

Regulatory Options to Combat the Spreading Risk of Wildfires

National Conference of Regulatory Attorneys

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Preventing and Mitigating Wildfire Risk

- Background
 - Oregon PUC and role with utility safety
- Physical Risk of Wildfires
 - Call to Action Growing Risk
 - Wildfire Mitigation Strategies
- Financial Risks of Wildfires
 - Impacts Legal Liability
 - Legislative Responses

Oregon PUC

Economic regulator of IOUs:

• Electric – Portland General Electric, PacifiCorp, and Idaho Power

Safety Regulator of all electric utilities, including 38 COUs:

- Cooperatives
- Municipalities
- People's Utility Districts

3 full-time Commissioners – 135 FTE



PUC's Safety Role

Requires utilities to proactively manage all safety and reliability risks (wildfire, earthquake, cybersecurity threats)

Safety Rules

- National Electric Safety Code
- Minimum vegetation clearance requirements

Inspection Team

- Conducts audits in field for compliance
- Trust but verify



Utility Infrastructure Risk

Ignition Causes

Downed Power Lines:

Power lines can fall onto vegetation, creating an arcing hazard or igniting nearby materials.

Arcing:

Lines can arc (release sparks) when in contact with vegetation, debris, or other objects

Overheating:

Overheated lines can melt or ignite nearby dry vegetation, especially in hot and dry weather.

Contributing Factors

Aging Infrastructure:

Many systems are old and not be equipped with modern safety features or monitoring systems

Negligent Maintenance:

Inadequate maintenance: poor vegetation management and lack of equipment inspections

Climate and Weather:

Increased temperatures and drought; severe dry and windy weather

Land Use/Forest Management:

Wildlands-Urban Interface; Fuel Loads, Right of Way



Call to Action – Camp Fire, Paradise CA

November 2018 – Red Flag Weather

- Excessive precipitation (increased fuels/) followed by drought (<1" rain since May)
- Extremely low humidity 11% Sustained winds 20-30mph Gusts up to 60mph
- Poorly maintained transmission line with worn equipment





Pacific Gas and Electric Transmission Line

- 6:20am: Worn hook failed, causing transmission line to fall and contact tower
- Electric arc reached 5,000 to 10,000 °F
- Melted metal components fell into brush
- CalFire on site 6:44am noted difficulty accessing
- By 7:00am burned 200-300 acres
- By 7:50am fires reported in Paradise 7 miles from ignition







Paradise CA



- Burned 153,336 acres over 2 weeks
- 85 fatalities, and destroyed 18,000+ structures

The Ugly Truth to the 2018 Camp Fire – 12 Minute Video https://www.youtube.com/watch?v=cV74dRke1PA

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Oregon Wildfire Fire Risk

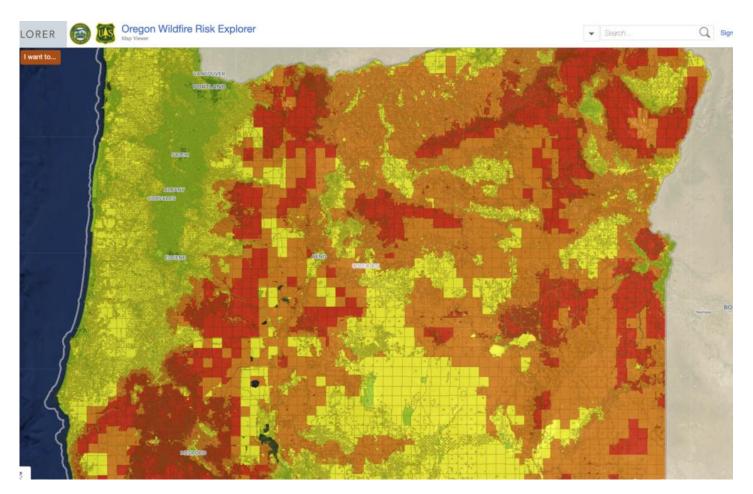
Oregon's Geography:

