

XCEL ENERGY WILDFIRE MITIGATION

Denver City Council Transportation and Infrastructure Committee
April 29, 2026



AGENDA

Background

What causes sparking?

What are we doing about it.

Maps

Additional Resources



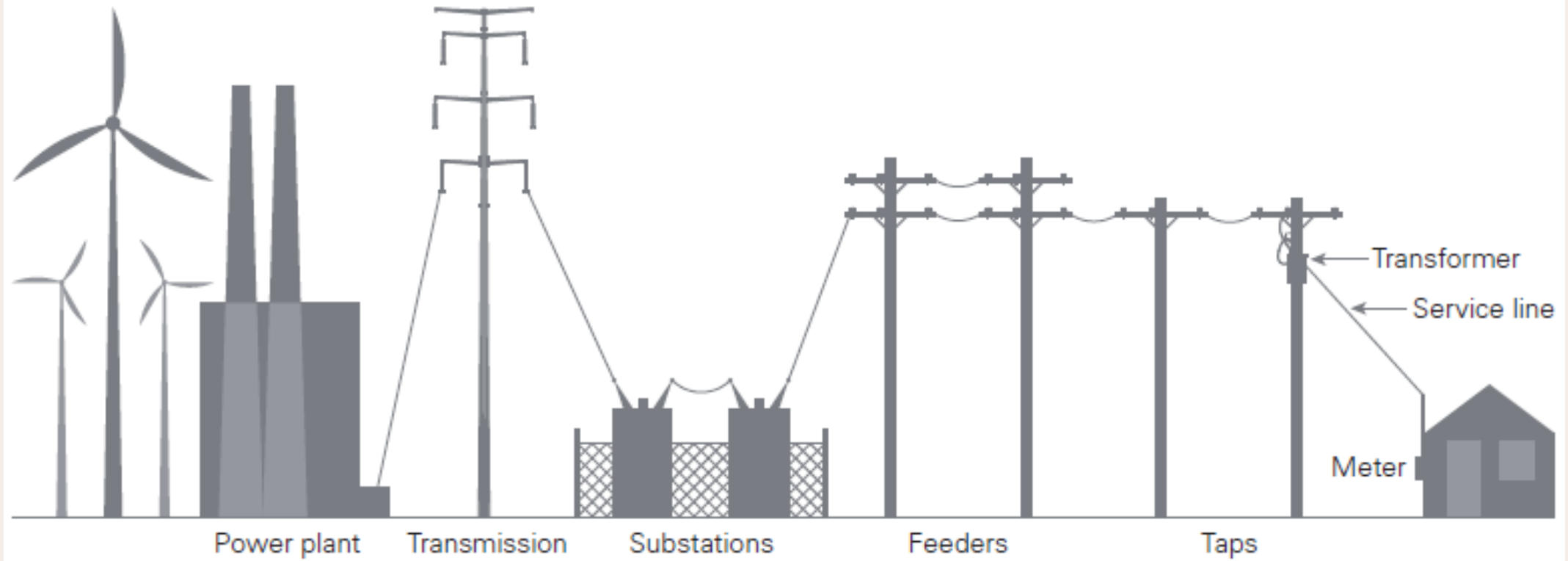


BACKGROUND

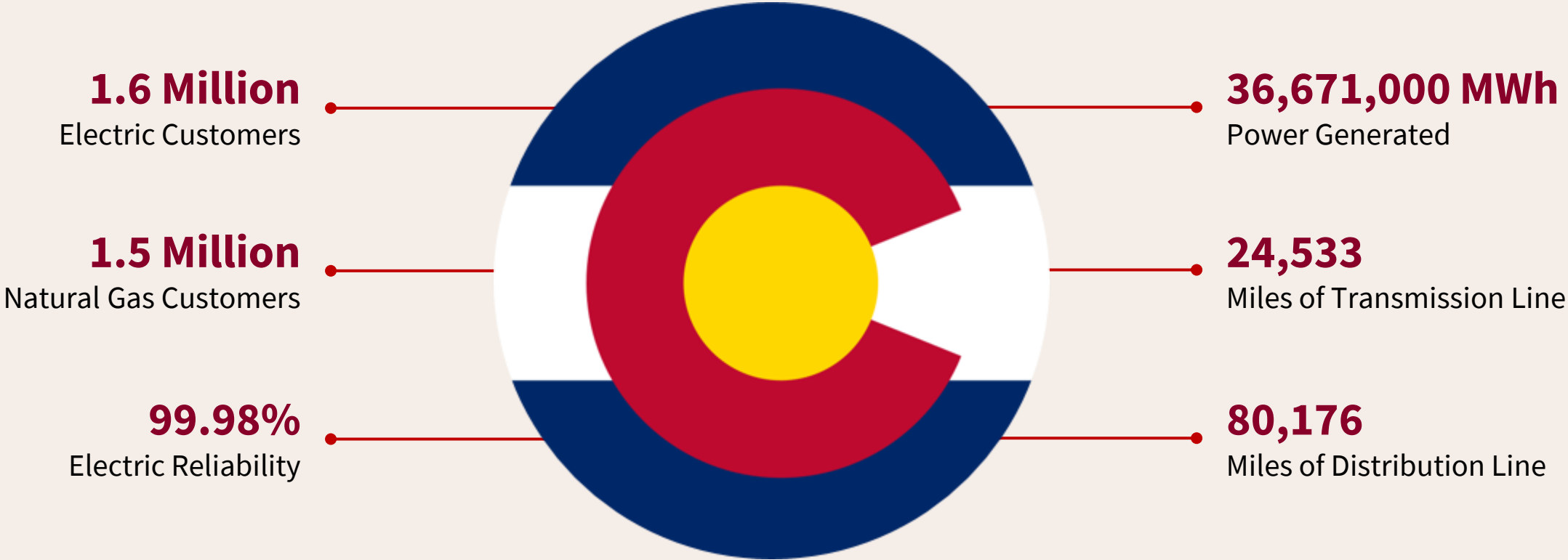


ELECTRICAL GRID

How the electric distribution system works



XCEL IN COLORADO



ISSUE/SOLUTION



➤ **MORE SEVERE WEATHER AND DRIER CONDITIONS**

➤ **WILDFIRE SAFETY IS SHARED BY EVERYONE**

WHAT CAUSES SPARKING



VEHICLE ACCIDENTS



