding for a more durable Fund, the cost to capitalize a $36 billion Fund from ratepayers and shareholders is likely not viable.

Written submissions to the 254 Study recommended various alternative funding sources. Broad categories of potential funding include contributions from Federal government programs, State, county, or municipality-level revenues or programs, contributions from corporate or private entities (voluntary or mandatory), capital sourced from the insurance or reinsurance market to supplement existing funding sources such as IOU ratepayer and shareholder contributions. The viability of potential alternative funding sources is unclear. Restrictions on Federal funds likely prevent comingling with utility ratepayer and shareholder funds to pay for utility wildfire liabilities. It is unclear that corporate or other private funding sources—voluntary or through taxation—would materialize.

Option 2.4.3: Establish a more durable Wildfire Fund along with liability reforms.

Concept: This option builds on the more durable Wildfire Fund in Option 2.4.1, by introducing targeted liability cost-containment measures to help manage volatility. The cost-containment measures make wildfire recoveries more predictable for IOUs and the Wildfire Fund, enabling faster and more predictable payments to survivors.

Rationale: By placing defined limits on IOU-attributed wildfire exposures, this policy option reduces the scale and variability of losses that the IOUs and the Fund must absorb which lowers the level of claim-paying capacity required to maintain a durable Fund.

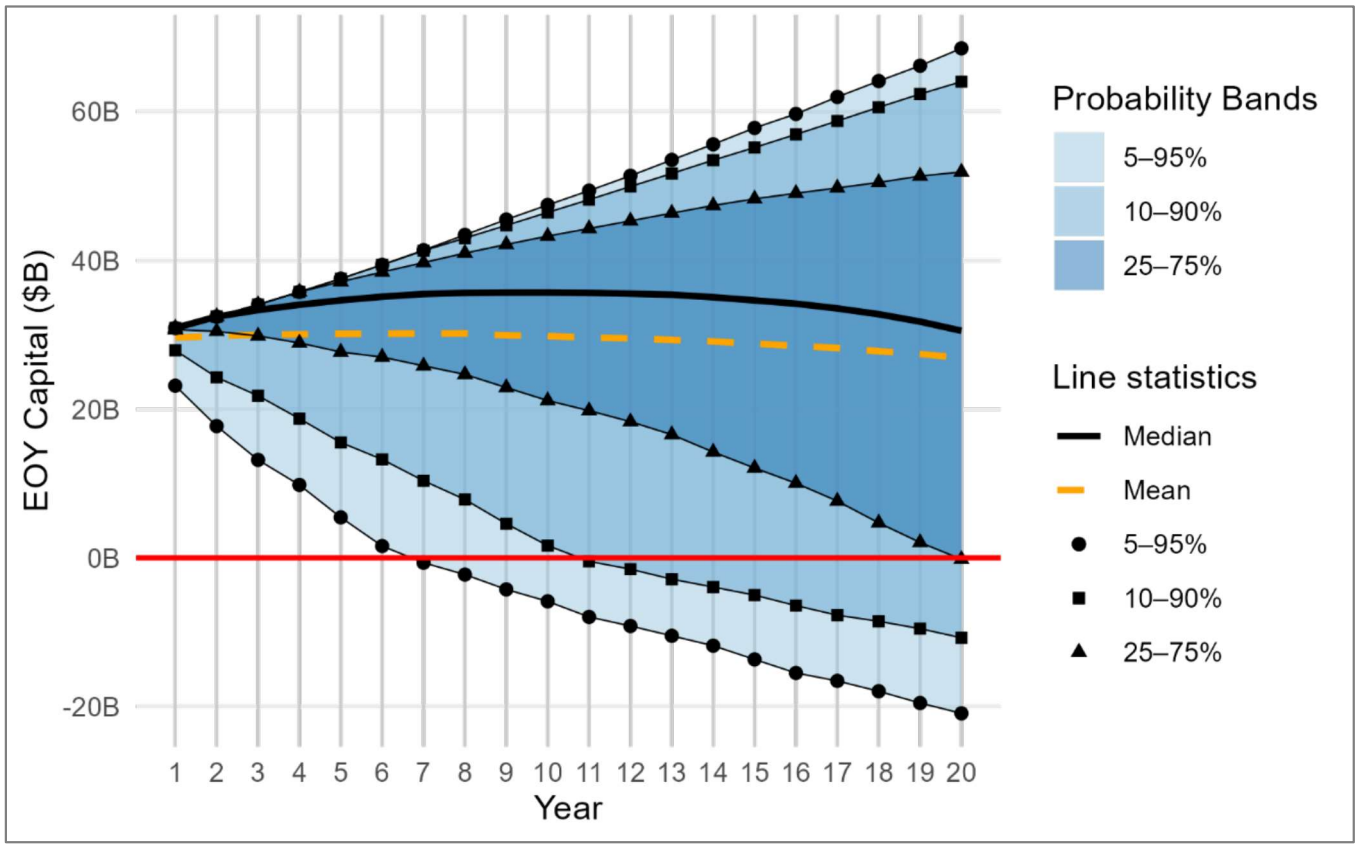
Features: A set of liability cost-containment measures were developed based upon Options presented in Strategy 2.2 that are designed to limit the size, volatility, and timing of loss obligations. Below are the cost-containment measures included in the modeling, along with a brief explanation:

- **Eliminate Punitive Damages:** Removes extra damages that a court can award above compensation of actual losses.
- **Capping Non-Economic Damages at $150K:** Non-economic damages (such as emotional distress, pain and suffering) cannot exceed $150K per claim.
- **Public Entity Property Damage Recovers Diminution in Value (DIV):** When public entity buildings are damaged, the maximum recovery awarded is the depreciated value and not full cost of replacement.
- **No Public Entity Non-Property Recovery:** Public entities are not allowed to recover any non-property damages such as economic losses or lost tax revenues.
- **Limited Additional Living Expenses (ALE):** ALE that covers costs such as temporary housing and increased food/transportation costs are standardized and recoveries are limited to schedule.

Analysis: From a durability perspective, the liability cost-containment reforms would reduce capitalization costs $36 billion, by a modeled estimated $7 billion and down to $29 billion. Funding the $29 billion with non-bypassable surcharges would result in an average non-bypassable surcharge of approximately $7 per month for the average ratepayer. This cost is less than the estimates for a more durable Wildfire Fund, presented in Option 2.4.1, but still much more than the original AB 1054 surcharge.

Figure 9 shows the range of modeled outcomes for a more durable Wildfire Fund with liability reforms. There remains a possibility of needing to replenish before the end of 20 years, which could require additional layering of non-bypassable surcharges. This durability analysis indicates that, while liability cost-containment measures reduce the capital required for the Fund, the remaining need is still materially larger than current commitments of the AB 1054 Fund or SB 254 Continuation Account. It uses liability reform to bring the capital requirement down but does not fully resolve the long-term durability challenge. And, like the more durable Wildfire Fund described in Option 2.4.1, the Fund could be eroded and lacks a replenishment mechanism, which would be needed to remain truly durable.

Figure 9 Probabilistic range of modeled outcomes for a Durable Wildfire Fund with Liability Reform



Unless expanded for broader participation, this option does not resolve challenges for POUs and SMJUs. In addition, even with these liability reforms in place, the capital requirement for a durable Wildfire Fund remains materially large, and an excessive additional cost for ratepayers and shareholders, under the AB1054 construct. However, this policy option has the advantages of expanding the claim-paying capacity of the more durable Wildfire Fund by adding liability cost-containment mechanisms to help stabilize volatility and enable more predictable payments to survivors. This option points to the importance of incorporating liability reforms into the broader set of administrative and legislative actions to address wildfire risk.

Pathway 3 – State Roles for Addressing Catastrophe Resiliency

Strategic Context: In the first two Policy Pathways presented in this Report, Strategies and Options focus on making the key investments that will enhance catastrophe resiliency—taking a targeted, well-organized approach to risk reduction, and addressing the needs of the capital-intensive systems used to provide safe, clean and reliable energy, and to finance and spread the costs of catastrophes.

In Pathway 3, the focal point is on opportunities for the State to play a more significant role in supporting the state's catastrophe resiliency. Existing systems are not designed to manage climate-driven, long-tail wildfire and natural catastrophe risk. The status quo leaves survivors, utilities, insurers, and others exposed to large unfunded liabilities when major catastrophes occur. Put another way, California has catastrophe "protection gaps." This Pathway looks at strategies and structures to be used to fill those protection gaps.

Strategy 3.1 presents policy options to address California's growing, unfunded tail risk from catastrophes that neither utilities nor insurers can reliably finance. This Strategy discusses Options to create durable, State-sponsored financing structures that cover large catastrophes by clearly defining how extreme losses are shared among utilities, insurers, and the State, while supporting rapid survivor recovery.

Strategy 3.2 addresses the fact that wildfire risk is outpacing mitigation funding needs. It presents an option to establish a long-term, statewide funding and financing framework that is backed by stable revenue and a coordinated investment strategy to help mobilize public and private capital investments to "bend the curve" of wildfire risk downward toward a more catastrophe resilient future.

While there will always be periods, like now, when there is no clear source of funds to do the expensive work that needs to be done or to help fund catastrophe recovery when the needs arise, the Strategies and Options in this Pathway are based on the notion that there can be great value and benefit in creating the catastrophe finance infrastructure in advance of when they are needed or able to be fully funded.

Strategy 3.1. State Roles to Finance Catastrophe Risk

California has created several entities to help manage disaster risk, including the CEA, the Wildfire Fund, and the FAIR Plan. As noted in this Report, these structures face challenges and require improvements. Other states and countries have established state-sponsored mechanisms to address natural catastrophe risk, including the FAIR Plans and wind pools around the U.S., Federal approaches to flood and terrorism, and natural catastrophe financing approaches in countries such as Australia, France, New Zealand, Spain, and the United Kingdom. These arrangements

provide lessons for how governments can play a direct role in supporting insurance market capacity and they offer a wide variety of approaches tailored to each jurisdiction's unique risk profile, financial needs, and institutional and political context. Among these examples, California is unique in needing to address the "tail risk" of electric utility liability for wildfires caused by their equipment or operations.

Introducing a revised role for the State of California in managing financing aspects of wildfire catastrophe risk could unlock solutions that are not feasible within the current framework. In particular, new or revised State-sponsored structures can:

- **Enable expansion of broad cost sharing and scaling for catastrophe risk:** By pooling risk across a wide base of policyholders, taxpayers, or regions, the State can spread the financial impact of low-probability, high-severity wildfires. This broader risk base makes it more practical to provide coverage for extreme losses that would otherwise be unaffordable or unavailable in the private market. A State-sponsored structure can also be calibrated to scale up in response to very large events, helping to maintain solvency and support rapid recovery.
- **Address gaps in current recovery and protection systems:** A State-sponsored mechanism can be designed to complement, rather than replace, private insurance and existing catastrophe risk financing programs by filling gaps, at least for as long as those gaps persist. The regulatory reforms in the SIS have the potential to at least partially fill the gap that shows up in the lack of access to fulsome insurance in high-risk and very-high-risk areas of the state, yet the private market have been slow to take advantage of the opportunity to meet that need. Holistically, gaps currently exist in utility liability coverage, uncapitalized catastrophe "tail" risk in the FAIR Plan, and earthquake and flood insurance. Protection gap enterprises can reduce volatility in and stabilize the insurance and energy markets.

