NARUC
National Association of Regulatory Utility Commissioners

State Spotlight on Resilience:

The Washington Utilities and Transportation Commission's Wildfire Mitigation Plans

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Key Takeaways

The Growing Threat of Wildfires: Wildfires are becoming more frequent and severe in the Pacific Northwest, increasing risk to electric infrastructure and utility operations. Fire-prone weather conditions and aging infrastructure increase ignition likelihood, making proactive mitigation strategies essential.

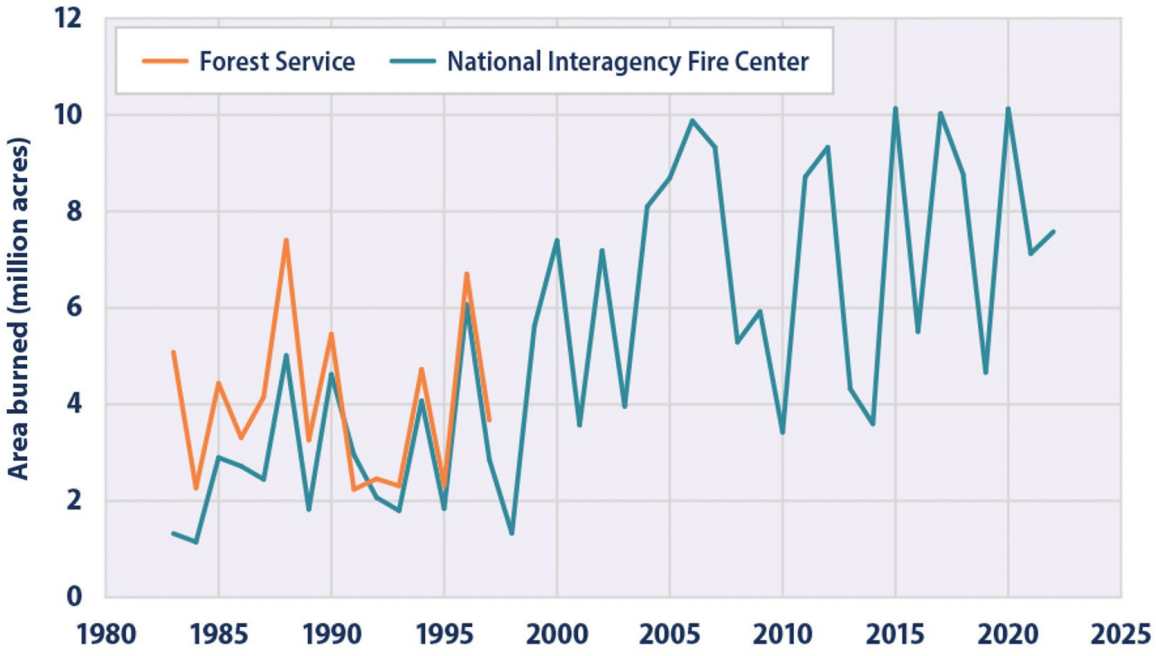
Wildfire Mitigation Plans as a Resilience Strategy: Mitigation plans help utilities reduce fire risk by implementing measures such as vegetation management, infrastructure upgrades, and operational improvements. Such measures can reduce ignition risk, quicken response times, and enhance system-wide resilience, ultimately protecting communities and curtailing long-term costs.

Continuous Improvement and Coordination: The Washington Utilities and Transportation Commission (UTC) conducts preseason and postseason meetings with utilities and collaborates with the Department of Natural Resources to refine wildfire mitigation strategies. Their commitment to review and refinement allows for adjustments based on evolving risks and lessons learned.

Section 1: Overview

Wildfires present a significant risk to critical infrastructure, endangering energy systems by damaging transmission lines and imposing a variety of costs on utilities and their customers. Wildfires have increased nationally in both extent[1] and intensity[2] as vegetation conditions become drier and wind patterns[3] become more turbulent. Aging infrastructure[4] may also cause transmission lines to ignite vegetation.