WILDLIFE



VEGETATION



SEVERE WEATHER



DEC 17 +19

Arvada



Repairs

90 poles, 122 crossarms, 41 transformers, 391 fuses, 114K feet of wire

Customers Impacted

135,000 in PSPS

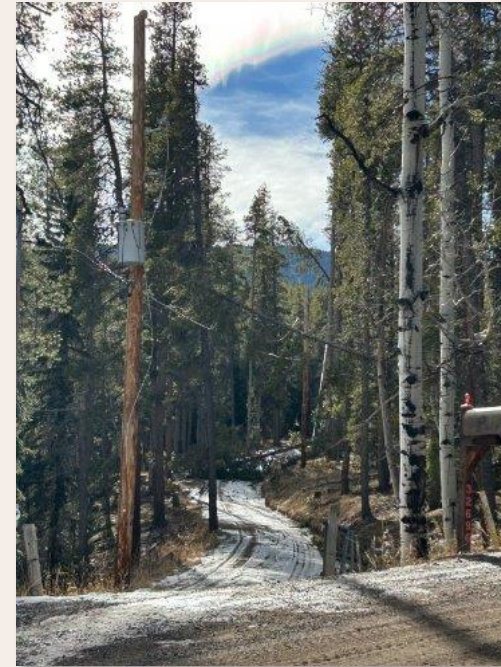
Many other unplanned outages

Majority in Boulder and Evergreen

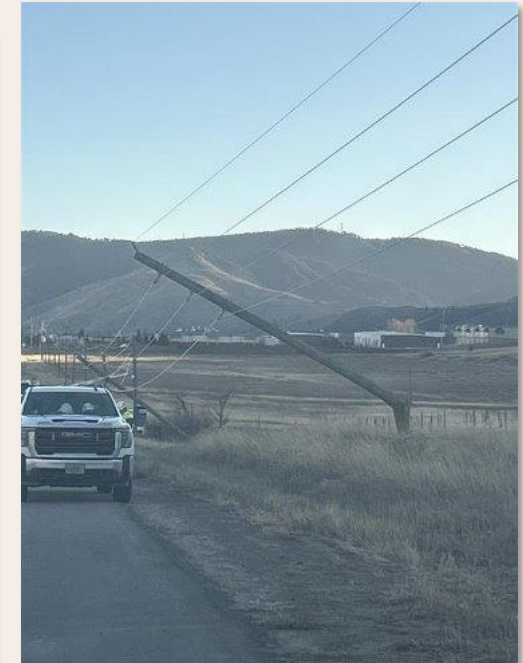
Evergreen



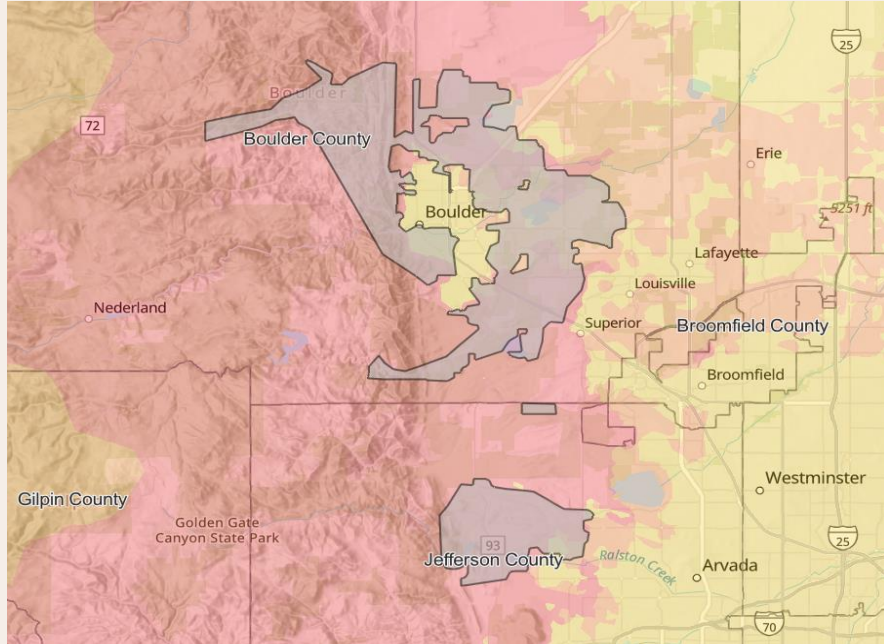
Conifer



Golden



MARCH 14



Customers Impacted

~12,000 in PSPS

Total of 22 feeders were within scope of this event and 17 were proactively de-energized.