Option 3.1.1: Establish a State-administered wildfire liability insurance program for electric utilities.

Concept: Establish a State-administrated program that would provide wildfire-liability insurance for electric utilities and provide a mechanism to spread wildfire costs more broadly. This option would replace the Wildfire Fund and the associated Continuation Account. It could be available to all electric utilities in the state, including IOUs, POUs, and SMJUs. This option removes the volatility of tail risk from utilities, but the utilities would still be responsible for funding the program. The State would manage the volatility through bond issuances against utility premiums or other means if the State-administered program capitalization is insufficient to cover losses.

Rationale: Electric utilities are currently unable to obtain cost-effective insurance that covers a substantial share of their liability exposure. This policy option addresses this gap by creating a State-administered insurance program. By setting up an ongoing insurance program, it addresses the lack of replenishment provisions for the Wildfire Fund. Many factors and parties contribute to

the ultimate devastation that results from utility-ignited wildfires, and this option also provides a mechanism for spreading liability costs more broadly.

Features:

- The program charges each participating utility a premium for coverage, and utilities would be able to pass these premiums on to ratepayers as a cost of doing business. The premium could be risk-based, reflecting the expected annual payouts to the utility. Or, it could ignore the very large, low-probability events if costs are spread more broadly to other parties.
- The program provides coverage for utility payouts above a per-event deductible and subject to a utility co-pay. The deductible would be set at the amount of insurance coverage that the utility can purchase in the private market at reasonable rates or the capacity of a self-insurance program approved by the CPUC or the overseeing body (approximately $1 billion for the large IOUs). The utility would pay 20% of losses above the deductible.
- Overall utility outlays are capped at 20% of the Transmission and Distribution Rate Base (which, for example, would be approximately $4 billion for SCE).
- The program would be open to smaller IOUs and POUs with premiums, deductibles, and caps that reflect their size and risk profile. As they do now, IOUs could be required to maintain a safety Certificate to participate, and some analogous process could be established for POUs.
- Should accumulated premiums be insufficient to cover claims, the State would step in and provide a backstop, funded by such State-level sources as assessments on properties in high-risk areas or insurance policies, gas taxes, cap and trade funds, State General Fund revenue, or other sources. Small shortfalls could be structured as loans to the program. Assessments could also be imposed up front to build fund capital.
- To address residential property insurance availability, this recommendation could be combined with Option 3.1.3 to establish a State-backed catastrophe reinsurance layer for the residential property insurance market or with Options in Strategy 2.1 to strengthen accessibility and affordability for California residential property insurance or with Options in Strategy 2.2 for utility liability reforms.

Analysis: This policy option would create a permanent solution to stabilize utilities, reduce costs to utility ratepayers and address electricity affordability in California. It could also be open to POUs and smaller IOUs, creating a solution for a broad set of parties. While this option was not explicitly modeled, its capital requirements would be similar to Options 2.4.1 – 2.4.3 for a more durable Wildfire Fund.

The utility co-pay above the deductible provides incentives to mitigate risk and take due care in settling claims, and the annual cap on costs for which the utility would be responsible is important from the perspective of equity and debt markets. The utility co-pay could be adjusted over time in response to utility success in reducing risk.

The program would need to address several challenges. It would expose the State General Fund and taxpayers to significant liabilities for program payouts that exceed the accumulated premium and other sources of claim-paying capacity. The size of the exposure will need to studied further and could depend on whether and what liability reforms are adopted (See Strategy 2.2). There is a great deal of uncertainty in modeling wildfire liability. This will make it difficult to set premiums that account for the different risk profiles of the utilities that participate.

Option 3.1.2: Establish a State-backstop for electric utility wildfire liability with a residual utility self-insurance pool.

Concept: This option creates a State-sponsored backstop for utility wildfire liability and is funded through broad assessments such as temporary post-event sales tax. The size of loss at which the backstop takes over would be set at a level such that utilities could collectively self-insure the residual risk not covered by the State-sponsored backstop. The backstop creates a mechanism to provide a clear delineation between the portion of the wildfire liability borne by utilities and the portion of the wildfire liability socialized broadly to Californians and non-Californians through the temporary sales tax, effectively socializing a large portion of the electric utility liability.

The State-sponsored backstop would replace the function of the Wildfire Fund and step in to pay losses above a specified threshold cutting off the catastrophe loss “tail risk” of the participating utilities. A residual utility self-insurance pool, similar to the Wildfire Fund but smaller, would exist alongside the State-sponsored backstop to fund liabilities below the specified backstop threshold. With the State-backstop covering most of the tail risk, the self-insurance pool would require significantly less capital and ongoing funding from utilities compared to the AB 1054 Wildfire Fund or SB 254 Continuation Account.

This policy option builds upon Option 2.4.3 to establish a more durable Wildfire Fund with liability reforms, expanding on the concept of a more durable utility self-insurance pool and defining a middle layer of IOU liability to be covered. It could also expand to include SMJUs and POUs and evolve into a more comprehensive wildfire liability platform subject to legal feasibility. Additionally, recovery could be expedited by establishing a State-managed claims facility for claims settlement once utility attribution is determined (see Option 2.3.1).

Rationale: By creating a State-sponsored backstop in addition to cost-containment measures, this Option eliminates the large, unfunded utility liability tail risk which significantly reduces utility and ratepayer costs. Implementing this option to include SMJUs and POUs could extend protection to a broader set of stakeholders and align with a more comprehensive and equitable approach to wildfire. This expansion would provide an even stronger legitimacy basis for the establishment of a State-sponsored backstop and broader cost-sharing across all Californians.

Features:

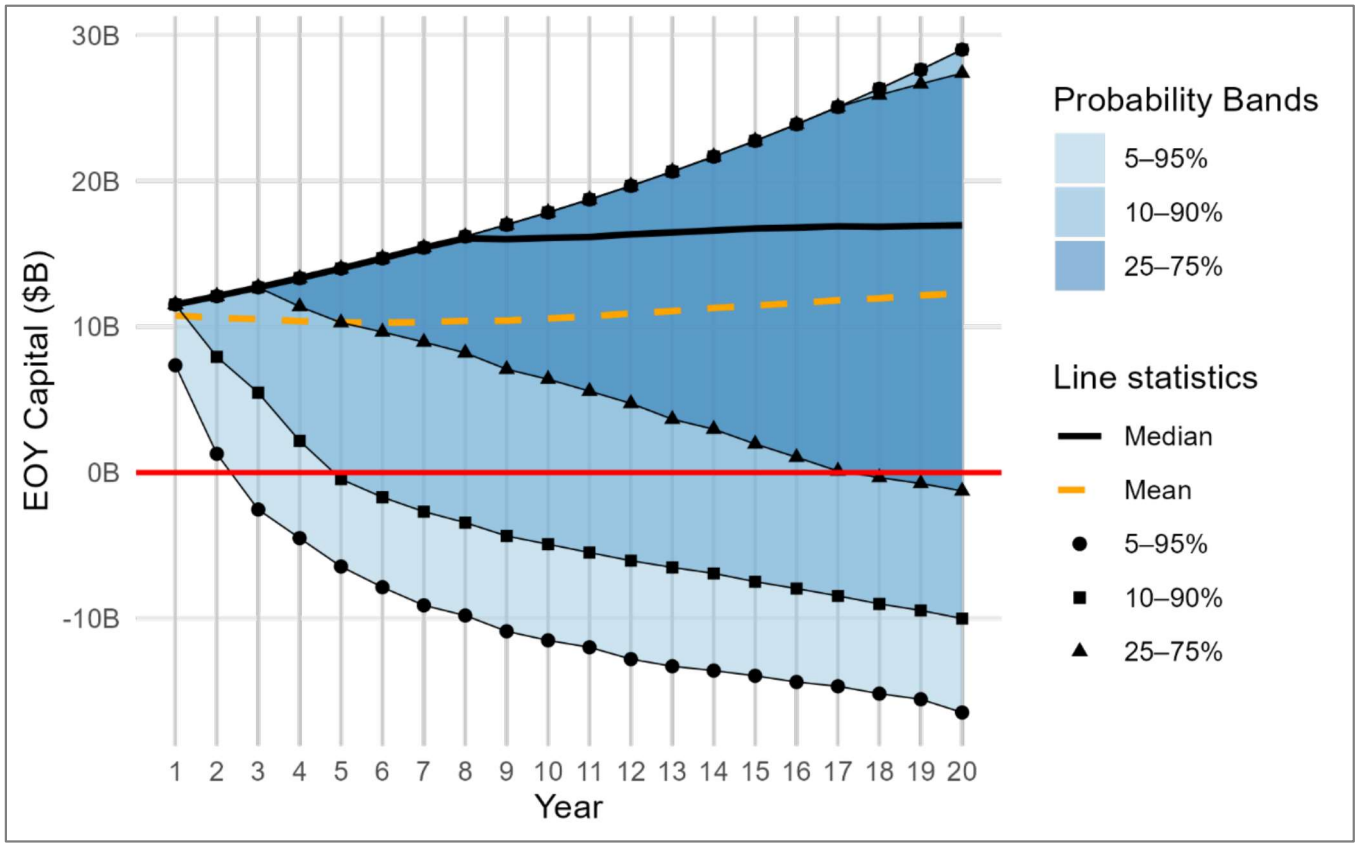
- A set of liability cost-containment measures has been selected for this option. Refer to Option 2.4.3 for details.
- Creates a State-sponsored backstop that is triggered once aggregate wildfire losses exceed the capacity of the fund up to a known limit:
  - The attachment point (the aggregate loss amount that triggers payment from the State-sponsored backstop) to be determined by actuarially modelled loss amounts that would be periodically re-evaluated as the risk landscape changes. For example, the threshold could be set at the 1-in-10-year loss level for covered utilities, currently estimated to be approximately $4 billion. The utilities would self-insure losses below $4 billion, and the State-backstop would cover losses above $4 billion.
  - By using a threshold like a 1-in-10-year loss level, it sets a dynamic threshold at which the State-sponsored backstop begins to pay for losses dependent on actuarially modeled loss estimates which evolves with changes in risk landscape.
- Socializes liability funding by funding with temporary post-event sales tax or other broad-based assessment.
- Stabilizes utility markets by selecting an attachment point should be selected so that utilities can reasonably self-insure without requiring excessive ratepayer contributions.
- Expedites recovery if a State-managed claim-paying facility is established once utility attribution is determined (see Option 2.3.1).
- Brings certainty to utility subrogation by establishing a fixed insurer subrogation percentage.
- *Optional:* Expands participation beyond IOUs to include SMJUs and POUs and establishes differentiated participation paths for SMJUs and POUs reflective of their size, risk profile and financial capacity. The State could operate a self-insurance fund to enable participation of public and private utilities.
- To address residential property insurance availability, this Option can be combined with Option 3.1.3 to establish a State-backed catastrophe reinsurance layer for the residential property insurance market. It could also be combined with Options in Strategy 2.1 to strengthen accessibility and affordability for California residential property insurance or with Options in Strategy 2.2 for utility liability reform.

