

# 2025 Public Safety Power Shutoff and AB 1054 Briefing

Presented to the California Public Utilities Commission

August 19, 2025



# Liberty

- ❑ ~50,000 customers
- ❑ ~1,400 miles of overhead lines
- ❑ ~300 miles of underground lines
- ❑ ~23,000 utility poles
- ❑ 12 substations
- ❑ Connected to Nevada Balancing Authority (not CAISO)
- ❑ 120 employees
- ❑ ~94% high fire threat district



Invested in Safety



# Wild fire Risk Modeling

*“Energy Safety finds Liberty’s new risk models and decision-making framework will likely improve Liberty’s understanding of its risk across its system.”*

*— Office of Energy Infrastructure Safety, 2025 WMP Decision*

## 2020 – 2022: Foundational Modeling

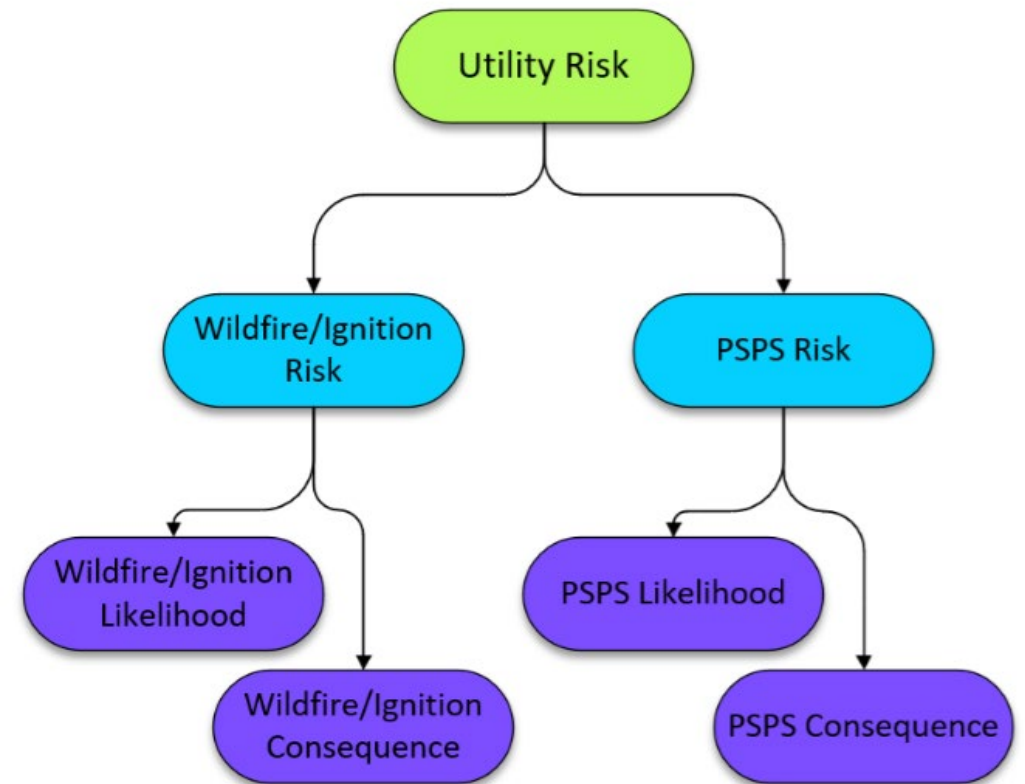
- Risk Models focused on basic wild fire risk identification