Coast and Willamette Valley

• People and rain

High Desert to the South and East

· Hot and arid



Raising Awareness – 2019 and 2020

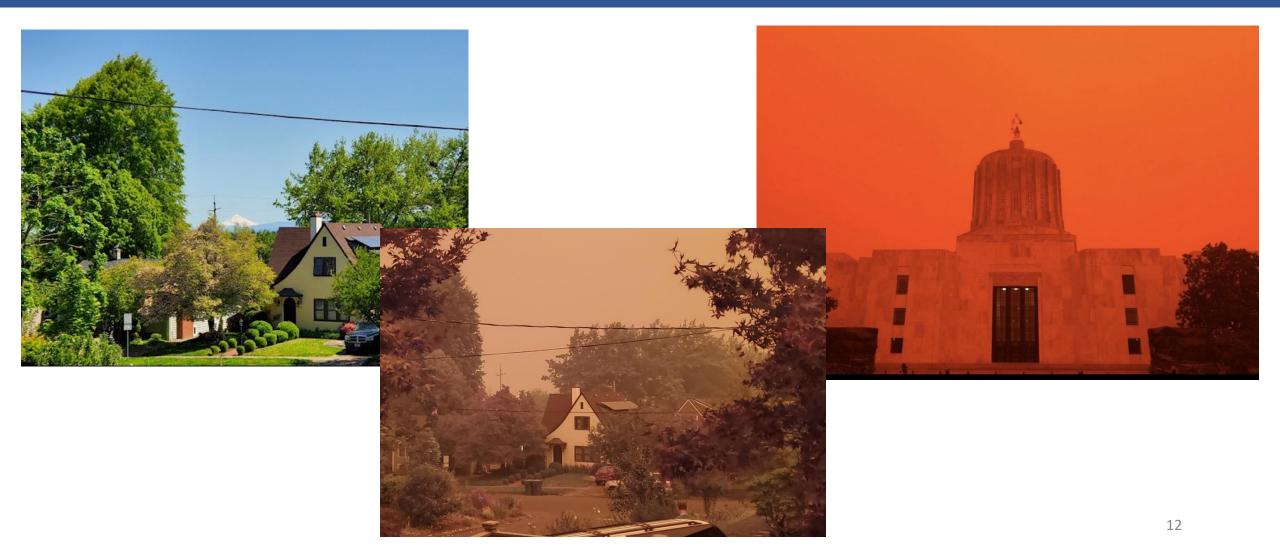
- Oregon PUC directed electric utilities to report on wildfire mitigation planning
- Hosted Wildfire Dialogue of West Coast Commissioners
 - Lessons learned, best practices, actions
- Visited Southern Oregon
 - Oregon Dept of Forestry Early Detection Center
 - Emergency Managers/Community Members
 - Introduced concept of Public Safety Power Shut-offs

2020 Labor Day Fires

- Wet spring followed by drought
- Extremely low humidity 3%
- Sustained winds 20-30mph gusts to 60+
- Lightning strikes many fires burning but stable
- 21 major fires
 - 6 over 100k acres
 - 11 deaths; 3000 structures destroyed
- Burned over 1.2 million acres



Labor Day Fires 2020



Impacts

California

- PG&E pled guilty to 85 counts involuntary manslaughter
- Settled multiple lawsuits
 - \$13.5B settlement
 - Former Executives and Directors also paid \$117M
 - Declared bankruptcy in 2019

Oregon

- Jury found PacifiCorp started Santiam wildfires and was grossly negligent in not cutting power
- Class Action Lawsuit 1000+ parties raising \$30+B in claims (PacifiCorp's 6-state assets total \$34B)

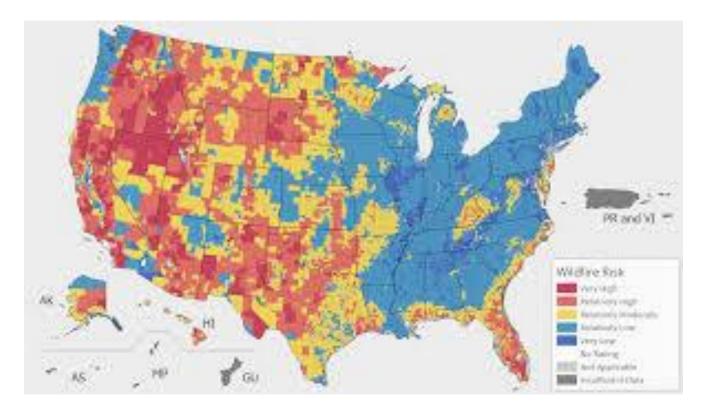


Wildfire Risks – Growing Problem

Colorado – 2021 Marshall Fire Texas – 2024 Smokehouse Creek Hawaii – 2023 Maui Fire Los Angeles – 2025 Palisades and Eaton Fires