Analysis: By cutting off the tail risk via a State-sponsored backstop, this policy option offers a material reduction in utility liability and the amount of capital that must be reserved, which lowers the overall system costs and reduces costs borne by ratepayers while still preserving a high level of protection against wildfire liabilities. The presence of a State-sponsored backstop benefits multiple stakeholders. The reliable protection of the backstop significantly improves financial stability and credit rating of IOUs compared to a Wildfire Fund-only approach, decreasing the

likelihood of abrupt cost shocks to ratepayers. In addition, the dynamic attachment point of the State-sponsored backstop creates a more flexible, evolving and risk-sensitive structure that supports a more efficient cost allocation and a lever for IOU incentivization.

Based on preliminary modeling with the State-backstop attaching at a 1-in-10-year modeled loss level, currently estimated to be about $4 billion, $11 billion of initial capital would be required for the State-backstop to reach a durability standard of 75% over 20 years. However, a single large event or successive wildfires could exhaust the initial capitalization. Figure 10 below illustrates the range of modeled outcomes for the State-backstop. The backstop design functions best with contingent post-event financing that could be similar to the ½-cent sales tax that the State implemented after the 1989 Loma Prieta earthquake. For losses below the backstop, a utility-funded self-insurance pool could be established to pool the risk between covered utilities.

Figure 10 Probabilistic range of modeled outcomes for State-backstop



To provide an example of how the State-backstop would be funded, consider the 1-in-100-year modeled loss which is estimated at approximately $25 billion. The utilities would self-insure losses below $4 billion. The backstop would then cover the remaining $21 billion. The current California 7.25% sales tax yields approximately $50 billion in revenue annually. A ½-cent sales tax would yield approximately $3.5 billion; a one-cent sales tax would yield approximately $7 billion. The losses to the fund could be paid through a six-to-seven-year temporary1/2-cent sales tax or a

three-to-four-year one-cent temporary sales tax. Note, multiple large events could require multiple stacking assessments.

In addition to post-event funding through a temporary sales tax or other measure, pre-event funding could be raised by combining this option with Option 3.1.1 to facilitate risk sharing with utilities, ratepayers, and the broader population.

Under the option in which SMJUs and POUs are included, this recommendation addresses current protection gaps and equity in cost-sharing concerns by extending protection to SMJUs and POUs that face similar exposures and challenges and exposures to IOUs thereby promoting a fairer sharing of wildfire risk across stakeholders. Under the conditions in which SMJUs and POUs are included, integration should be carefully considered to establish distinct participation path to avoid cross-subsidies and misaligned incentives.

Option 3.1.3: Establish a State-backed catastrophe reinsurance layer for the residential property insurance market.

Concept: A State-backed catastrophe reinsurance layer designed as a quota share for high-risk areas to address excess concentration related to wildfire faced by insurers.

Rationale: To reduce the possibility of correlated portfolio losses, insurance underwriting practices typically will limit the number of homes insured in a disaster-prone location. As California's wildfire risk has grown and the market in high-risk areas has contracted, some insurers are finding they are overly exposed in high-risk areas and struggle to adequately diversify this risk. Under the existing regulatory environment, their only tool to address this concentration is to issue non-renewals and cap their exposure limits, which often sends consumers to the FAIR Plan. Assistance with managing this risk could keep more insurers writing in high-risk areas of the state.

Features:

- Create a voluntary State-established reinsurance program to offer quota share coverage for a insurer's book of business in counties or other geographic areas where the insurer has high concentrations of wildfire risk. The reinsurance would be priced actuarially and the cost would be passed onto policyholders. Different levels of quota share coverage would be available.

- To address utility wildfire liability, this option could be combined with Option 3.1.1 to establish a State-administered liability insurance program for utilities, Option 3.1.2 to establish a State-backstop for utility liability with a residual utility self-insurance pool, or with Options in Strategy 2.2 for utility liability reform and Strategy 2.4 to make a more durable Wildfire Fund.

Analysis: Many California residential property insurers obtain general reinsurance coverage for wildfire as part of their multi-peril, nationwide reinsurance programs, and thus have historically been able to diversify the risk and cover the risk cost-effectively, indicating a limited need for a

State-created reinsurance program that replaces or competes with the traditional reinsurance for market. However, California insurers are challenged by the concentration risk that exists in their portfolios for certain high-risk geographies. The quota-share coverage concept presented with this Option is designed to be positioned below the private reinsurance layers that insurers typically purchase. While traditional reinsurance manages extreme losses, it may not effectively address systemic concentration risk from a single event.

This policy option thus aims to stabilize insurers' portfolios and reduce the pressure to absorb correlated losses, while still preserving the role of private reinsurance in covering catastrophic tail events. Similar to other models, this quota share coverage could benefit from additional financing structure beyond the insurance premium. One potential option is that when claim-paying ability exceeds reserves and any risk transfer premiums, the program could issue parcel-level assessments on every resident of the county that was triggered. A much more detailed analysis of this option is needed to evaluate its fit, impact, and viability.

Option 3.1.4: Create a State-sponsored wildfire insurer.

Concept: A State-sponsored insurance program for wildfire property losses separates catastrophic wildfire risk from the standard homeowners policy and insures it through a mandatory, State-backed wildfire policy. Wildfire would be defined as a wildfire or conflagration over a certain level of insured loss and excluded from all homeowners policies, and this coverage would only be available from the State insurer. Insurers continue to offer and service the homeowners policy plus the companion State wildfire policy, while a central State-managed fund manages capital, risk transfer, and post-event financing for wildfire losses. Like the CEA, it could be managed as an instrumentality of the State, separate from State government and isolated from the State General Fund and insurers would sell policies and adjust claims of the State wildfire insurer. The State insurer would decrease costs for utility ratepayers as it would not subrogate losses to the utilities or a liability fund and reduce the funding requirements for utility liability.

Rationale: By isolating catastrophic wildfire risk into a dedicated State program, this policy option aims to remove the wildfire risk that has kept admitted market insurers from writing homeowners policies in high-risk areas. This would enable admitted insurers to offer policies in high-risk areas and replace the role of the FAIR Plan in covering wildfire risk. Because the State insurer would not subrogate against IOUs, this would eliminate the liability for insured property losses and additional living expenses from utilities, decreasing costs for ratepayers. It also provides the State, as administrator of the program, direct ability to implement mitigation incentives to align with long-term resilience goals. The State insurer would set rules for coverage and claims processing and handling, leading to statewide consistency. If established as a non-profit instrumentality of the State, the State wildfire insurance program would not pay taxes or earn a profit and could have access to lower cost capital through the municipal markets. Total costs for policyholders may be higher and more visible than under the current embedded homeowners insurance approach.

Features:

- This approach would move wildfire risk out of the standard homeowners policy and into a separate, mandatory State-sponsored wildfire policy for residential property. This could be expanded to commercial property insurance
- It would centralize catastrophic wildfire financing and post-event assessments in a State fund, while preserving the insurers' role in underwriting, distribution, and claims handling consistent with State-established rules.
- The State would create a single, consistent framework for determining how much capital is needed for extreme ("tail") wildfire risk and how that risk is funded. The State would establish a funding plan for the program, which could include premiums, pre- and post- event assessments on policyholders, and potentially a State taxpayer backstop for extreme tail events, and access to low-cost capital through the municipal markets. Risk would be concentrated in a State fund, foregoing the diversification benefits embedded in insurers' national books.
- This option could be supplemented with a separate quasi-insurance program funded by utility ratepayers to pay for residual wildfire liabilities in the case of utility-caused wildfires.

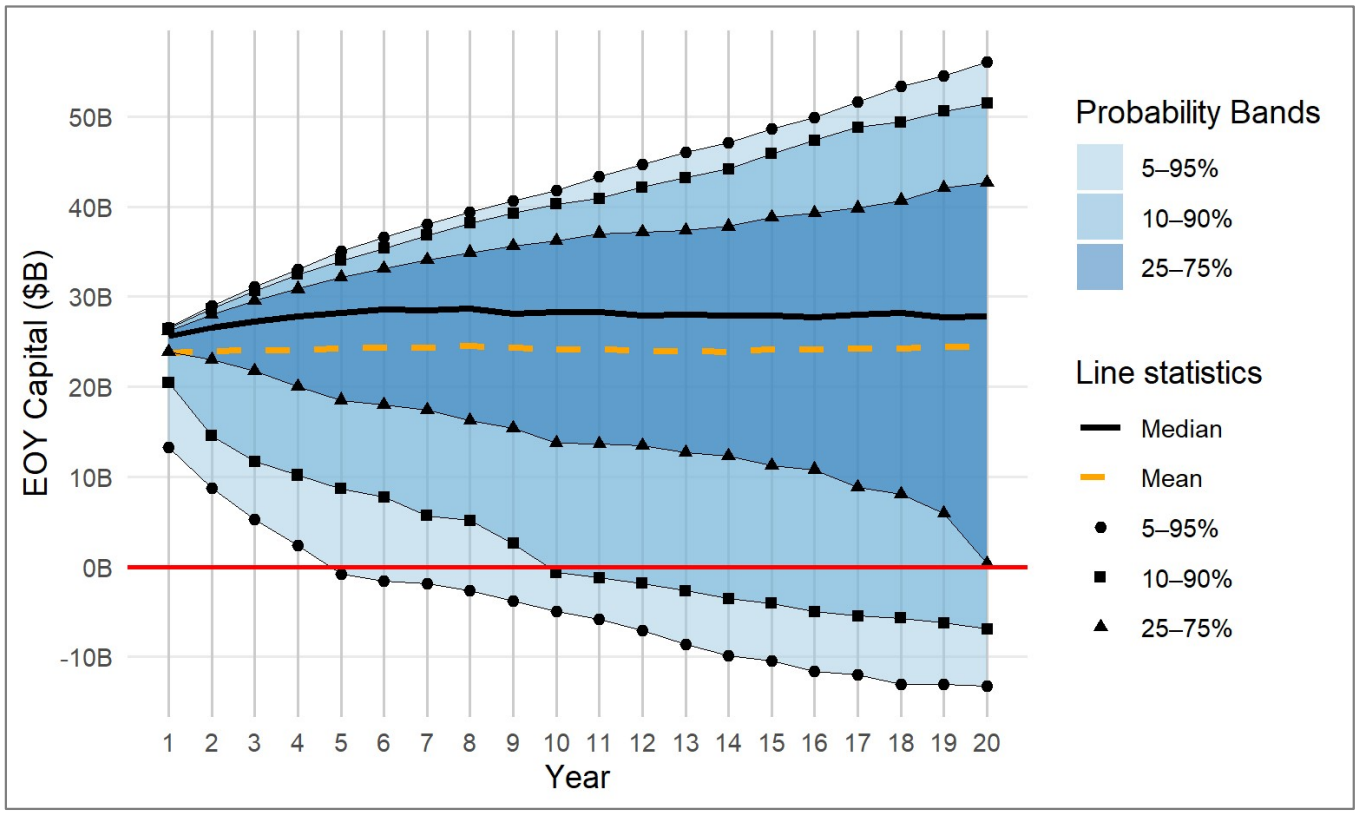
Analysis: The State wildfire insurance program would remove catastrophic wildfire coverage from standard multi-peril homeowners policies and place it in a mandatory State-backed program, while insurers continue to sell and service homeowners policies for non-catastrophic perils, subject to State-set requirements.