## 2023 – 2025: Advanced Modeling

- New Risk Based Decision Making (RBDM) Framework

## Plans for Future

- Full deployment for operational use
- Expansion of consequence modeling



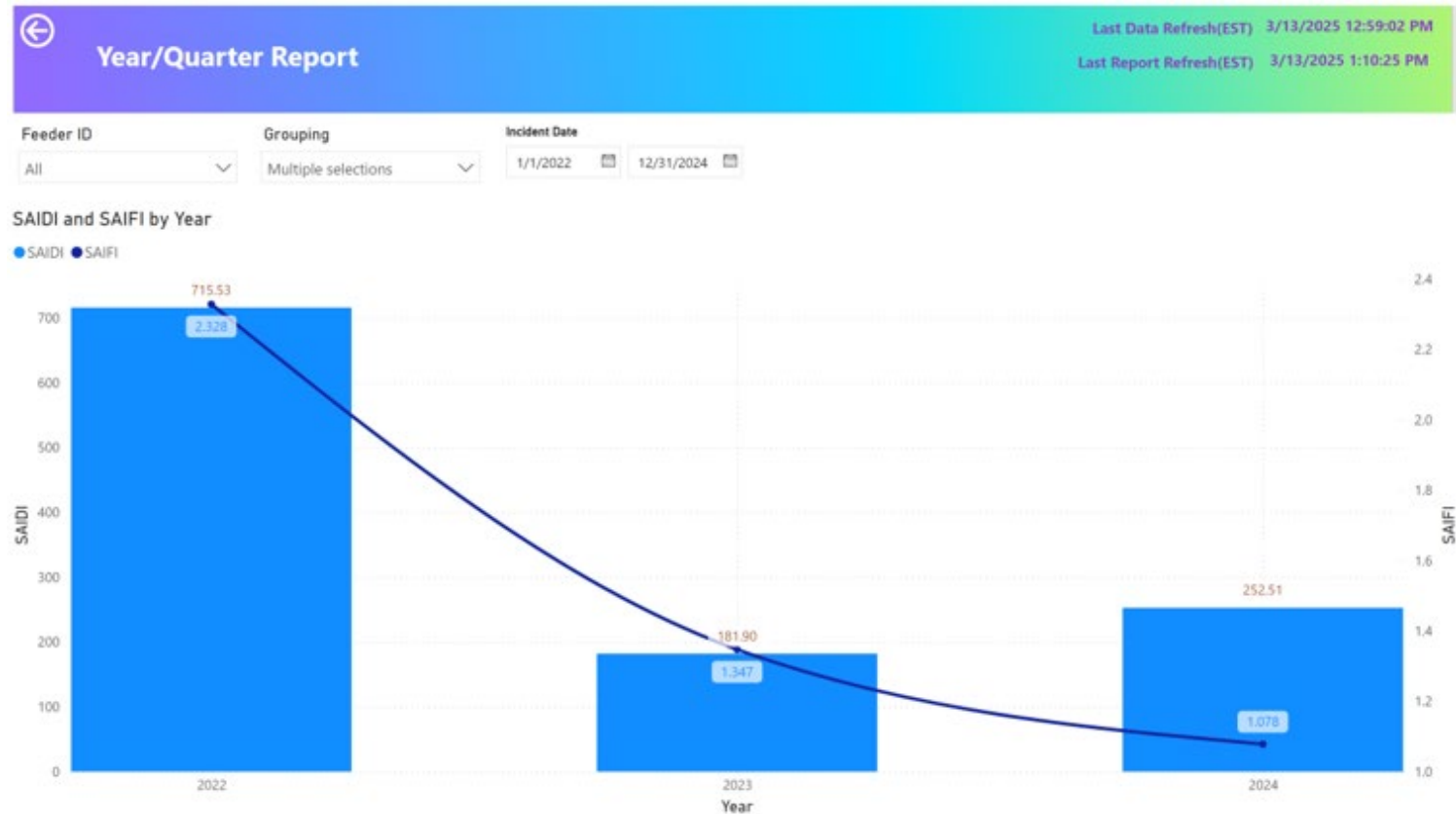
# Wild fire Mitigation Strategy and Implementation Status

	Description	2023	2024	2025 Plan	Total
Grid Hardening	Covered Conductor (miles)	5.7	3.9	2.7	12.3
	Pole Replacements (poles replaced)	292	823	500	1,615
	Open/Grey Wire Removal (miles)	4.4	7.4	5.2	17
	Expulsion Fuse Replacements (fuses)	4,122	750	500	5,372
Vegetation Management	Vegetation Inspections (miles)	1,016	1,094	1,078	3,188
	Tree Clearance Pruning (miles)	702	702	702	2,106
	Hazard Tree Removal (miles)	313	364	386	1,063
	Fuel Reduction Projects (acres)	625	350	280	1,255
	Pole Clearing (poles cleared)	4,957	5,084	4,900	14,941



# Impact of Grid Hardening

## *System Average Interruption Frequency Index (SAIFI) Improvement*



Reliability data used to calculate decrease in likelihood of an ignition event using interruptions as a proxy for ignitions.