Wikipedia - List of US Wildfires 2024

100+ fires over 1000 acres 26 states



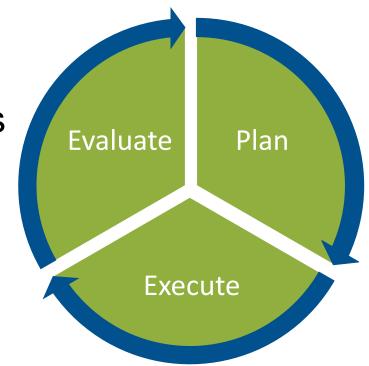
Oregon Response

<u>Senate Bill 762</u> (2021)

- Comprehensive bill to improve wildfire response and mitigation efforts
- Focuses on creating fire-adapted communities, developing safe and effective wildfire response, and increasing the resilience of Oregon's landscape
- New electric utility mandates to prevent and mitigate ignitions from utility infrastructure
- Both IOUs and COUs must operate under risk-based wildfire mitigation plans
 - IOUs submit plans annually to the PUC for review and approval.
 - COUs submit copies to the PUC once plans approved by governing bodies

Wildfire Protection Plans (WPPs)

- IOUs:
 - File annual WPPs at end of year
 - PUC reviews and approves within 180 days
- COUs file copies of approved plans
- First IOUs plans approved in 2022
- Link to Copies of Plans and PUC Dockets



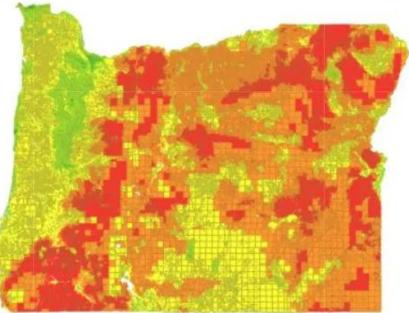
Wildfire Protection Plans – Key Requirements

- Identify high-risk areas in service territory or rights-of-way
- Provide risk analysis and plans to prevent and mitigate wildfire risk
 - System Hardening
 - Vegetation Management
 - Operational Protocols
- Plans for community engagement and strategies for collaborating with gov't agencies and local communities
 - Public Safety Power Shut-offs (PSPS)
- PUC Rules WPP Requirements

High Risk Fire Zones (HRFZs)

- All Oregon electric utilities face risk of wildfire varies due to location of service territories
- Fire Risk and PSPS can happen outside HRFZs
- Both IOUs and COUs operate overhead electrical lines in HFRZs
 - PGE operates ~ 1,000 miles in HFRZs
 - PacifiCorp operates ~ 3,600 miles in HRFZs
 - Idaho Power operates ~ 80 miles in HRFZs
 - COUs operate a combined 5,000 to 10,000 in HRFZs





Public Safety Power Shutoffs (PSPS)

- Proactive de-energization of electricity during extreme weather conditions
- Last resort must balance risks of disconnecting service during emergency
- Utility decision based on knowledge of system and equipment, real time conditions
- Coordinate with local emergency managers and impacted communities



PSPS Communication Requirements

Requirements	Timing			Notes
Where, when, how long, impacts	72-48 hours	48-24 hours	4-1 hours	
Public Safety Partners	V	\checkmark	\checkmark	When feasible utility will support local emergency management efforts to send out notifications
ESF 12	V	V	\mathbf{v}	Will notify Oregon Emergency Response System partners and Local Emergency Mgt in coordination with Oregon's Dept of Emergency Mgt
Utility Identified Critical Facilities	\mathbf{v}	\mathbf{v}	\mathbf{v}	IOUs also notify medically vulnerable customers that self-identify
Customers		V	V	Notice provided via email, phone call, website, social media, radio, television, and media

September 2022 PSPS Event

- 7 utilities performed PSPSs (2 IOUs, 5 COUs)
- Red Flag Weather:
 - \succ 25+ mph winds, with gusts to 60 mph
 - Low humidity, high fuel load
- Over 51,000 customers across 7 counties
 - Broad and robust communications
 - Coordination with Public Safety Partners
 - Community Resource Centers
- PUC After-Action review
 - Recording available <u>here</u>
 - Details of utility actions <u>here</u>



Impacts on Customer Rates

- Mitigation Costs
 - Vegetation Management
 - Hardening of Systems
 - Undergrounding of Lines
 - Monitoring Equipment and Personnel
 - Increased Inspections
- Insurance Costs