Under this option, risk is substantially reallocated and the insurance industry's role in covering wildfire losses is greatly reduced. Costs borne by utility ratepayers are reduced because the State insurer would not subrogate for covered losses.

The capital requirements for the State wildfire insurance program are significant. To reach a durability standard of 75%, the capital requirements are estimated to be $25 billion. Modeling for this option assumes liability reforms similar to those in the more durable Wildfire Fund with liability reform (Option 2.4.3) and assumes coordinated statewide mitigation is carried out in line with Strategy 3.2.

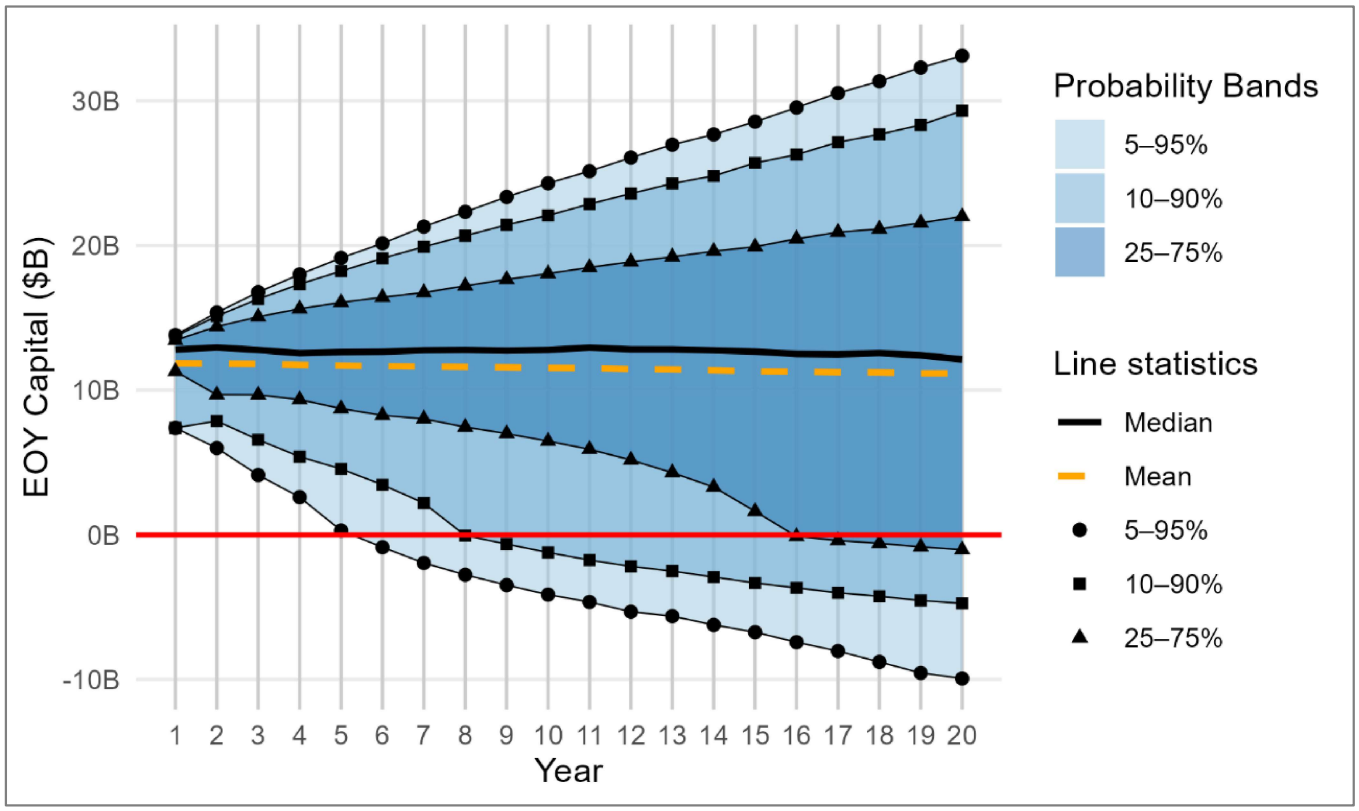
As noted above, this requirement could be funded with a combination of funding streams, including bond proceeds, risk transfer, and pre- and post- event assessments. Alternatively, the State insurer could be designed to rely on post-event assessments with lower initial capital costs. The chart below illustrates the range of outcomes for a State insurer capitalized at $25 billion. As for utility liability funding options, a State insurer faces the possibility of requiring recapitalization if there are large or cumulative wildfire losses as illustrated by the lower lines with circles and squares in Figure 11. Note that multiple large events could require the fund to be replenished through additional, large capital infusions.

Figure 11 Probabilistic range of modeled outcomes for State sponsored Insurer with Liability Reform



By removing the liability of subrogated insured wildfire losses, the funding requirements for utility wildfire liability are reduced from $36 billion for a more durable Wildfire Fund (see Option 2.4.1) to $12 billion which could be covered by a separate quasi-insurance program funded by utility ratepayers. The $12 billion could be funded with a non-bypassable surcharge of approximately $3 per month for the average ratepayer. The range of outcomes for this program are shown in Figure 12. The lower lines with circle and square markers illustrate the probability of needing to recapitalize with additional surcharges or other funds.

Figure 12 Probabilistic range of modeled outcomes for quasi-insurance utility liability program



Using reinsurance or other forms of risk transfer to reduce capital requirements would increase premiums or capitalization costs given the risk concentration, if used at levels comparable to other state insurers or insurance companies today. Risk transfer premiums for the State insurer are estimated to be $2 to $3 billion annually. These would pay for an illustrative layer of risk transfer for aggregate annual losses between $7 billion and $30 billion, which correspond with the 1-in-10-year and 1-in-100-year return period modeled losses, respectively. If spread across an estimated 13 million homeowners, fire and allied lines policies in California, this would result in an average increase of about $150 to $230 annually per policy. With this reinsurance in place, capital requirements are estimated to be reduced from $25 billion to $6 billion. The range of outcomes for the State insurer with reinsurance is shown below.

Alternatively, the State insurer could reduce capital requirements by relying more on post event assessments. If the State insurer were initially capitalized at $6 billion, a modeled 1-in-100-year loss event is estimated to result in a $25 billion assessment. If spread across an estimated 13 million homeowners, fire and allied lines policies in California, this would result in approximately $1,900 to $2,000 assessment per policyholder which could be charged over multiple years. Note that multiple large events could require multiple stacking assessments.

As noted above, this approach could improve availability of homeowners insurance in high-risk areas by taking most catastrophic exposure off insurers' balance sheets. It reduces current reliance on litigation and subrogation, which is inefficient and adds costs borne by ratepayers and policy holders for litigation expenses, attorneys' fees, and hedge funds who acquire and assert subrogation rights. It gives the State a mechanism to design and enforce wildfire mitigation incentives for State-insured properties more directly than can be achieved through the CDI Safer from Wildfire regulations and other voluntary retrofit standards.

By carving out only the catastrophic layer and leaving day-to-day homeowners insurance operations with admitted insurers, it removes pricing and risk aggregation challenges for insurers to offer insurance in high-risk areas.

Moving from diversified national insurer books to a single California wildfire catastrophe insurance program concentrates risk and gives up insurers' diversification and access to reinsurance at a lower cost than a State program. The State would need to replace these tools with public capital, large assessments and California-only risk transfer. Study modeling assuming that the State relied on more expensive reinsurance, implies that total homeowners insurance premium could be $20+ billion a year versus $18 billion today.

Post event assessments needed to recapitalize the program could be much larger and broader based than current FAIR Plan assessments, because the program is exposed to all insured households rather than the FAIR Plan. For comparison, under the current design with wildfire risk covered by the private insurance market, for a 1-in-100-year wildfire modeled loss, FAIR Plan assessments are estimated to be approximately $7 billion, or $500 to $550 annually per policyholder. Under the proposed State insurer program, modeled assessments for the same size event, assuming available capital of only $6 billion and use of no other risk transfer strategies, are estimated to be $25 billion. or $1,900 to $2,000 annually per policyholder; this is more than three times the modeled estimates for potential assessment needed for the FAIR Plan.[77]

Premiums are not expected to be reduced from current levels with a move to a State Insurance Program. Premiums would be reduced by the elimination of insurer profit margin, but the profit and overhead embedded in private rates are already small relative to total loss costs. Subrogation is reflected in current premiums based on past subrogation experience, The amount of total subrogation payments foregone could increase premiums but would be approximately offset by elimination of insurer profit margin. Modelling illustrates that premiums may increase under this proposed program due to the potential actuarial inadequacy of current premiums. In other words, premiums charged by admitted market insurers already are not adequate, an issue that the SIS is attempting to address through reforms. A State insurance program would also need to raise

[77] Per policyholder costs is based on 13 million policyholders. The State insurer assessment assumes the State insurer has approximately $6 billion in pre-event funding.

premiums to be actuarily sound. In addition to potential premium increases, capital, risk transfer, or assessments would be required to enable the State insurer to cover catastrophic events.

The option thus offers increased access to insurance for Californians, stronger State control over wildfire insurance policy terms and mitigation, clearer governance and increased transparency, at the price of potentially higher premiums and the need to build and sustain a large, durable State insurance program.