Evergreen



Evergreen





WHAT WE ARE DOING ABOUT IT



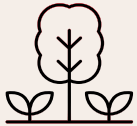
WILDFIRE MITIGATION PROGRAM



**System
Maintenance
& Resiliency**



**Advanced
Technologies
& Planning**



**Vegetation
Management
Projects &
Partnerships**



**First
Responder &
Community
Outreach**



**Collaborative
Safety &
Preparedness**



**Ignition
Prevention
Measures**

2025 – 2027 WILDFIRE MITIGATION PLAN OVERVIEW

REDUCING WILDFIRE RISK WHILE PROMOTING RESILIENCY

82.7%

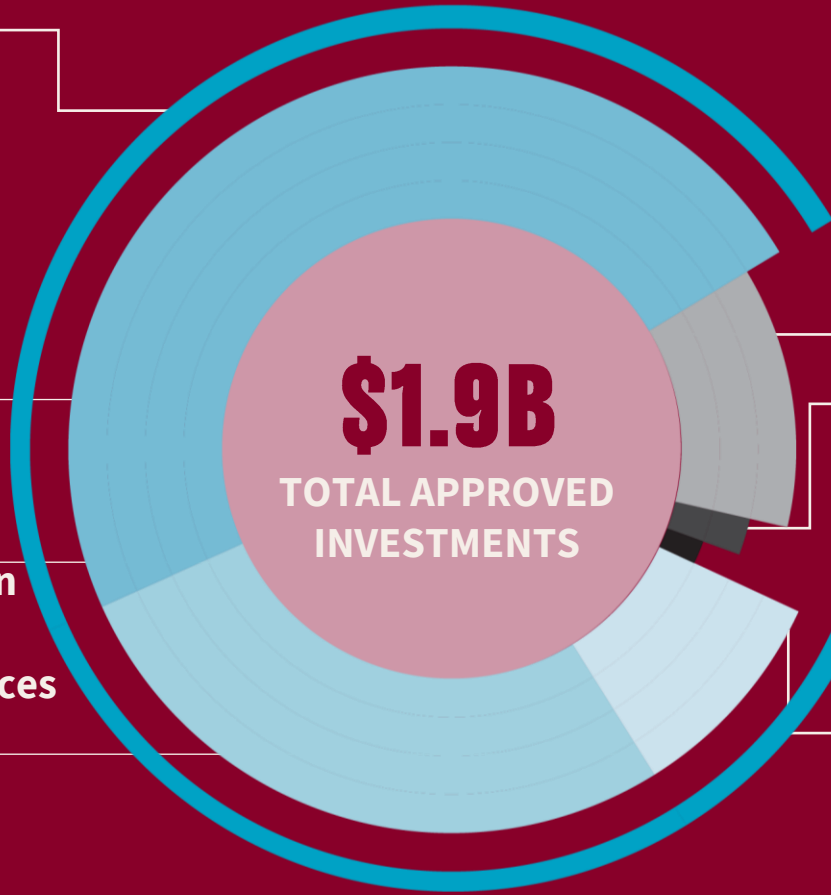
System Resiliency

\$1.56 billion

57% Pole Remediation
\$897 million

32% Power Line Improvements
\$496 million

11% Vegetation Management and Tech Services
\$175 million



11.5%

Operational Mitigations
\$217 million

1.3%

Customer & Other Support
\$24 million

4.5%

Situational Awareness
\$50 million



System Resiliency

50 miles of underground power lines
10,000 pole replacements



Operational Mitigations

100% feeders enabled with Enhanced Powerline Safety Settings (EPSS)



Situational Awareness

3x AI-enabled wildfire monitoring cameras
29,000 fault detection sensors deployed



ADVANCED TECHNOLOGY

System Maintenance and Upgrades

- Advanced reclosures
- Newer components designed not to spark
- Covered wiring replacement
- Rebuild transmission, including underground when possible





PANO AI CAMERAS

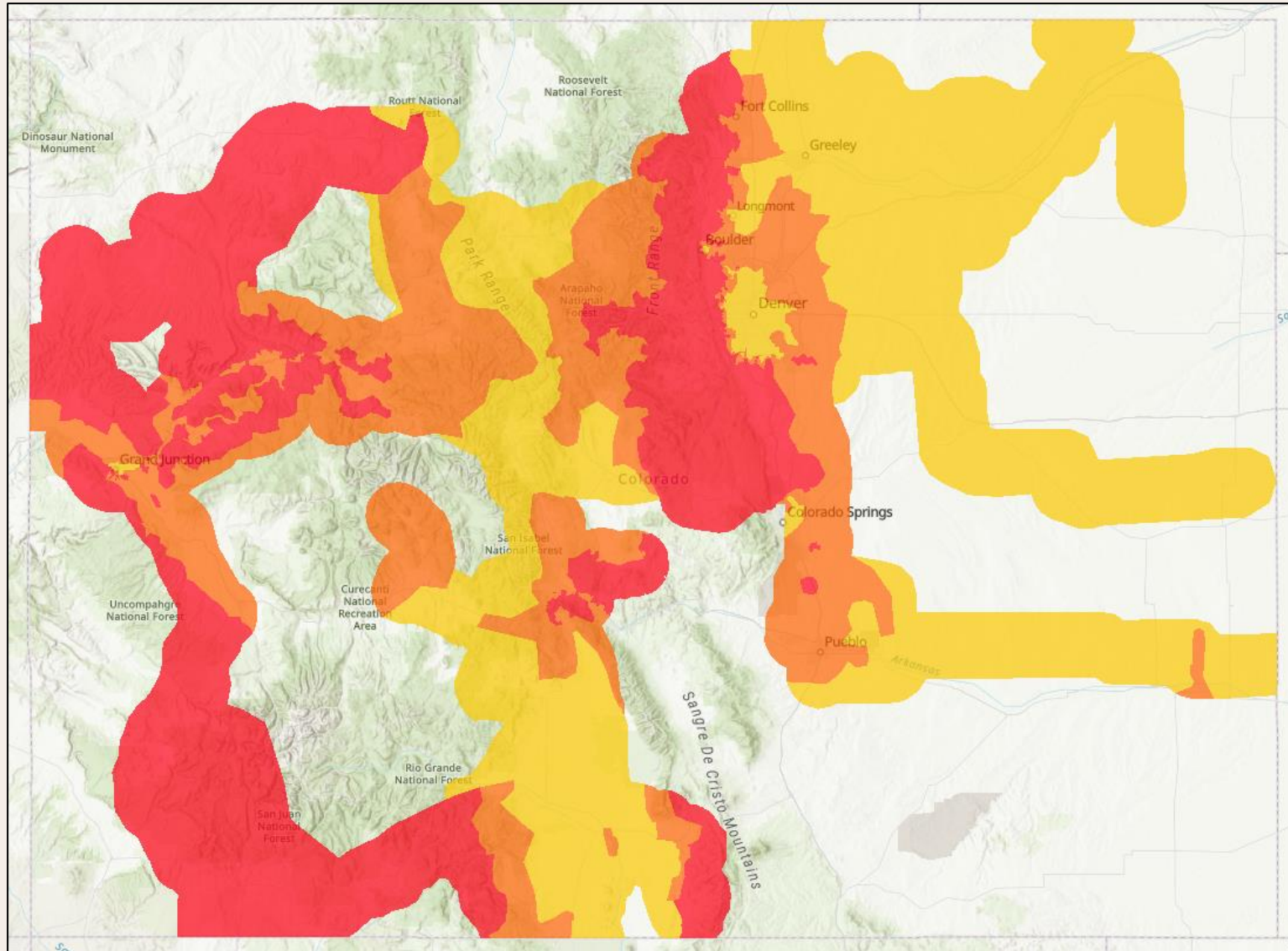
- Identify fire starts
- Increase threat awareness
- Available to first responders and OEMs to access