Figure 1: Wildfire Extent in the United States, 1983–2022



Data sources:

- NIFC (National Interagency Fire Center). (2024). *Total wildland fires and acres (1983–2023).* [Data set]. Retrieved February 21, 2024, from www.nifc.gov/fireInfo/fireInfo_stats_totalFires.html
- Short, K. C. (2015). Sources and implications of bias and uncertainty in a century of US wildfire activity data. *International Journal of Wildland Fire, 24*(7), 883–891. https://doi.org/10.1071/WF14190

For more information, visit U.S. EPA's "Climate Change Indicators in the United States" at www.epa.gov/climate-indicators.

For utilities, the financial risks of wildfires are compounded by challenges such as weakened credit quality[5], increased litigation exposure[6], and rising insurance premiums[7]. Public service commissions are navigating the balance between requiring utilities to invest in wildfire mitigation while ensuring that ratepayers are not disproportionately burdened by these costs. Wildfire mitigation plans are critical in managing these risks.

Section 2: Impact of Wildfires in Washington State

Wildfires have far-reaching consequences that extend beyond environmental destruction and utility service disruption, inflicting devastating economic and social impacts on communities and ratepayers. In Washington state, an analysis of the 2014 Carlton Complex Fire published by the Western Forestry Leadership Coalition found that after spending $68 million on suppression efforts across the 256 thousand acres burned, the immediate property losses were as high as $110 million, not including the longer-term economic impacts up to $120 million[8]. Even though $98 million was paid out for damage to 353 homes, it is probable that many of those homes were underinsured [9].

Figure 2

Carlton Complex Fire Washington	2014	256,108	$68 million *(WFDSS)*	• **$98 million** in insured losses (over 353 homes) • **$10 million** utility repair costs • **$1.6 million** damage to orchards • **up to $50 million** in long-term cost for livestock industry • **$70 million** estimated "annual secondary economic losses"	• Damage to 366 miles of power lines • Agricultural damage to fruit trees, irrigation systems, fences and grazing land • Two major highways closed from fire, blockages from slides • Fish habitat impacted

The Insurance Information Institute's wildfire statistics webpage names Washington in the top 10 states with nearly 60,000 homes at risk for extreme wildfire and over 150,000 acres burned in 2023[10]. In the 2019 Wildfire Strategic Plan, Washington State Department of Natural Resources (DNR) noted that Washington had 4,500 square miles of wildland urban interface, representing an area the size of Connecticut, and continues to see increasing development in those higher-risk areas throughout the state[11]. This highlights that utility regulators in the State of Washington are wrestling with some of the most severe wildfire risks across the nation and emphasizes the growing urgency for wildfire risk reduction measures.

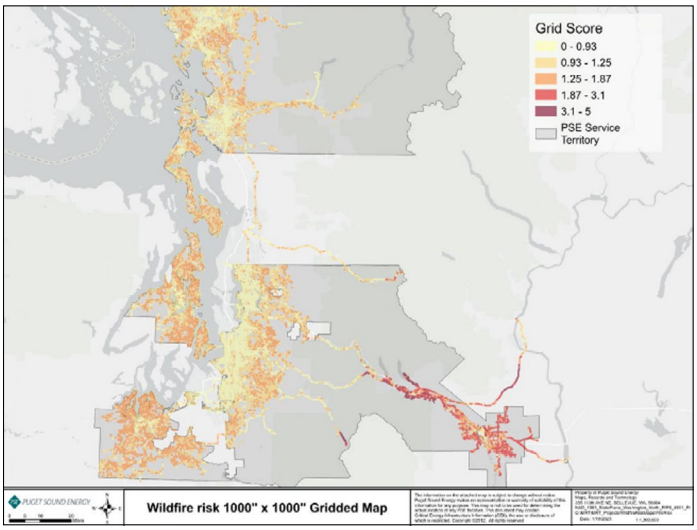
Section 3: Wildfire Mitigation Plans as a Strategy

Ensuring energy resilience is crucial for Washington State as wildfires continue to pose a significant threat to communities, natural resources, and critical infrastructure. To address this, the state requires utilities to submit wildfire mitigation plans to the UTC. These plans outline a utility's intentions to reduce ignition risks through vegetation management, risk assessment, infrastructure hardening, public safety power shutoff (PSPS) procedures, and more. By implementing comprehensive strategies, wildfire mitigation plans can minimize the extensive damage, service disruption, and massive financial strain caused by wildfire.