Strategy 3.2: Statewide Funding for Community Wildfire Mitigation

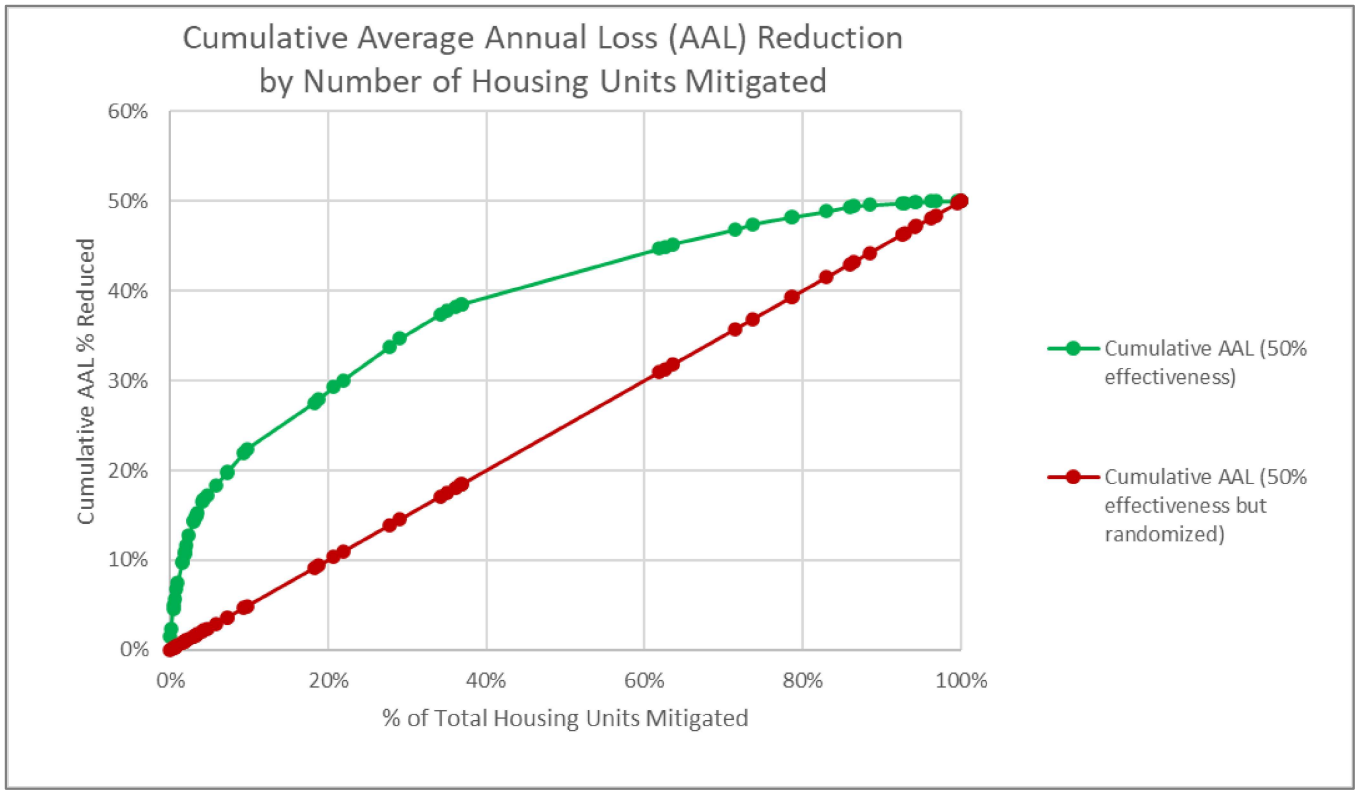
By creating a more coordinated statewide program for targeted community mitigation, California can accelerate statewide mitigation and maximize "bending the curve" of wildfire risk. Through this statewide coordination and targeting to prioritize mitigation to the highest risk communities that are most prone to conflagration risk, the risk reduction achieved can be more than double the risk reduction from an uncoordinated approach.

Modeling performed as part of the SB 254 study, estimates that with a concerted statewide effort to mitigate statewide wildfire risk in the most high-risk neighborhoods of the state, the potential need for durable wildfire catastrophe risk financing can decrease from $36 billion to less than $24 billion. The benefit of targeted mitigation is embedded in the assumptions of the two mitigation spending scenarios developed for this Study. Assuming a maximum possible risk reduction through highly coordinated and targeted mitigation of 50%, the first scenario targets a robust investment to mitigate 70% of at-risk structures in the state for an estimated mitigation cost of $19 billion and a risk reduction of 47%. A second, smaller scale but still coordinated mitigation scenario that is less aggressive could achieve an estimated 35% risk reduction. If the same number of structures were subjected to improvements aimed at mitigation but in an uncoordinated manner, it is estimated that risk reductions of only 35% and 15% could be achieved for scenarios 1 and 2, respectively.

The benefits of an initial increased rate of mitigation effectiveness is illustrated in the figure below. This demonstrates how, for example, the 10% highest wildfire-risk communities in the state (from an annual aggregate loss perspective) generate more than 20% of that annual statewide aggregate loss. This means that targeting mitigation efforts in the10% highest-risk communities will have a greater initial impact on wildfire risk reduction than a randomized approach which would, at most, affect 10% of the possible total reduction. In other words, a completely randomized mitigation approach across all homes does not allow for risk reduction benefits to accrue and then be shared across neighboring properties. Targeted, collective community-centered wildfire mitigation will more efficiently reduce the statewide wildfire risk problem than is currently happening with less coordinated mitigation.

Undertaking targeted mitigation statewide, will bring down future losses for the entire state, better enabling any of the funding options laid out in Strategies 2.4 and 3.1 to be more sustainable over the long -term by reducing future funding requirements and the need for repeated capital infusions or assessments.

Figure 13 Targeted Mitigation Impacts by % of Communities Targeted vs Randomized Mitigation Impacts



Option 3.2.1: Develop a long-term funding and financing strategy for statewide community wildfire mitigation.

Concept: Develop a 15-to-30-year statewide strategy to fund and finance community wildfire mitigation-at-scale.

Rationale: Most funding for wildfire risk reduction currently comes from one-time, or limited duration, Federal and State public funding sources, which are insufficient to cover the full cost of mitigation on a sustainable long-term basis. Funding for risk reduction to individual private properties is often limited to State support, and investment by property owners. State dollars are limited, and Federal dollars are inconsistent. A fire-resilient California requires far more capital than current budgets can sustain because, with climate change, wildfire risk is increasing and outpacing the state's physical infrastructure, ecological health, and community-protection

systems. This strategy would raise new funding from both public and private sources for mitigation activities and enable more efficient and timely use of funding to manage rising wildfire risks.

Features:

- **Create a State Wildfire Resilience Financing Facility** to cultivate and prospect new financial resources, issue bonds, provide credit enhancements, and manage large-scale mitigation of capital investments.
- **Establish a New Revenue Stream** for sustained wildfire risk reduction investments for households, businesses and communities. Dedicated, recurring revenue source, capitalized by a combination of public funding sources including a mitigation tax credit, to be identified, to fund both direct wildfire risk reduction investments and catalytic financial tools that attract private capital at scale. Additional ideas for revenue raising are provided in Table 5.
- **Create a Community Wildfire Investment Strategy** with targets set by the statewide coordinating entity (see Option 11.1) that develops a long-term plan to enable the State to diversify financial capital raising to invest in fire risk reduction and resilience; expand access to financial resources for community-scale and parcel-level wildfire mitigation; and leverages existing State funding to be more effective and efficient at supporting mitigation. Timing of strategy updates should align with periodic updates of the State's Wildfire and Forest Resilience Task Force Action Plan.

Analysis: A coordinated financing model—blending public revenue, private investment, and bioeconomy development—has the potential to stretch limited local, State and Federal dollars. However, establishing this diversified funding stream comes with near-term costs—including securing dedicated revenue and navigating the complexity of multi-sector financial alignment. Fiscal durability is a constraint, particularly the need to balance immediate budgetary and economic needs with the long timeframe commitment of funding necessary to substantially reduce potential wildfire losses across the state.

Table 5 Potential Community Wildfire Mitigation Financing and Funding Strategies

Revenue Raising Concepts
Establish Wildfire Mitigation Tax Credit. Establishing a new tax credit could generate new, scalable funding for wildfire-risk reduction by creating a State-issued incentive that supports both households and market participants.
Maintain Current Wildfire Resilience Funding. Restoring the $200 million wildfire and forest resilience allocation from the Greenhouse Gas Reduction Fund (GGRF) to a higher funding priority, rather than its current placement in Tier 3 of the new GGRF allocation structure, would help ensure reliable funding for wildfire risk mitigation and resilience investments.
Mobilize Philanthropy to De-Risk Early-Stage Investment. The State could marshal philanthropic foundations as well as impact investor vehicles, to provide grants and direct subsidies to de-risk early-stage investments in mitigation projects.
Develop Bioeconomy Markets for Risk Reduction. The bioeconomy includes a wide-ranging set of processes that transform biomass—woody forest residues, agricultural byproducts, municipal solid waste, and more—into sustainable products.
Provide Low-Cost Loans for Mitigation. This could be modeled after the State Clean Water State Revolving Fund, which provides low-cost loans to communities for a range of water projects.
Provide Loan Guarantees for Mitigation. Piloting a State-supported loan loss or loan guarantee program would provide security or guarantee to capital lenders lending low-cost loans to homeowners.
Update California's Property Assessed Clean Energy (PACE) Financing to Authorize Wildfire Mitigation. Legislation could update PACE financing to authorize wildfire mitigation as an eligible activity across the state.
Coordinate Mortgage Lenders to Support Wildfire Mitigation. The mortgage lending industry plays a central role in fire mitigation and housing protection because it sits at the financial hinge point between homeowners, insurers, secondary markets, and long-term housing stability.
Establish a State Working Group on Mortgage Lending and Wildfire Risk. This working group would identify actionable ways to incentivize, fund and execute a residential mitigation and resiliency strategy by setting standards for underwriting, providing technical guidance on fire risk reduction, and/or providing strategic financial incentives to lenders to pass on to mortgage consumers.
Advance State Community Reinvestment Act (CRA) Policies to Incentivize Risk Reduction Investments. Banks can direct eligible CRA dollars toward wildfire-mitigation projects in high-risk, low- and moderate-income communities through targeted engagement.
Incentivize Property Investment by introducing building "rating system" that has been appropriately mitigated.
Introduce administrative tax relief for multifamily housing owners to enable reinvestment of reserves and savings into mitigation.

6 Conclusions

The Policy Pathways and strategic options developed by the SB 254 Study result from a roughly seven-month process by 40 subject experts, policy leaders and researchers with deep expertise in insurance, catastrophe finance, utility management, wildfire risk, policy and planning. The teams, under the leadership of CEA, worked to be as inclusive and transparent as possible within a limited timeframe, engaging with stakeholders across California and the country. While not all participants in the Study are likely to agree with every policy option presented, there was unanimous agreement on the importance of this moment: California faces a growing natural catastrophe risk, compounded by a changing climate, that requires collective and sustained focus, shared responsibility and a commitment to working together on durable, long-term solutions.

As policymakers consider the trade-offs among different strategies and pathways forward, the following summary considerations are offered.

Assessing Cost-Benefit Tradeoffs of Different Policy Pathways

The SB 254 Study demonstrates that targeted community- and parcel-level mitigation can generate substantial long-term savings for California. These benefits, however, accrue broadly across society and materialize over time. Because wildfire occurrence is inherently uncertain, there will never be a guaranteed timeline for realizing those savings or a precise one-to-one return on every mitigation investment. By contrast, utility liability reforms can produce immediate, measurable changes—either reductions or increases—in the costs borne by different parties, with direct, near-term shifts in who pays. This contrast does not imply that one approach is preferable; rather, it highlights why direct comparisons across the Study's Policy Pathways are challenging. For high-level orientation, the following table summarizes the benefit cost profile, scale, and time horizon associated with the strategies outlined in Section 5.