ADVANCED TECHNOLOGY

- Over 100 weather stations installed to increase accuracy of forecasts
 - Data now publicly available
-
- Drones reduce time for line inspections before and after power outages
 - Strengthen maintenance program
 - Reduce hazard risk



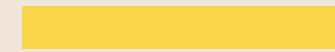
PLANNING



In collaboration with State Forest Service

Color

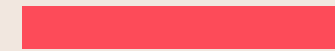
Tier



Tier 1



Tier 2



Tier 3

Tier

Description

Tier 1

Areas with significant human development and/or surfaces resistant to fire.

Tier 2

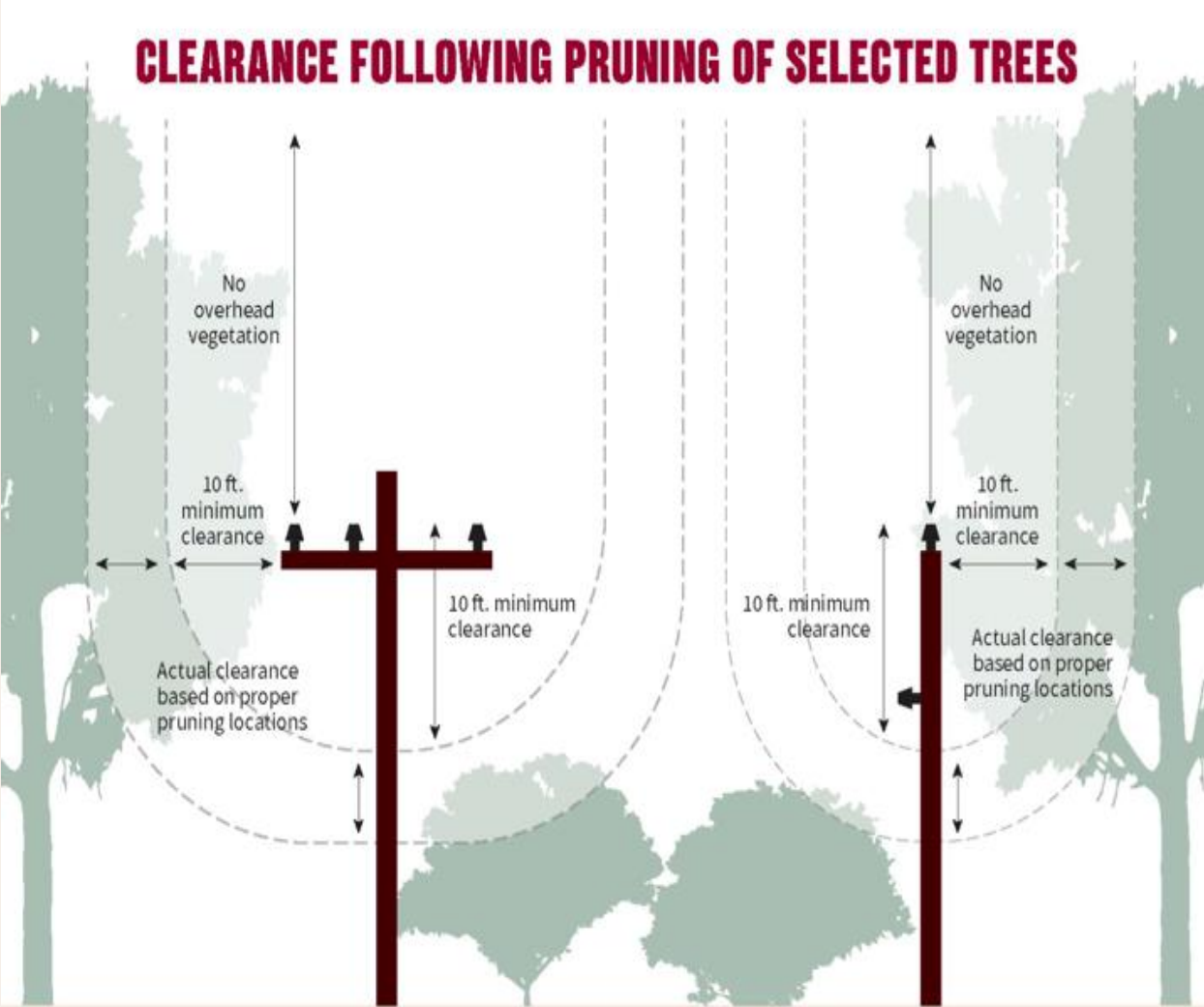
Areas where wildfire may cause significant damage to human infrastructure due to fuel continuity and terrain.