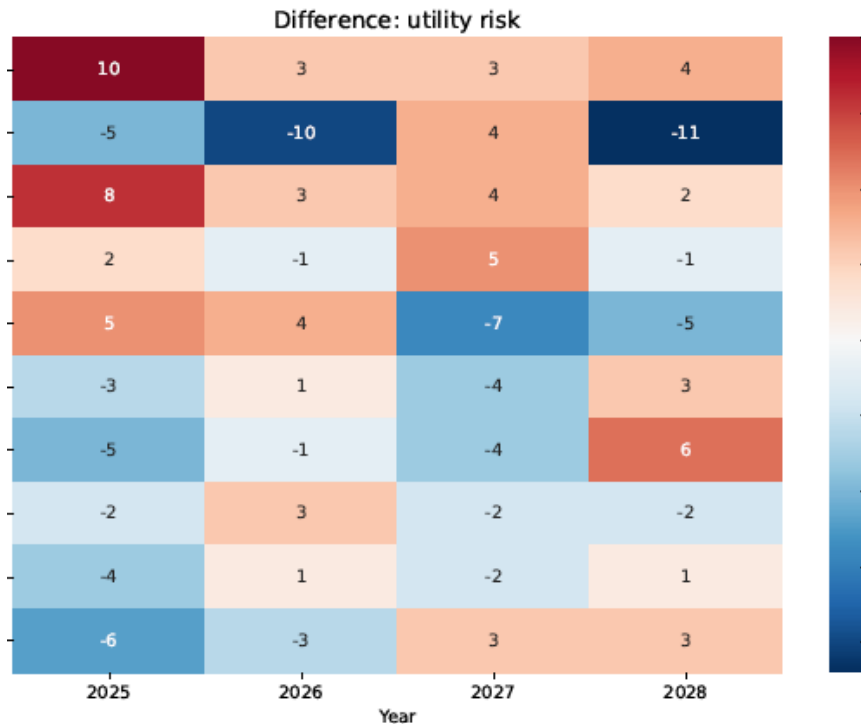
2022-2024 data shows 54% Reduction in events that could lead to an ignition.

Work is prioritized on circuits with higher risk and multiple risk factors within a localized area



# Evaluation of Mitigation Options

*Liberty uses a combination of Risk Spend Efficiency (RSE) analysis and strategic planning to compare and select options.*



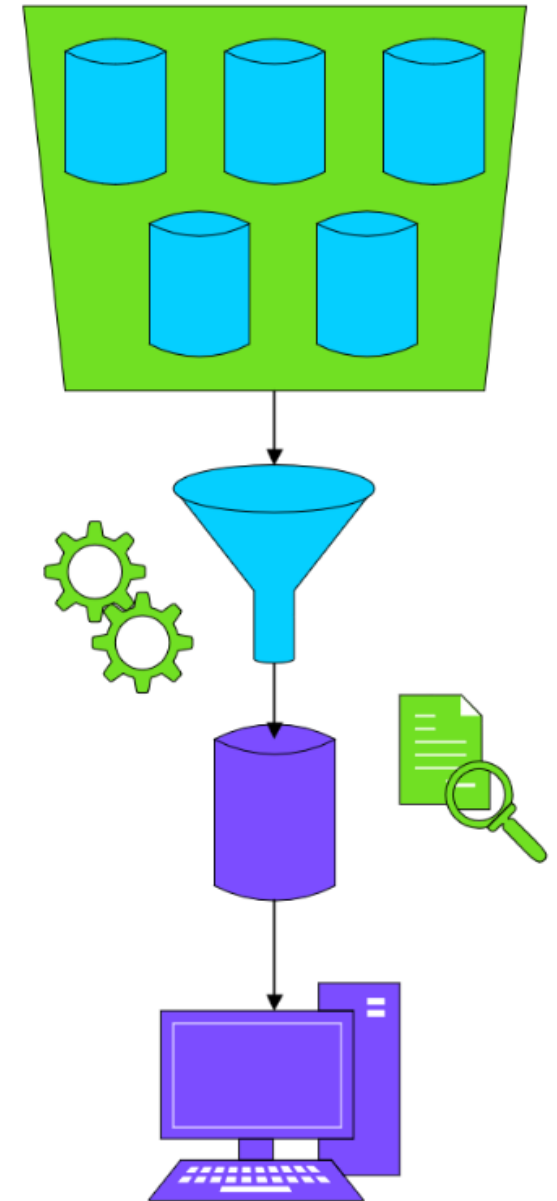
## Key Insights from RBDM Platform and Lessons Learned