Table 6 Summary of Cost-Benefit Tradeoffs of Different Policy Pathways and Strategies

Policy Pathways and Strategies	Costs	Benefit
Statewide Coordination and Local and Individual Shared Responsibility for Community Mitigation (Pathway 1, Strategies 1.1 and 1.2, and Pathway 3, Strategy 3.2)	• Minimal direct State cost if strategies are designed well. • Benefits accrue slowly and depend on wildfire occurrence patterns. • Requires upfront coordination, planning, and capacity building at the community level.	• Long-term best value for the state through avoided losses and reduced future disaster spending. • Creates a strong foundation for attracting private and philanthropic capital. • Community-scale risk reduction produces benefits that extend beyond individual property owners. • Supports resilient local economies and infrastructure over time.
Utility Safety (Pathway 1, Strategy 1.3)	• Requires sustained investment in system hardening, vegetation management, and operational changes. • Benefits accrue over time and depend on regulatory clarity and enforcement.	• Long-term value through reduced ignition risk and fewer catastrophic events. • Clearer standards for "acceptable risk" could reduce unnecessary spending and lower ratepayer costs. • Supports more predictable planning and investment cycles.
Stable Property insurance (Pathway 2, Strategies 2.1)	• Expanded coverage for recovery comes with higher costs and striking this balance is challenging. • Insurance instability will persist in fire-prone areas absent substantial home and community loss reduction. • Implementation requires regulatory and industry alignment, which may take time.	• Offers both near-term and long-term value to assets and the residential sector by stabilizing insurance availability. • Stronger linkages between mitigation and insurance pricing can help offset expected affordability pressures, incentivize investment into resilience, and motivate risk-reduction collective action in communities. • Accessible and full insurance will lead to improved recoveries for survivors.
Utility Liability Reform and Compensation Improvements (Pathway 2, Strategies 2.2 and 23)	• Potential shifts in who bears risk and cost across utilities, ratepayers, wildfire survivors, local governments, and the State.	• Some reforms can immediately reduce utility outflows for claims, settlements, or financing costs. • Could improve financial stability for utilities and reduce volatility in ratepayer impacts.
Financing Catastrophe Risk, including the Wildfire Fund, other Potential Tail Risk Approaches (Pathway 2, Strategy 2.4 and Pathway 3, Strategy 3.1)	• Costs are highly dependent on the chosen structure (e.g., reserve fund, reinsurance, catastrophe bonds). • Some approaches, for example to prefund durable liability coverage, require significant upfront capital or ongoing contributions. • These costs materialize immediately and may affect utility rates or State financing needs. • Design choices determine whether costs fall on the State, ratepayers, insurers, or a mix.	• Potential to stabilize post-disaster financing and reduce pressure on the General Fund. • Could create a more predictable and equitable system for recovery funding. • Depending on design, may attract private capital or reinsurance markets.

Table Rev. 4/22/26

Monitoring Policy Effectiveness Over Time

The SB 254 Study reveals the interconnected nature of the core issues that California faces relating to wildfire and natural catastrophe tail risk, where policy options addressing one issue often have consequential impacts on others. This is particularly true with respect to:

- Utility liability and associated ratepayer affordability;
- Insurance availability and affordability; and,
- How the cost of catastrophic wildfires is allocated and borne by stakeholders, including:
  - Survivors,
  - Insurers and policyholders,
  - Utilities and ratepayers, and
  - Taxpayers and the State of California as a whole.

A more holistic statewide resiliency framework can track policy performance and provide clearer signals for when to adjust course. Once policy decisions are made, the State should monitor impacts across communities, utilities, insurance markets, and infrastructure to maintain situational awareness and ensure policies are delivering intended resilience benefits.

Implementation works best through a combination of incentives and accountability. A statewide resilience framework—supported by a small set of clear, outcome-oriented metrics—creates a consistent way to measure progress. Monitoring progress over time can be aided by documenting the State's long-range goals and objectives, including the key results that policymakers seek to achieve. A sample vision-based statement of long-range natural catastrophe resiliency framed around potential policy outcomes was developed as part of the Study and is set forth below. In addition to acting as a tracking tool to measure progress, the development of this type of documented strategy can be used in monitoring policy effectiveness, to help provide early indications of system-level resilience and vulnerability, and guide future planning, budgeting, and legislative action.

Regular public reporting can strengthen transparency and engagement. Benchmarking communities against one another and against peer cities introduces productive comparison and highlights where additional support or intervention is needed. Similar approaches can be applied to buildings and infrastructure to illuminate strengths and gaps.

Durability can come from embedding this monitoring cycle into the State's governance processes and empowering communities as long-term partners. With consistent data, clear incentives, and structured opportunities to adjust, California can implement policies that evolve with changing conditions and steadily improve statewide resilience.

Vision for a More Resilient California

Objective 1: Reliable, financially strong utilities. Key results:

- Affordable energy
- Safe infrastructure and operations
- Investible IOUs, attractive to investors and lenders that provide capital support for operations and safety improvements
- Supportive of State's climate and economic goals

Objective 2: Robust, accessible insurance market. Key results:

- Increased access to insurance in all risk territories
- Competitive rates reflective of risk
- Rate adequacy
- Fluid, responsive and timely rate regulation system (Functional rate regulatory system able to adapt rates to rapidly changing risks)
- Appropriate coverage (address underinsurance & uninsurance)
- Appropriately sized residual market (CA FAIR Plan depopulation)
- Resources to manage the tail risk (infrequent but high severity events like wildfires, earthquake, and floods)
- Prompt and fair claims handling

Objective 3: Resilient communities. Key results:

- Funding to undertake mitigation-at-scale
- Additional Resources to do mitigation work (standards, workforce, training, supplies to do mitigation)
- Able to measure the risk reduction over time
- Ability to get credit for risk reduction in insurance rates
- Community accountability for collective risk reduction efforts (Community Wildfire Plans)
- A recovery coordination structure to provide faster and better outcomes for communities and survivors

Closing

Our changing climate and land-use patterns are forcing all of society to confront risk in a new and systemic way—and to rethink the very architecture of resilience. Individual actions—retrofitting homes, shifting to cleaner transportation, installing solar—matter, but collective action matters more.

This Report offers a clearer picture of California's expected future losses and the opportunities for statewide risk reduction from wildfires, and other perils, in an increasingly volatile environmental future. The multisystem analysis presented in the SB 254 Study underscores the need for a durable, forward-looking resilience foundation—one that aligns State policy, investment, and governance around long-term risk reduction. The Policy Pathways and strategies presented here reflect the Study's best understanding of the choices that will enable California to strengthen its catastrophe resilience over time. Together, they offer a roadmap for sustained, statewide progress built on consistent direction, coordinated action, and a shared commitment to reducing risk across communities, infrastructure, utilities, and markets.

Because wildfire and other natural hazards are collective action problems, policy solutions and their implementation require sustained, structured engagement for collaboration, feedback, and refinement. Continued, meaningful stakeholder engagement—across agencies, communities, Tribes, utilities, insurers, and local governments—is essential for building shared ownership, adapting to changing conditions, and ensuring that the State's resilience strategy remains effective over time.

This page is intentionally left blank.

Appendix A: List of Contributing Organizations

Affordable Energy Campaign
After the Fire
Agricultural Energy Consumers Association (AECA)
Alameda Municipal Power
Allotrope Cellulosic Development Company (ACDC)
American Clean Power (ACP) California
American Property Casualty Insurance Association (APCIA)
Association of California Water Agencies (ACWA)
ATSM-Property Resilience Assessment
Blue Forest
BofA Securities, Inc.
Braun Blaising & Wynne P.C.
Burbank Housing
California Alliance for Community Energy (CACE)
California Conservation Corps Foundation (CCCF)
California Fair Access to Insurance Requirements (FAIR) Plan
California Farm Bureau
California Fire Chiefs Association
California Fire Safe Council (CFSC)
California Forward
California Municipal Utilities Association (CMUA)
California Organized Investor Network (COIN)
California State Association of Counties (CSAC)
California Water Association (CWA)
CalMutuals JPRIMA
Carnegie Endowment
Citi Institutional Investors
Climate and Community Institute
Coalition for Sustainable Flood Insurance (CSFI)
Colorado State University
Community Wildfire Organization
Community Wildfire Resilience Workgroup
Consumer Attorneys of California (CAOC)
Consumer Federation of America
Consumer Watchdog
County of Los Angeles
CSAA Insurance Group
Delos Insurance
Eaton Fire Residents United (EFRU)
Eaton Fire Survivors Network (ESFN)
Environmental Defense Fund (EDF)
Faith Electric
Farmers Insurance
Filsinger Energy Partners
Fire Districts Association of California
Fire Safe Marin
Fire Safety Research Institute-Underwriters Laboratories (FSRI-UL)
FireAside
Firescape
Fitch
Frontline Wildfire
FutureProof
Golden State Power Cooperative
Government Finance Officers Association
Governor's Wildfire and Forest Resilience Task Force
Greenthread
Gridworks
Guidehouse
Hueston Hennigan
IND Technology
Independent Institute
Insurance for Good
Insurance Institute for Business & Home Safety (IBHS)
JAMS
Jeffries
Lakeside Fire Protection District
League of California Cities (Cal Cities)
Lendistry
Liberty Mutual
Liberty Utilities

Local Initiatives Support Corporation Green (LISC Green)
Los Angeles Department of Water and Power (LADWP)
Marin Independent Journal
Marin Wildfire Prevention Authority
Mariposa Resource Conservation District
Matador Fire
McKinsey & Company
McNicholas & McNicholas LLP
Megafire Action
Mercury Insurance
Milken Institute
Milliman, Inc.
Moody's
Mosaic Solutions & Advocacy
Munger Tolles & Olson LLP
Murrieta Fire and Rescue
Natural Resources Defense Council (NRDC)
Neptune Flood
NextEra Energy Transmission (NEET)
North Carolina Joint Underwriting Association/North Carolina Insurance Underwriting Association (NCJUA/NCIUA)
Northern California Power Agency
Pacific Association of Domestic Insurance Companies (PADIC)
Pacific Gas & Electric (PG&E)
Pali Strong Foundation
Paradise Irrigation District
Personal Insurance Federation of California (PIFC)
Political Solutions
Probable Futures
Property Insurance Plans Service Office (PIPSO)
Public Advocates Office within CPUC
Putting California's Assets to Work
Raymond James
Rebuild Paradise
Reclaim our Power! Utility Justice Campaign
Redpill Group
Reinsurance Association of America (RAA)
Resilience Investments
Resources for the Future
Resources Legacy Fund
RockRose Risk
ROCKWOOL
Rural County Representatives of California (RCRC)
S&P Global
San Diego Gas & Electric
SCIRP - Southern California Ignition Reduction Program
Sempra
Sierra Business Council
Southern California Edison (SCE)
Southern California Gas Company
Southern California Public Power Authority (SCPPA)
Stanford University
State Farm Mutual Automobile Insurance Company
Swiss Re
Tahoe Fund
The Darwin Fund
The Moore Organizations
The Nature Conservancy (TNC)
The Utility Reform Network (TURN)
Town of Los Gatos
Truckee Donner Public Utility District
UCLA Luskin Center for Innovation
United Policyholders
University of Alabama
University of California Agriculture and Natural Resources (UCANR)
University of California, Berkeley
University of California, Davis
University of California, Santa Barbara
University of North Carolina
University of Wisconsin
Utility Wildfire Survivor Coalition
Vanderbilt University
Vibrant Planet
Wells Fargo
XyloPlan