One example of the kind of analysis found in a wildfire mitigation plan is the following map from Puget Sound Energy.[12] It shows the results of PSE's Gridded Risk Model, which quantifies individual circuit risk by considering the likelihood of a wildfire event occurring in a particular area in PSE's service territory and multiplying that figure by the event's anticipated impact. To perform this modeling, PSE uses publicly available datasets like the DNR's Wildland Urban Interface, the USFS Wildland Hazard Potential map and the USFS Wildfire Burn Probability map.

PSE then combines these datasets with their grid infrastructure attributes and risk assessment. Each overhead circuit's conductor type is given a rating assessing their risk of potential fault, based on their material, size, and level of insulation. This combined data produces a wildfire risk score that is normalized to a five-point scale and shown on the Gridded Risk Map below. The Gridded Risk Model is updated annually and guides PSE's design and construction methodologies.

Figure 3



This type of analysis provides valuable insights that help identify vital information that can inform and prioritize mitigation efforts. Incorporating diverse analyses like PSE's Gridded Risk Model and integrating advanced technologies and data creates a robust plan that provides a targeted and efficient response to escalating wildfire threats.

Section 4: Interview with the UTC

NOTE: The following text is a narrative interview, and responses reflect only the work, views and opinions of the individuals interviewed.

1. How do you think the increasing wildfire risk has changed Washington's grid resilience planning activities? What is the UTC role in Washington's grid resilience planning?

The UTC regulates investor-owned utilities (IOUs) in the state, which serve 45 percent of the state's electric customers, but not the consumer-owned utilities (COUs), which serve the remaining 55 percent of customers. COUs are self-governed, but the Department of Commerce does have a role in working with the COUs, including through the state's Energy Office, and its Emergency Management Division.

The increasing risk of wildfire events and risk of losses to IOUs and communities in Washington from those events has attracted increased attention by the UTC to wildfire planning, mitigation, and associated costs to customers. Utilities in the state are required to develop plans using guidelines set by the State Department of Natural Resources (DNR) in RCW 76.04.185. The UTC is required by law to "acknowledge" the IOU wildfire mitigation plans; The UTC had to decide the meaning of "acknowledgement" in this case of first impression (see below).

Additionally, the UTC must determine which of the costs associated with IOU wildfire plans, prevention, mitigation, response, education and community coordination can be recovered by rate payers. Recovery must be fair, just, reasonable and equitable. The investments for prevention, mitigation and other wildfire related activities may also provide benefits for other resiliency risks (such as, storm damage or cyber events), such that several challenges may well be simultaneously addressed by the same measures.

2. What role does the Washington DNR's statutory framework play in shaping the wildfire mitigation plans submitted to the UTC? What is the UTC looking for when reviewing the submitted Wildfire Mitigation Plans?

As set forth in RCW 76.04.185[13], the review of Wildfire Mitigation Plans (WMPs) must recognize that utilities have varying topography, population, and vegetation in their service areas and the Plans must be designed to fit site-specific circumstances. The Plans must also demonstrate how the utility will address or approach:

- Vegetation management;
- Infrastructure inspection and maintenance;
- Modifications or updates to facilities to minimize fire risk to incorporate cost- effective measures to minimize risk;
- Preventative programs;
- Operational Procedures; and
- Communication plans for addressing wildfire safety and risk mitigation.