Tier 3

Areas where wildfire will likely rapidly become large, destructive or catastrophic events due to fuel continuity and population density.

VEGETATION MANAGEMENT

CLEARANCE FOLLOWING PRUNING OF SELECTED TREES



OUTREACH AND COLLABORATION

- **Offices of Emergency Management**

- Training and Exercises
- Workshops and Planning
- EOC embed if requested

- **Critical Infrastructure**

- Collaborating on list development
- Formalizing internal notification process

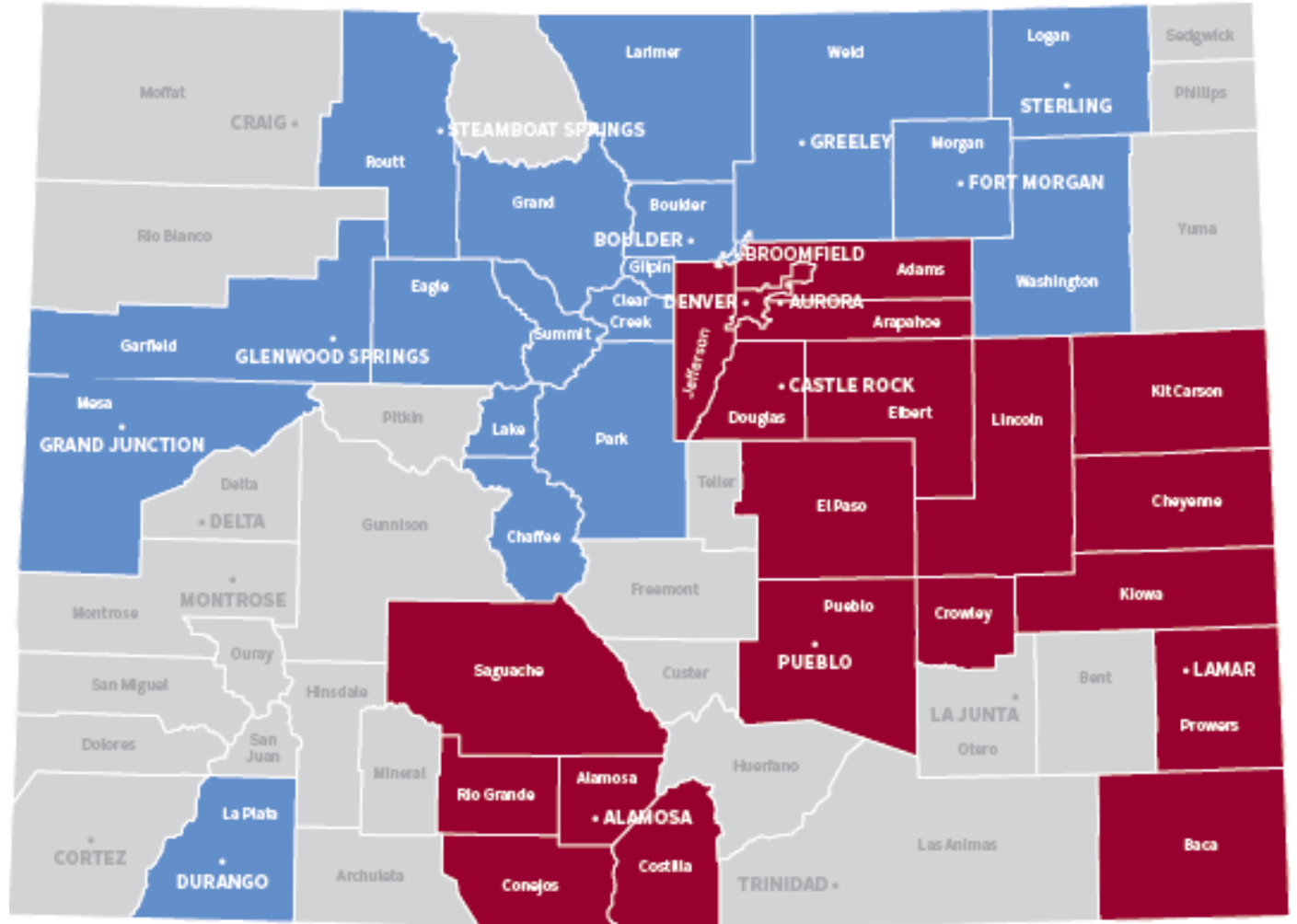
- **Outreach and Engagement**

- Support wildfire and PSPS education
- Information on Wildfire Mitigation Plans and other hazard planning
- First responder training for gas and electric infrastructure safety