Appendix B: List of Abbreviations

AB: California State Assembly Bill

AI: Artificial Intelligence

ALARP: As Low As Reasonably Practicable

ALE: Additional Living Expenses

ASRS: Aviation Safety Reporting System

CA: California

CAL FIRE: California Department of Forestry and Fire Protection

Cal OES: California Governor's Office of Emergency Services

CARE: California Alternate Rates for Energy

Cat Bond: Catastrophe Bond

CDI: California Department of Insurance

CEA: California Earthquake Authority

CEQA: California Environmental Quality Act

Continuation Account: SB 254 Continuation Account for the Wildfire Fund

CPUC: California Public Utilities Commission

CRA: Community Reinvestment Act

DIV: Diminution in Value

Energy Safety: California Office of Energy Infrastructure Safety

ERC: Extended Replacement Cost

FAIR Plan: California Fair Access to Insurance Requirements Plan

FEMA: Federal Emergency Management Agency

GGRF: Greenhouse Gas Reduction Fund

GRC: General Rate Case

IBHS: Institute for Business & Home Safety

IOU: Investor-Owned Utility

LA: Los Angeles

NASA: National Aeronautics and Space Administration

NBC: Non-bypassable charge

NEPA: National Environmental Policy Act

OEIS: California Office of Energy Infrastructure Safety, or "Energy Safety"

PACE: Property Assessed Clean Energy

PG&E: Pacific Gas & Electric

PNAS: Proceedings of the National Academy of Sciences

POU: Publicly Owned Utility

PSPS: Public Safety Power Shutoff

RDF: CPUC's Risk-Based Decision-Making Framework

Report (or SB 254 Study Report): Senate Bill 254 (2025) Natural Catastrophe Resiliency Study Report

SB: California State Senate Bill

SCE: Southern California Edison

SDG&E: San Diego Gas & Electric

SIS: Sustainable Insurance Strategy

SME: Subject Matter Expert

SMJU: Small and Multi-Jurisdictional Utility

Study (or SB 254 Study): Senate Bill 254 (2025) Natural Catastrophe Resiliency Study

Wildfire Fund (or Fund): Assembly Bill 1054 (2019) Wildfire Fund

WMP: Wildfire Mitigation Plan

WUI: Wildland–Urban Interface

ZIP: Zone Improvement Plan (postal code reference)

Appendix C: Glossary

Additional Living Expenses (ALE): Compensation that covers the increased cost of living elsewhere while a damaged home is repaired or rebuilt; commonly limited to 24-36 months under policies, with proposals to adjust for utility-caused events.

Admitted Insurer: An insurance company licensed by the California Department of Insurance (CDI) that is subject to rate and form regulation, participates in state guarantee funds, and must comply with Proposition 103 rate approval requirements.

Admitted market: Insurers licensed and regulated by the state.

Aggregate Liability Cap (or Per-Event Limit): A per-event ceiling on total payouts for wildfire claims, with potential backstops or proration mechanisms once the cap is reached.

As Low As Reasonably Practicable (ALARP): A risk tolerance concept referenced as a model for defining acceptable residual risk levels in high-hazard industries and proposed as a framework for electric utility wildfire risk management.

Backstop: State or government funding layer that covers catastrophic losses above a defined threshold.

Bioeconomy: Economic system that converts biomass into sustainable products supporting wildfire risk reduction and climate goals.

Build-Back-Better (BBB) Endorsement: An optional insurance policy endorsement that provides additional funds following a loss to rebuild to a higher standard of disaster resilience than required by current building codes.

Built Environment: Human-made or modified areas of varying densities where people live and work, encompassing buildings (e.g. homes) and infrastructure (e.g., roads, sewage and drainage systems, water systems, electrical systems).

California Alternate Rates for Energy (CARE): A California program that provides discounted utility rates for eligible low-income residential customers; relevant to how wildfire costs flow through bills.

California Environmental Quality Act (CEQA): A California statute that requires state and local agencies to evaluate and disclose the potential environmental impacts of proposed discretionary projects, consider feasible measures to avoid or reduce significant impacts, and inform the public and decisionmakers before approving a project.

California FAIR Plan Association (FAIR Plan): California's residual market insurer that provides basic dwelling fire and limited commercial insurance to insureds who cannot obtain coverage in the voluntary market.

Catastrophe Bond (Cat Bond): Capital-market instruments transferring catastrophe risk to investors in exchange for a potential loss of principal if a defined event occurs.

Catastrophe Modeling: Simulation of catastrophic events (such as wildfires, earthquakes, hurricanes) to estimate the frequency, severity, and spatial distribution of losses for use in pricing, capital management, and policy analysis.

Catastrophe Resiliency: Ability of communities, utilities, and markets to withstand and recover from disasters.

Chapter 7A (now Part 7) of the California Building Code: For purposes of this research paper refers to WUI building standards (e.g., ember resistant construction) cited as reducing losses.

Claimant: An individual, business, insurer, or public entity pursuing compensation from a utility for wildfire related losses.

Claim-Paying Capacity: The maximum amount of realizable assets a fund, insurer, or other obligated entity has available to pay claims, based on available capital, reinsurance, and financing mechanisms.

Community-Centered Wildfire Mitigation: An approach to wildfire risk reduction that focuses on coordinated, neighborhood- and community-scale actions, rather than relying primarily on individual property owners, to reduce the likelihood that wildfires ignite, spread, and become destructive urban conflagrations.

Community Wildfire Protection Plan (CWPP): Locally developed plan identifying wildfire hazards and prioritizing mitigation actions.

Conflagration: A large, uncontrollable fire that rapidly spreads from structure to structure in more densely populated areas, causing widespread destruction. Conditions that typically accompany a conflagration include drought; wind; ignition mechanism (often human-based); structure separation distances which can support fire propagation through radiant heat transmission; existing construction materials with little to no resistance to fire; and dense combustible elements surrounding and between structures.

Continuation Account (or SB 254 Continuation Account) of the Wildfire Fund: A segregated account within the Wildfire Fund created by SB 254 (2025) that may be available to pay claims arising from covered wildfires ignited on or after September 19, 2025.

Damages, Economic: Compensation for quantifiable financial losses (e.g., medical bills, lost wages, property damage) that can be documented through records or expert analysis.

Damages, Non-Economic: Monetary compensation awarded for intangible harms (e.g., pain, suffering, emotional distress, loss of use) that do not have a direct monetary value. Often subject to statutory caps or jurisdiction-specific limitations.

Damages, Punitive: Monetary awards intended to punish particularly egregious conduct (e.g., oppression, fraud, malice) and deter similar future behavior, awarded in addition to compensatory damages and typically requiring a higher evidentiary standard.

Deductible: Out-of-pocket amount paid before insurance coverage applies.

Defensible Space: Vegetation and fuel management that creates a buffer zone around structures designed to slow or stop the spread of fire, protect homes, and provide safe areas for firefighters. Defensible space can be classified into three zones: (1) Zone 0; (2) Zone 1; and (3) Zone 2.

Diminution-in-Value (DIV): The reduction in a property's fair market value due to damage.

Durability: Probability that a fund remains solvent over a defined time horizon.

Extended Replacement Cost (ERC) Coverage: An insurance provision allowing claim payments above the stated dwelling coverage limit—often 125% or 150%—to account for unexpectedly high rebuilding costs after a total loss.

Fire Victim Trust (PG&E): Trust created in PG&E's bankruptcy plan of reorganization to pay wildfire claims.

General Rate Case (GRC): A CPUC proceeding in which utilities seek approval for revenue requirements, including wildfire mitigation investments and operating costs.

Hazard Mitigation Plan: Formal planning documents developed by states, local governments, Tribes, or utilities that identify natural hazards, assess risks and vulnerabilities, and establish prioritized actions to reduce long-term loss of life, property damage, and economic disruption.

Indicated Rate: The premium level or rate change calculated by an insurer's actuarial analysis as necessary to cover expected losses, expenses, and a reasonable return on capital, based on current and forward-looking risk assumptions.

Insured Losses: The portion of total economic damages from a disaster that is covered and paid by insurance policies.

Inverse Condemnation: See Section 3 of the Report for a detailed discussion.

Investor-Owned Utilities (IOUs): Privately owned utilities regulated in California by the CPUC (e.g., PG&E, SCE, SDG&E).

Landscape Scale Vegetation Management: Fuel treatments (thinning, shaded fuel breaks, prescribed fire) to lower fire intensity/spread.

Mitigation: Actions to reduce hazard or risk, such as home hardening and vegetation management for wildfire risk. Also referred to in this report as "risk reduction" and "loss reduction."

Non-bypassable Charge (NBCs): Fees included in utility bills that all electric customers must pay. They are typically associated with costs related to maintaining the electric grid and funding public programs, such as ratepayer contributions to the Wildfire Fund and energy efficiency initiatives.

Non-Economic Damages: See Damages, Non-Economic.

Non-Renewal: The termination of an insurance policy at the end of its term initiated by the insurer, often used to reduce exposure in high-risk areas.

Operational Mitigations: Utility wildfire risk reduction measures that rely on changes to system operations rather than permanent infrastructure investment. In this report, operational mitigations primarily refer to practices such as Public Safety Power Shutoffs (PSPS) and Enhanced Powerline Safety Settings (EPSS), which can be deployed quickly and at relatively low cost to reduce ignition risk during high fire weather conditions, but which involve tradeoffs with electric service reliability and customer impacts.

Premium Tax: A tax levied on insurance premiums collected in California.

Proposition 103 (1988): California's Insurance Rate Reduction and Reform Act.

Protection Gap: Difference between total losses and insurance payouts. In this report, it can refer to the difference between total economic losses from wildfire and the portion covered by insurance.

Public Safety Power Shutoff (PSPS): Preemptive de-energization during extreme fire weather to lower the risk of ignition on affected circuits.

Publicly Owned Utilities (POUs): Municipal or public utility (e.g., LADWP).

Quota Share: Reinsurance agreement where both the primary insurer and reinsurer proportionately share a fixed percentage of both premiums and losses.

Ratepayer: In this Report, an electricity customer of a California electric utility who pays regulated utility rates and charges.

Reinsurance: Insurance purchased by insurers or catastrophe funds to transfer a portion of risk to other (re)insurers or capital markets.

Replacement Cost: The amount of money required to repair or replace damaged or destroyed property with new property of similar kind and quality, without deducting for depreciation.

Residual Market: A state-mandated insurer that provides coverage when admitted market insurers withdraw or restrict availability.

Residual Risk: Risk that remains even after extensive mitigations which cannot be fully eliminated.