Washington's Department of Natural Resources has been involved in efforts to prevent and suppress wildfires in the state since at least the late 1950s. These efforts appear to have accelerated around the middle of the last decade.

The UTC began focusing on utility efforts to address wildfire risk in 2021 through Docket U-210254[14], requiring utilities to file wildfire plans and holding workshops to discuss those plans. The last presentations by utilities in this series of recessed open meetings was in July 2024.

The legislature provided statutory direction to both DNR and the UTC effective July 23, 2023. Under the law, DNR was required to provide a format and necessary elements for all utilities in Washington to include in a plan by April 1, 2024. Each of the UTC regulated electric utilities submitted plans to DNR's Utility Wildfire Prevention Advisory Committee by October 31, 2024, as required, before presenting them to the UTC for acknowledgement. The WMPs of the IOUs must be updated and submitted annually.

The UTC determined that, to decide to acknowledge the WMPs in the statute means, specifically, that the UTC has been charged to confirm whether the plans of the IOUs in Washington contain the required elements as described by DNR's WMP template. There were no on-site inspections, but the Commission Staff (Staff) did interview utility teams in charge of implementing the WMPs. Staff checked the Plans submitted by the IOUs against the DNR template. Staff took into consideration that DNR had already reviewed and accepted the WMPs in recommending a compliance finding to the Commission. The UTC confirmed that all three IOUs met the statutory requirements in substance in its December 5, 2024, open meeting (Dockets 24083115, 240832[16] and 240836[17]). However, the Commission noted that all three IOUs had not included information concerning costs as required by the statute, so it directed them to do so in the future. The Commission also directed the IOUs to report on the annual number of ignition incidents.

3. UTC meets with their regulated utilities before the wildfire season and after the wildfire season. What is learned from these meetings? How do these meetings impact collaboration overall? Are these meetings formal or informal? Staff- or commission-led?

The UTC has requested that the utilities present wildfire plans in both recessed open meetings and regularly scheduled open meetings. The UTC has typically issued a public notice of the work session, requesting the utilities to file their plans, together with responses to specific questions about their planning efforts. Over time, the UTC has held sessions before the wildfire season or after but is working to develop a cadence for meetings prior to the season that would include a discussion of learning from the last season, as well as industry practice. The staff of the Policy Division typically lead these sessions, but they have been led in the past by Regulatory Services Staff or jointly by Policy and Regulatory Services. There is generally no collaboration with organizations other than the utilities or the Emergency Management Division.

4. How do the UTC staff and/or commissioners prepare for the preseason and postseason meetings? How do you make these meetings successful from a regulatory perspective?

As discussed above, these meetings will likely now be scheduled prior to the wildfire season, after the utilities have completed their wildfire plans or any updates to their plans. As discussed above, the Policy and Regulatory Services Staff will coordinate on topics to address in the work session, asking commissioners for their thoughts on topics or questions. If certain events occurred in Washington or other states that require additional focus, these topics will also be the subject of the conversation.

The meetings include a combination of presentation, Q&A from the commissioners, staff, and those in attendance, as well as discussion with the utilities presenting. As wildfire mitigation, response, and community engagement are a continually developing area, the Q&A and discussion are what make these sessions successful for the UTC and the utilities.

5. Could you describe how lessons learned from postseason reviews influence updates to utility wildfire mitigation strategies? Examples?

The UTC's review of the prior fire season is primarily focused on ensuring each utility has evaluated its performance and the plan's performance over the last fire season and adjusted plans and planned actions for the next fire season, considering general consensus practices from other utilities. For example, as

utilities gain familiarity with mitigation technology and tools such as cameras for detection, LIDAR and AI for vegetation management, and community engagement practices for preparing impacted communities, these technologies and practices can be improved and made more effective. As the UTC is modifying its review from a post season review to a preseason review, with a discussion of changes to plans and practices following the last fire season, this will be a continual learning process for the utilities and the UTC.