- Covered conductor installed in densely forested areas in Wildland Urban Interface.
- Undergrounding is highly effective in reducing ignition risk but has low RSE due to high cost and operational challenges as well as reliability concerns.
- Overhead line rebuilds with bare conductor performed in areas with less vegetation and space to install wider cross arms and additional poles to shorten spans.
- Grid hardening initiatives, such as fuse replacements and pole upgrades, are bundled for efficiency.



# Data Collection, Reporting, and Record Keeping

- Consolidation of legacy asset inspection applications into a single Asset Tracking system
- Development of vegetation data pipeline from 3<sup>rd</sup> party application into enterprise database to provide archiving, clarity, and consistency
- Automated data quality checks and embedded data governance in data pipelines
- Power BI dashboards connected to SQL server housing WMP data to provide up to date reporting





# Sa f e t y C u l t u r e & E n g a g e m e n t

Em p l o y e e E n g a g e m e n t, R e p o r t i n g, a n d T r a c k i n g u s i n g G e n s u i t e E H S S o f t w a r e

- S a f e t y O b s e r v a t i o n s, G o o d C a t c h e s, a n d N e a r M i s s e s
- L e a d e r s h i p E n g a g e m e n t s, C o r r e c t i v e A c t i o n C l o s u r e R a t e

F i e l d S a f e t y P r a c t i c e s a n d T r a i n i n g

- S a f e t y s t a n d - d o w n s a n d a n n u a l f i r e p r e v e n t i o n t r a i n i n g
- L e a d e r s h i p s a f e t y c u l t u r e t r a i n i n g f o r s u p e r v i s o r s a n d m a n a g e r s
- A u t o m a t e d J o b S a f e t y T a i l b o a r d A p p l i c a t i o n

O r g a n i z a t i o n a l L e a r n i n g

- S a f e t y c o m m i t t e e t o r e v i e w t r e n d s
- T a r g e t i n g h a z a r d s w i t h l a y e r e d c o n t r o l s
- W o r k f o r c e s u r v e y u s e d t o a s s e s s p e r c e p t i o n s a n d b e h a v i o r s



# Lessons Learned

## Public Safety Power Shutoff (PSPS)

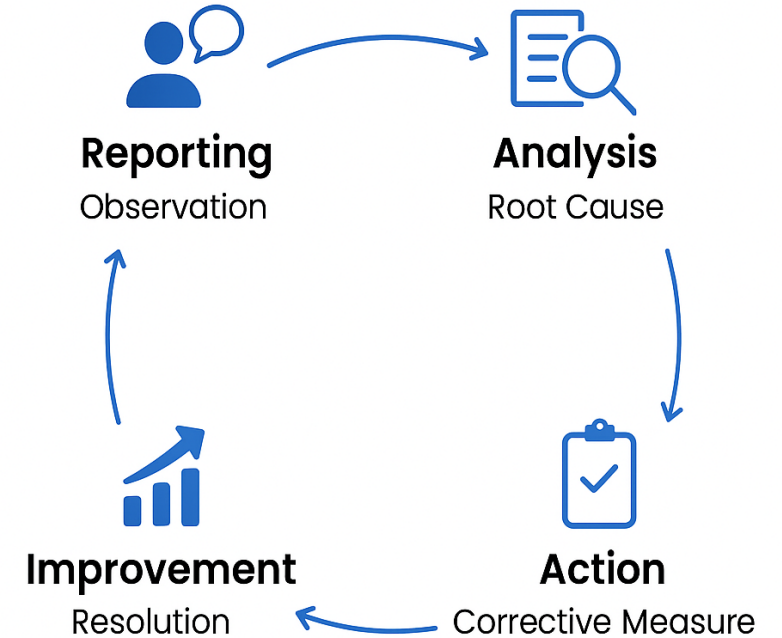
- Improved PSPS readiness and communication
- Medical Baseline Meter Audit

## Project Management

- Improved tracking and prioritization
- Risk Spend Efficiency (RSE) used to guide investments

## Safety

- Enhanced feedback loops and incident tracking
- Increased leadership visibility and engagement