Risk Capital: Capital set aside or committed to absorb potential losses arising from uncertain, low-probability, but high-severity events, such as catastrophic wildfires. In this report, risk capital refers to financial resources—provided by insurers, utilities, investors, ratepayers, or the state—that are explicitly designated to bear catastrophe risk and protect system stability, credit quality, and timely compensation when losses occur.

Risk Scaling: An analytical and policy approach used to adjust how risks are weighted and evaluated based on their probability and potential consequences, particularly to ensure that low-probability, high-consequence events (i.e., tail risks) receive appropriate emphasis in decision making.

Risk Transfer: The shifting of financial risk from one entity to another through mechanisms such as reinsurance, catastrophe bonds, or parametric coverage.

Safer from Wildfires: California Department of Insurance Regulation 2644.9 effective from October 14, 2022.

Strict Liability: Legal concept imposing responsibility for damages without proof of fault or negligence.

Subrogation: The legal right of an insurer to pursue a third party that caused an insurance loss to the insured; to recover the amount the insurer paid on the claim.

Surface Fuels: Vegetation and combustible materials that lie on or near the ground surface and are most readily available to burn during a wildfire. Surface fuels typically include grasses, leaves, needles, small branches, downed woody debris, shrubs, mulch, and low-lying vegetation.

Surplus Line Market/Insurers: The segment of the insurance market composed of non-admitted insurers.

Tail-Risk: The risk of rare, low frequency but high severity loss events that occur in the extreme ends (“tails”) of a loss distribution and can produce losses far larger than typical or expected outcomes. In insurance, tail risk is associated with catastrophic events that drive a disproportionate share of total claims.

Tort: A civil wrong leading to liability for damages (e.g., negligence, nuisance, trespass).

Underinsurance: A condition in which insurance coverage limits are insufficient to fully repair or replace property after a loss.

Urban Conflagration: A large-scale wildfire event that spreads into densely built areas, causing widespread structural damage and exceptionally high insured losses.

Utility Ignitions: Wildfires that originate from the operation, failure, or interaction of electric or gas utility infrastructure with the surrounding environment.

Vegetation Management: The intentional treatment, removal, or modification of combustible plants or dead plant material to reduce wildfire intensity, slow fire spread, and/or lower the likelihood that flames or embers ignite nearby structures. Examples of vegetation management activities can include mechanical thinning, hand thinning, prescribed or cultural burns, pile burning, livestock grazing, herbicide application, or other activities.

Wildland–Urban Interface (WUI): The zone of transition between unoccupied land and urban development. It is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

Wildfire: A fire that burns uncontrolled, in vegetated and WUI areas, and may threaten people, structures, or communities when it transitions into the built environment.

Wildfire Fund (WF): An insurance fund established under AB 1054 (2019) to reimburse participating utilities for eligible claims from utility-ignited wildfires.

Wildfire Mitigation Plans (WMPs): State-required plans detailing how utilities will reduce wildfire ignition risk. In California, electric utilities are legally required to prepare, submit, and implement Wildfire Mitigation Plans (WMPs) to reduce the risk that utility infrastructure ignites wildfires. This requirement was established primarily by Senate Bill 901 (2018) and strengthened by AB 1054 (2019) and is codified in Public Utilities Code §§ 8386–8389.

WUI Community: A populated area within the WUI where groups of structures, infrastructure, people, and shared surroundings collectively face some level of exposure and vulnerability to wildfire.

WUI Conflagration Index: A composite, community-level risk metric to estimate the likelihood and potential severity of structure-to-structure wildfire spread—that is, urban or suburban conflagration within the WUI.

Zone 0/Zone Zero: An area of defensible space within the first five feet of a home or structure.

Zone 1: An area of defensible space extending from five to thirty feet (or to the property line, whichever comes first) around a home or structure.

Zone 2: An area of defensible space extending from thirty feet to one hundred feet around a home or structure, but not beyond the property line.

Appendix D: Catastrophe Risk Modeling Definitions, Assumptions, Footnotes, and Disclaimers

Catastrophe modeling for the SB 254 study focused on identifying and estimating the capital required to finance durable solutions for all of California's wildfire catastrophe losses when they happen, not just IOU-caused wildfires. It also tried to look at more transformational ways that capital could be allocated to potentially achieve a wider array of natural catastrophe resiliency objectives for California. Definitions, assumptions, footnotes and disclaimers about the catastrophe risk modeling methodology and tools are provided in the following sections.

Modeling Definitions and Assumptions

Key Definitions

Durability is defined as the ability of a catastrophe financing structure to be able to remain solvent not only for singular large events, but also for years with multiple events, and for sequences of years with multiple events. A fund must be able not only to pay for a single large event, but also to remain capable of paying for subsequent large events that may occur in close succession. A fund that can respond once but is then effectively exhausted is not durable over time. Durability is therefore critical, as it provides a way to assess whether the committed funding sources are likely to be sufficient to meet losses on an ongoing, multi-event basis. For this study, the foundation of analysis considers fund durability over 20 years and shows what funding is necessary to ensure a funding structure has a 75% probability of being solvent over the 20 years. The probability is determined by using thousands of simulations of realistic 20-year loss patterns and evaluating how much funding is needed so that the fund is solvent for 75% of the 20-year simulations.

Return period: This is the number of years one would need to experience (or simulate) before having a reasonable expectation (at least one simulated year) of the loss. i.e. a 1-in-100-year return period for a total loss amount in a year is the amount for which there is only a 1% chance of exceedance in the next year.

End of Year Capital: End of year (EOY) capital is shown on the left axis of the model output charts. This is the amount of callable funding (also referred to as claims paying capacity) that is deemed available at the end of each year. Where the EOY capital is below zero, this is deemed to be terminal to the fund. Funding would need to be sourced from another solution and therefore only the loss in the final year is shown. The ultimate amount of cumulative losses to the California population, insured, uninsured, electric utilities and insurers post-fund insolvency is therefore in excess of this graphed fund inadequacy. Where pertinent, additional charts demonstrate this effect.

Key Assumptions for the Catastrophe Modeling

Catastrophe Models

The base model output is a blend of third-party vendor models and empirical observations. Consideration was given to recent empirical experience, but the longer-term views of the models were given greater weight.

The third-party models were run based upon Aon proprietary industry exposure databases representing insurable property exposure for the year 2025.

Liability Modeling

Some vendor models attribute causation of losses to electric utilities based upon the location of the ignition. For models that do not provide a utility attribution, Aon's own view of the probability of attribution was used. This is also based upon the location of ignition in proximity to transmission and distribution assets and the size of property damage created.

Once attributed to electric utilities, the extent of losses are modeled using various industry sources. The extent of these economic losses are translated into settled values ("subrogated" from the fund in question) and a portion of the settlements that represents the noneconomic damages and legal fees is estimated.

These settlement assumptions place reliance upon expert judgment of other SB254 Study team members who have line of sight to prior settlement data. Given the limited nature of this data, model results are therefore based upon significant judgment beyond the frequency and severity of wildfire events. Actual results could vary greatly from modeled assumptions, and the sensitivity of model results to these assumptions should be noted.

Impact of Liability Reforms

Similarly other SB 254 Study team members offered estimates of the impact of liability reforms upon the aforementioned settled values of claims brought against the utilities and compensated by the modeled funds.

Mitigation Modeling

Another key assumption in some of the models is the impact of mitigation efforts on the severity of wildfire events. The potential impact of mitigation efforts to use in the modeling was suggested by research conducted by the mitigation workstream.

Inflation

In this model, a base level of inflation is modeled as losses are projected out into the future; the potential growth of the population and residential structures was considered however a long-term inflation factor of 3-4% was settled upon.

Interest Rate for Discounting and Amortization

The actual source of the cashflows is not explicitly modeled but with the knowledge that some of contributions to the current Wildfire Fund are due from the IOUs and are not guaranteed, a rate of approximately 5% was used to discount future cashflows. This was benchmarked upon a 10-year BBB yield.

Investment Rate

For the Wildfire Fund modeling options, if funds were immediately available these would be invested in secure investments. The cost of borrowing would likely be more than the investment return. In the past, funding has therefore been structured as being callable. The investment rate in the modeling uses the same 5% rate as is used to discount potential future cash flows for simplicity.

Capital and Cost of Capital

For the Wildfire Fund modeling options, as stated, funding sources are deemed to be callable securitizations of future cashflows which are discounted at the aforementioned rate. The amount of callable funding is assumed to be drawn upon in incremental amounts to pay losses and expenses to the Fund.

Risk Transfer

Risk transfer pricing estimates are based upon multiples of premium to expected loss inferred from recent transactions with similar peril aggregation characteristics. Actual risk transfer prices will vary based on the unique direct and indirect risk impact from commercial, political and physical characteristics influencing the insurer's operational performance volatility, all of which will be subject to the market risk assumption appetite dynamics at the time of the transaction.

Footnotes and Disclaimers on Catastrophe Modeling

Footnotes on Model Output

All modeled estimates presented in this Report are point estimates for ease of comprehension but due to the inherent uncertainty of statistical estimation and a reliance on expert judgement for key assumptions, they should be considered as points within a range of other reasonable estimates. However, the primary underlying modeled risk of wildfire is common to all result sets; therefore, model results are useful to make reasonable conclusions about the relativity of different options

Risk transfer pricing estimates are based upon multiples of premium to expected loss inferred from recent transactions with similar peril aggregation characteristics. Actual risk transfer prices will vary based on the unique direct and Indirect risk impact from commercial, political and physical characteristics influencing the insurer's operational performance volatility all of which will be subject to the market risk assumption appetite dynamics at the time of the transaction.

Limitations Regarding Use of Catastrophe Models

This report includes information that is output from catastrophe models of AIR Worldwide Corporation (Verisk), CoreLogic and Moody's RMS. The information from the models is provided by Aon Benfield Inc. (Aon) under the terms of its license agreements with Verisk, CoreLogic and RMS.

The results in this report from Verisk, CoreLogic, and Moody's RMS are the products of the exposures modeled, the financial assumptions made concerning insurance terms such as deductibles and limits, and the risk models that project the dollars of damage that may be caused by defined catastrophe perils. Aon recommends that the results from these models in this report not be relied upon in isolation when making decisions that may affect the underwriting appetite, rate adequacy or solvency of the company.

The Verisk, CoreLogic, and Moody's RMS models are based on scientific data, mathematical and empirical models, and the experience of engineering, geological, meteorological and terrorism experts. Calibration of the models using actual loss experience is based on very sparse data, and material inaccuracies in these models are possible. The loss probabilities generated by the models are not predictive of future hurricanes, other windstorms, or earthquakes or other natural or man-made catastrophes, but provide estimates of the magnitude of losses that may occur in the event of such catastrophes.

Aon makes no warranty about the accuracy of the Verisk, CoreLogic, and Moody's RMS models and has made no attempt to independently verify them. Aon will not be liable for any loss or damage arising from or related to any use of, or decisions based upon, data developed using the models of Verisk, CoreLogic, and Moody's RMS, including without limitation special, indirect or consequential damages.