6. What challenges has UTC encountered in ensuring compliance with wildfire mitigation requirements? Examples?

After having reviewed several years of wildfire plans, the plans are getting more complex as are the basis for the utilities seeking cost recovery for the plans. Thus, in our reviews, the UTC must be clear that in finding the plans meet statutory requirements, we are not approving the elements of the plan for cost recovery and that the utilities must still demonstrate the expenses under the plan are prudent for cost recovery.

In proceedings to determine cost recovery for utility wildfire costs, the UTC staff, and the Commissioners will consider and balance the costs and benefits of particular mitigation measures the utility adopts and the degree or speed of application of those measures (e.g., enhanced vegetation management, undergrounding, weather monitoring / situational awareness, increased sensitivity of changes in system operating parameters, and public safety power shutoffs).

In addition to wildfire mitigation plans, are there other initiatives the UTC is pursuing to enhance energy resilience and protect critical infrastructure from wildfire impacts?

The UTC holds open meetings before and after each wildfire season to maintain consistent communication with utilities and interested parties on developments to emergency planning and response. During open meetings the UTC asks questions about wildfire mitigation efforts and hears from the utilities about future potential plan updates.

7. What stakeholders outside of the UTC and their regulated utilities contribute to Washington's wildfire mitigation and resilience efforts? What are the mechanisms for collaboration with other stakeholders?

In 2024 the Legislature tasked the Department of Natural Resources with assembling a working group, the Utility Wildland Fire Prevention Advisory Committee, to establish a recommended list of elements that all utility wildfire mitigation plans must include:

- The Washington State Military Department
- The Washington State Department of Commerce – Emergency Management Division
- Washington Department of Natural Resources
- Consumer Owned Utilities: Public utility districts, rural coops, and municipal utilities, as well as BPA
- Members of the public at large, either individually or collectively
- Communities and political entities
- Firefighting organizations
- First responders
- Legislators
- Media

UTC's workshops on utility wildfire plans are open to the public and held as recessed open meetings. Interested stakeholders may participate in the workshop by listening, and making verbal or written comments. The UTC has not required the utilities to hold stakeholder coordination sessions as the utilities do in developing integrated resource plans, conservation plans, or transportation electrification plans. However, the UTC has been clear that the utilities' plans must include a process for coordinating with communities and first responders in developing their mitigation efforts, communication plans, community engagement and in developing public safety power shut off plans.

Section 5: Conclusion

Wildfires are a growing challenge to Washington's electric utilities, threatening infrastructure, financial stability, and public safety. The Washington UTC plays a central role in ensuring that investor-owned utilities develop and implement effective wildfire mitigation plans that align with state requirements while balancing costs to ratepayers. Through ongoing reviews, preseason and postseason meetings, and coordination with other state agencies, the UTC continuously refines its approach to wildfire mitigation. As wildfire risks evolve, so must the strategies employed to enhance grid resilience, protect communities, and strengthen the long-term reliability and resilience of Washington's energy system.

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Endnotes

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3 The Unpredictable Force: Exploring the Impact of Wind on Wildfire Spread, Delvin, Kestrel Instruments, June 2023.

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7 Wildfire Threats Make Utilities Uninsurable in US West, Chediak, Financial Post, June 2024.

8 The True Cost of Wildfire in the Western U.S, Western Forestry Leadership Coalition, 2022, page 52.

9 According to a review by the Washington Insurance Commissioner of the 2023 Gray and Oregon Road fires which destroyed 366 homes, many of the homeowners did not have enough insurance coverage to replace their homes. Washington Claim Analysis Finds Most Homes in 2023 Wildfire Were Under-Insured, October 2024.

10 Facts + Statistics: Wildfires, Insurance Information Institute.

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13 RCW 76.04.185: Electric utility wildfire mitigation plan.

14 Docket U-210254, Washington Utilities and Transportation Commission

15 Dockets 240831, Washington Utilities and Transportation Commission

16 Docket 240832, Washington Utilities and Transportation Commission

17 Docket 240836, Washington Utilities and Transportation Commission