# Modern Technologies and Innovation

## Sensitive Relay Profile Program

- Enable Fast-Trip Settings across system

## Sagehen Microgrid

- Ability to de-energize 4 miles of power line in high fire risk area

## Bundled upgrades

- Higher Risk Spend Efficiency with traditional overhead hardening

## Forest Resilience Corridors

- Reduce wildfire risk and consequence beyond utility right-of-way

## Data Analytics

- Enhanced Business Intelligence



# Benchmarking & Best Practice Sharing

*The Lake Tahoe Basin sets the gold standard in wildfire preparedness through over 20 years of extensive multi-jurisdictional collaboration.*



Participation in CA  
IOU working groups



Risk Modeling



Weather  
Forecasting &  
Analytics



Vegetation  
Management



Mitigation  
Effectiveness



Wildfire Resilience  
Utility Working  
Group

Collaboration with partners

NV Energy and Truckee Donner PUD

Regional Partners

- Tahoe Fire and Fuels Team
- Fire Agencies
- Tahoe Resource Conservation District
- National Forest Foundation





# Public Safety Power Shutoff (PSPS)



# Public Safety Power Shutoffs (PSPS) – Progress, Improvements and Challenges

- ❑ Liberty has made significant enhancements to its RBDM Framework that aid in operational decision making when executing PSPS events and enabling Sensitive Relay Profile (SRP).
  - ❑ Liberty most recently implemented a PSPS risk module that consists of models for PSPS likelihood and consequence. SRP is accounted for in both models.
- ❑ Liberty's fire weather dashboard and detailed weather forecasts aid decision making
  - ❑ Liberty's weather forecasting utilizes data from multiple models
  - ❑ Liberty monitors wind gust, sustained wind speed, relative humidity, and temperature
  - ❑ Real-time data for decision making when executing PSPS events and enabling fast-trip settings
- ❑ Liberty uses multiple fire weather indices for fire threat awareness and operational decision-making.
  - ❑ Energy Release Component, Severe Fire Danger Index, and Composite Risk Index
  - ❑ Escalating levels of risk control methods based on observed conditions



# PSPS – Protective Equipment and Device Settings (PEDS) and Customers with Access and Functional Needs (AFN)

- ❑ Liberty implemented its advanced Sensitive Relay Profile (SRP) program in 2024. By August 31, 2025, all capable equipment will have SRP enabled. Most have remote control capability. Direxyon modelling calculated the risk reduction at 74%.
  - ❑ Severe Fire Danger Index (SFDI) is used in conjunction with assistance from weather and fire science experts to determine when to enable SRP settings
  - ❑ Relatively new program with limited data available to assess safety impacts
- ❑ Our vision is to continue to improve the SRP program with these future considerations in mind:
  - ❑ How can we have remote-control over all devices, not just most devices?
  - ❑ Can we add automated control based on real-time condition monitoring?
  - ❑ Can we coordinate more devices so that fewer customers experience outages?
  - ❑ How do we communicate with customers regarding SRP?



# PSPS – Community Communication and Preparedness

- ☐ AFN Identification outreach
- ☐ Support Resources available to AFN customers
  - ☐ Customer assistance programs
- ☐ PSPS Outreach and Community Engagement
  - ☐ Outreach through Community Based Organizations (CBOs)
  - ☐ Direct AFN customer outreach through community meetings, educational toolkits, social media, email, bill inserts, and the Liberty website
  - ☐ Wildfire messaging customer awareness surveys
  - ☐ Engagement with the Washoe tribe
- ☐ Community Resource Centers (CRCs)
- ☐ Stakeholder inclusion in PSPS exercises





# PSPS – Pre-Season Planning and Preparations for 2025

- ❑ Liberty held PSPS tabletop and full-scale exercises on May 28 and June 26, respectively. Local stakeholders participated in the event
- ❑ By August 31, 2025, all capable equipment will have SRP enabled
- ❑ Monitoring of forecasts and weekly weather meetings
- ❑ Efforts to complete grid hardening and vegetation management initiative targets are ongoing
- ❑ Continue direct outreach to AFN customers and collaboration with CBOs ahead of fire season
  - ❑ Liberty has conducted PSPS Preparedness outreach at more than 20 meetings and community events so far in 2025



Questions?