- **Mitigation and Preparedness Support**

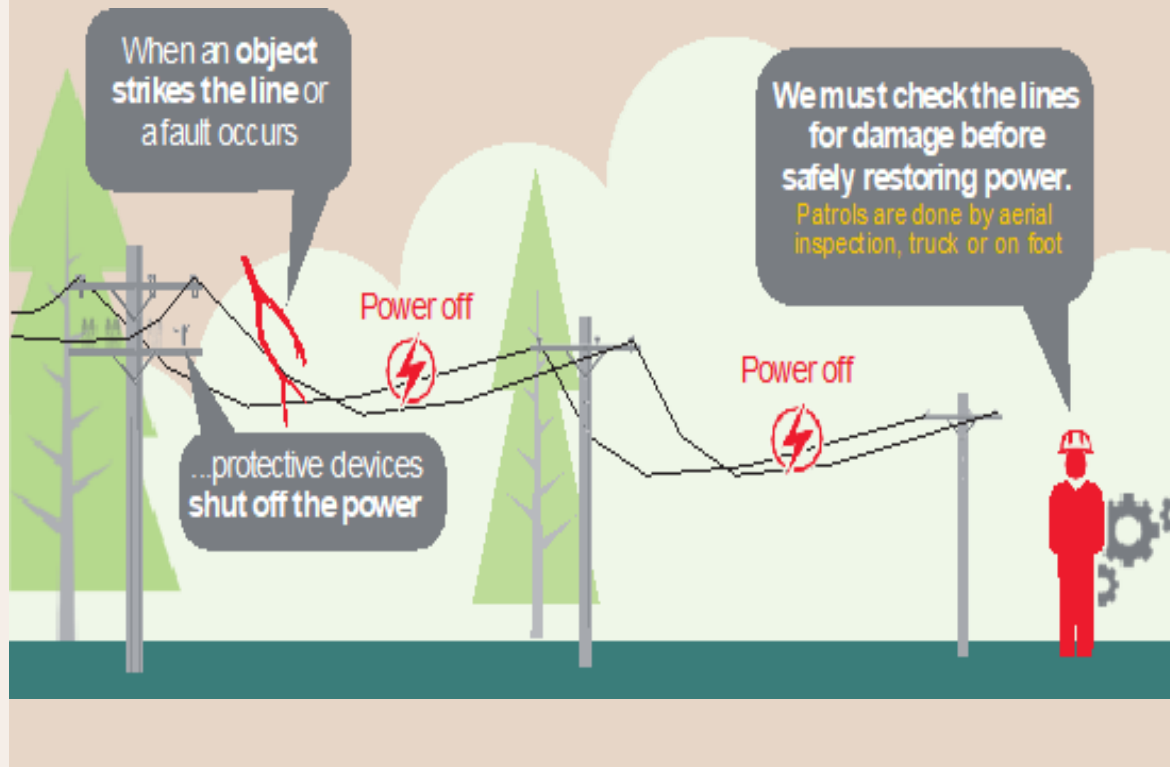
- Connect to vegetation management teams

■ Tiernan Doyle ■ Lyle Moore



IGNITION PREVENTION

ENHANCED POWERLINE SAFETY SETTINGS (EPSS)



When EPSS is activated, power lines are more sensitive and can quickly stop the flow of energy if an issue is detected, like a tree branch or other object touching the line. When that occurs, the power will remain off until our crews can inspect the line to make sure it's safe to turn it back on.

It is intended to enhance public safety during heightened risk conditions, but it means power outages are likely to occur more frequently, and if they do, are likely to last longer because crews need to patrol the line before restoring power.

EPSS is used in risk zones identified by the CO State Forest Service and risk probability models considering facts like weather, housing density, terrain, miles of overhead lines.



IGNITION PREVENTION

Public Safety Power Shutoffs (PSPS) are a tool of last resort. A PSPS is only considered when the following three factors are present:



Extreme Winds

wind speeds greater than or equal to the 99th percentile within the forecast area



Low Relative Humidity

20% or lower



Low Fuel Moisture Content

calculated by considering day length, hours of rain and daily temperature and humidity ranges

After a PSPS, restoration efforts can only begin after high winds and elevated wildfire risk have subsided. Power restoration may take multiple hours or days because we must visually inspect lines to ensure they're safe to be re-energized.

PSPS FACTORS

- Deciding to execute a Public Safety Power Shutoff is a difficult, complex decision involving many different factors.
- In addition to the Fire Weather Environment, there are many operational considerations to make, including some of the following.

Fire Weather Environment

- Extreme Winds
- Low Humidity
- Low Fuel Moisture Content



Catastrophic Fire Behavior Assessment

- Fire Behavior Index
- Buildings Potentially Impacted



Baseline Risk

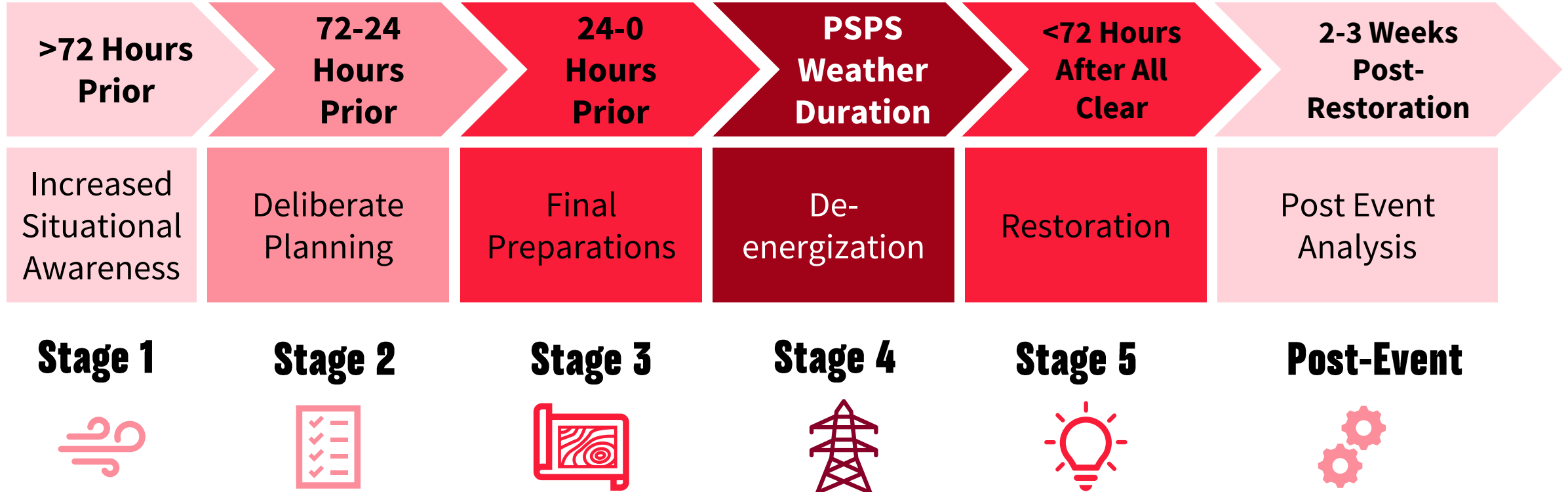
- Overhead Assets
- Assets in Wildfire Risk Tier 2 & 3