Summary – Western States Wildfire Mitigation Plans

Oregon	California	Idaho	Utah	Washington	
Reviewing Authority					
PUC oversight of safety,	New OEIS safety	Utilities submit plans to	Utah PSC has oversight	Dept of Natural	
including wildfire	oversight previously	IPUC as part of general	of wildfire mitigation	Resources developing	
mitigation activities.	done by the CPUC.	rate case	issues.	IOU plans for with	
				WUTC	
	Ide	entification of High Risk Are	eas		
Utilities identify HRFZs.	Statewide map created	Idaho Utilities identify	Utah utilities identifies	Washington IOUs	
ODF also working on	by scientists, foresters,	HRFZs but seek input	HRFZs in their	identify HRFZs.	
state map	fire fighters, and utilities	from state and federal	protection plans with		
		agencies.	assistance from state		
			agencies.		
	I	Efficacy of Mitigation Actior	าร		
PUC balances IOU risk	California determines	Least-cost, least-risk	Utah WPPs and annual	Topic of discussion in	
versus spend. Annual	objective risk spend	investments are focus in	reports describe the	Washington rate cases,	
cost recovery	efficiency based on	Idaho but utilities may	costs of implementation	but there are not specific	
mechanisms established	identifying threats, costs	pursue extra pilot	but cost-effectiveness is	rules.	
for PGE and PacifiCorp.	to mitigate, and	projects.	not specified.		
	potential threat impact.				
Verification of Equipment Installation					
Oregon performs no	OEIS conducts extensive	Idaho PUC audits 5-10%	No auditing of	No specific audit of	
specific audits of	audits for work reported	of investments in rate	investments. Locations	wildfire investments;	
mitigation investments;	quarterly. Costs for	cases, some randomly	are not provided as part	reviewed with other	
are validated as part of	mitigation are assessed	and others prioritized.	of reports.	spending during a rate	
routine line audits.	by CPUC as part of rate			case.	
	cases.				

Litigation Risk

- Wildfire risk from utility infrastructure can be reduced <u>but</u>
 <u>not</u> eliminated
- Consequence of ignitions largely outside the utility's control

Wildfire related lawsuits

- Led to PG&E Bankruptcy
- Hawaiian Electric \$3B settlement
- Xcel Energy Marshall and Smokehouse Fires
- PacifiCorp \$30B+ legal liability

Impacts to Rates and Reliability

Investor concern

• In February 2024 letter to investors, Warren Buffet reported that wildfire-related lawsuits have raised uncertainty "about the desirability of future [utility] investments."

Increased Costs of Capital

- Credit downgrades; increased borrowing costs
- Impacts Reliability
 - More PSPSs and sensitive settings
- Effects on Bankruptcy
 - Risks remain preventing reorganization

Legislative Responses

• Wildfire Compensation Funds

- Designated funds to help ensure liquidly of utility
- Liability Limits
 - Providing cap for economic and non-economic damages
- Safety Certifications
 - Help establish expectations



Summary – Western States Safety Certification and Compensation Fund

Oregon	California	Idaho	Utah	Washington		
Safety Certification						
HB 3666 proposes to establish a certificate process. Implementing plan and commitment to safety	Certification by OEIS aids IOUs in access to the Wildfire Fund and wildfire cost recovery at the CPUC.	None	No specific, but Utah PSC does acknowledge protection plans that meet specific requirements.	None		
State Wildfire Damages Fund						
Proposed legislation introduced but failed – looking at study bill.	\$21B Wildfire Fund. Funding is evenly split: shareholder funds front-loaded and ratepayer payments being spread evenly over 10 years.	None	Rocky Mountain to seek approval for a \$1B fund to pay for utility- caused wildfire liabilities. Fund would come from a ratepayer surcharge.	Not yet. It's been proposed as a policy solution by the Office of the Insurance Commissioner.		

Summary – Western States Liability Limits

Oregon	California	Idaho	Utah	Washington		
Financial Liability Limits						
None	Compensation not	Idaho law has	Compensation is	WA law requires		
	limited, but CPUC	\$250k caps for	capped up to	electric utilities to		
	may determine	economic damages	\$100k for people	demonstrate the		
	max liability an IOU	from negligent	physically	"highest standard		
	can pay before	destruction of	unharmed and up	of care" for		
	bankruptcy and	property and	to \$450k for	prudence in utility		
	direct further costs	damages for	people physically	operations to avoid		
	to be paid by	physical harm.	harmed. No	being found		
	ratepayers.	Punitive damages	limitation for	negligent for		
	Wildfire Fund	capped at \$250k or	wrongful death	wildfire-related		
	should limit the	3X compensatory	actions; no liability	damages.		
	need for the CPUC	damages if utility	caps if the PSC			
	to exercise this	acted in	determines RMP			
	authority unless an	oppressive,	operated in a			
	IOU is found to	fraudulent,	manner materially			
	have operated	malicious, or	out of compliance			
	irresponsibly.	outrageous	with PSC-approved			
		manner.	WPP.			