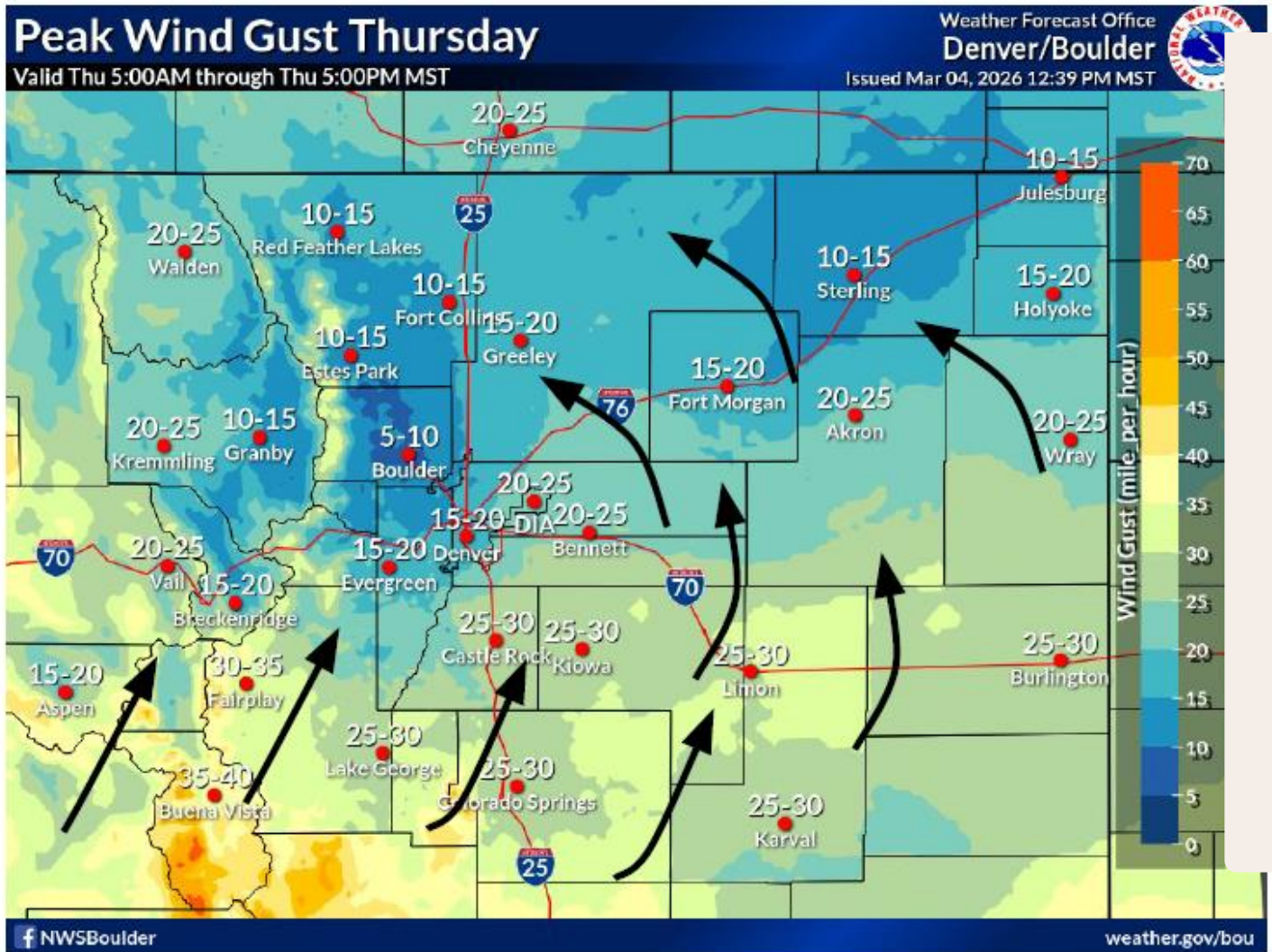
Operational Risk

- Material Health & System Hardening
- Vegetation Strike Potential
- Operational Constraints
- Critical Infrastructure
- Bulk Electric System Impacts

PSPS PROCESS STEPS



STAGE ONE: SITUATIONAL AWARENESS



How do we collaborate?

- OEM communications
- General preparedness messaging shared to local news and PIOs
- Communication with National Weather Service



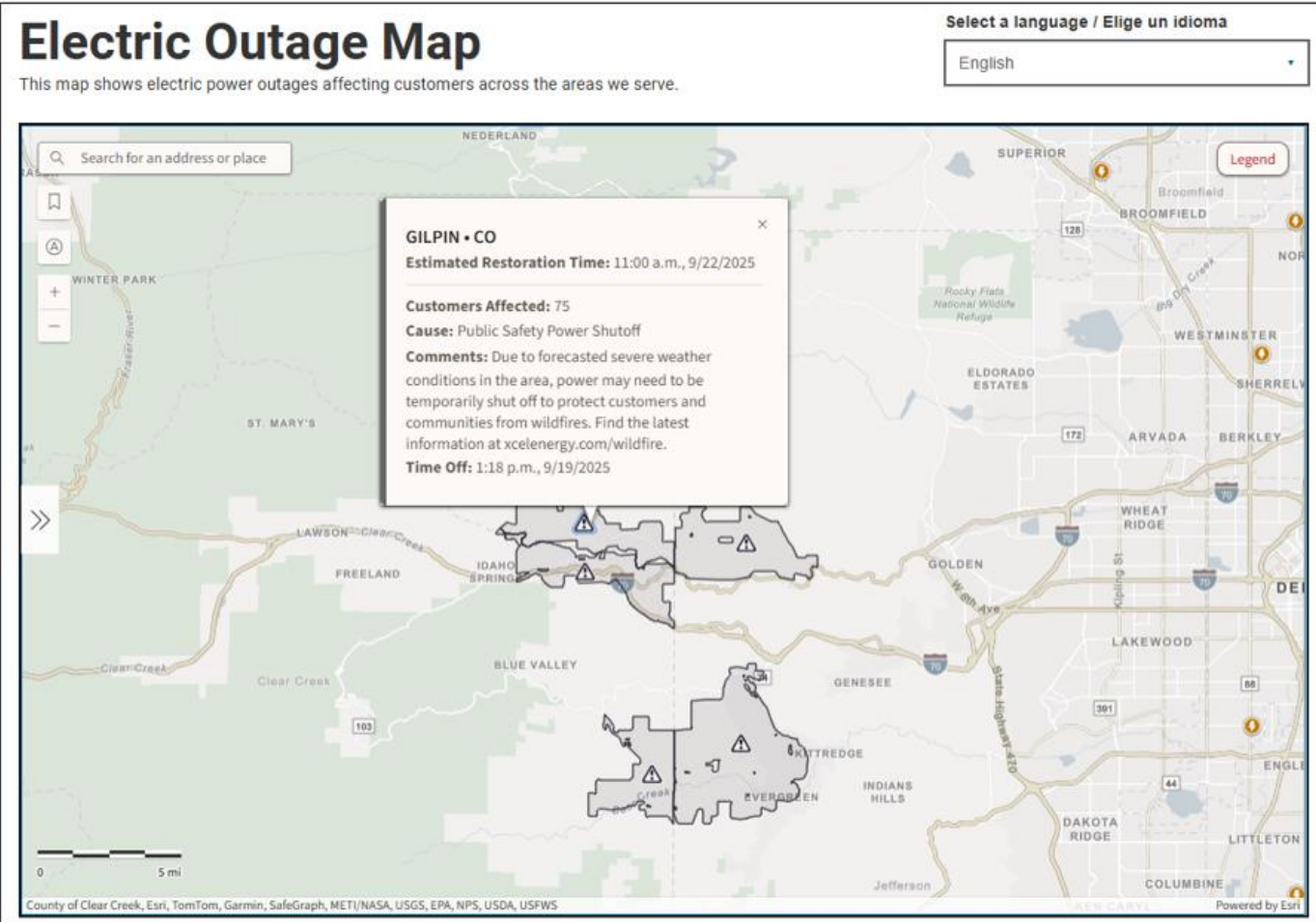
STAGE TWO: DELIBERATE PLANNING



How do we collaborate?

- OEM briefings
- 72hrs - Outreach to critical customers & medically vulnerable
- Information sharing between local and Xcel PIOs
- Ground truthing fuels and weather with partners
- 48hrs – Outreach to customers in Area of Concern (AOC)

STAGE THREE: FINAL PREPARATIONS



How do we collaborate?

- OEM briefings
- Outreach to critical customers & medically vulnerable
- Information sharing between local and Xcel PIOs
- Outage maps updated
- Public Safety Officer on standby
- <4 hrs, final notifications

STAGE FOUR: DE-ENERGIZATION



How do we collaborate?

- Damage reports from first responders
- OEM briefings
- Information sharing between local and Xcel PIOs
- Charging centers established if requested
- Morning and evening updates to customers



STAGE FIVE: RESTORATION



How do we collaborate?

- Continuous updates to OEMs on expected reenergization times
- Information sharing between local and Xcel PIOs





MAPS



PUBLIC FACING OUTAGE MAP

Outages

Total of **58** outages affecting **1,164** customers.

Update list as map moves

List All | By County | By State

ADAMS • CO Estimated Restoration Time: 11:30 a.m., 3/23/2026 Cause: Unplanned Comments: Crews are working to restore power as quickly and safely as possible. Please continue to check back for estimated restoration time updates. Thank you for your patience. Time Off: 8:33 a.m., 3/23/2026	1 Customers Affected View on Map
ADAMS • CO Estimated Restoration Time: 12:00 p.m., 3/23/2026 Cause: Unplanned Comments: Crews are working to restore power as quickly and safely as possible. Please continue to check back for estimated restoration time updates. Thank you for your patience. Time Off: 9:04 a.m., 3/23/2026	1 Customers Affected View on Map
ARAPAHOE • CO Estimated Restoration Time: 5:00 p.m., 3/23/2026 Cause: Unplanned	8 Customers Affected

Search for an address or place

Legend

Esri, TomTom, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS, USFWS

DENVER • CO

Estimated Restoration Time: 11:30 a.m., 3/23/2026

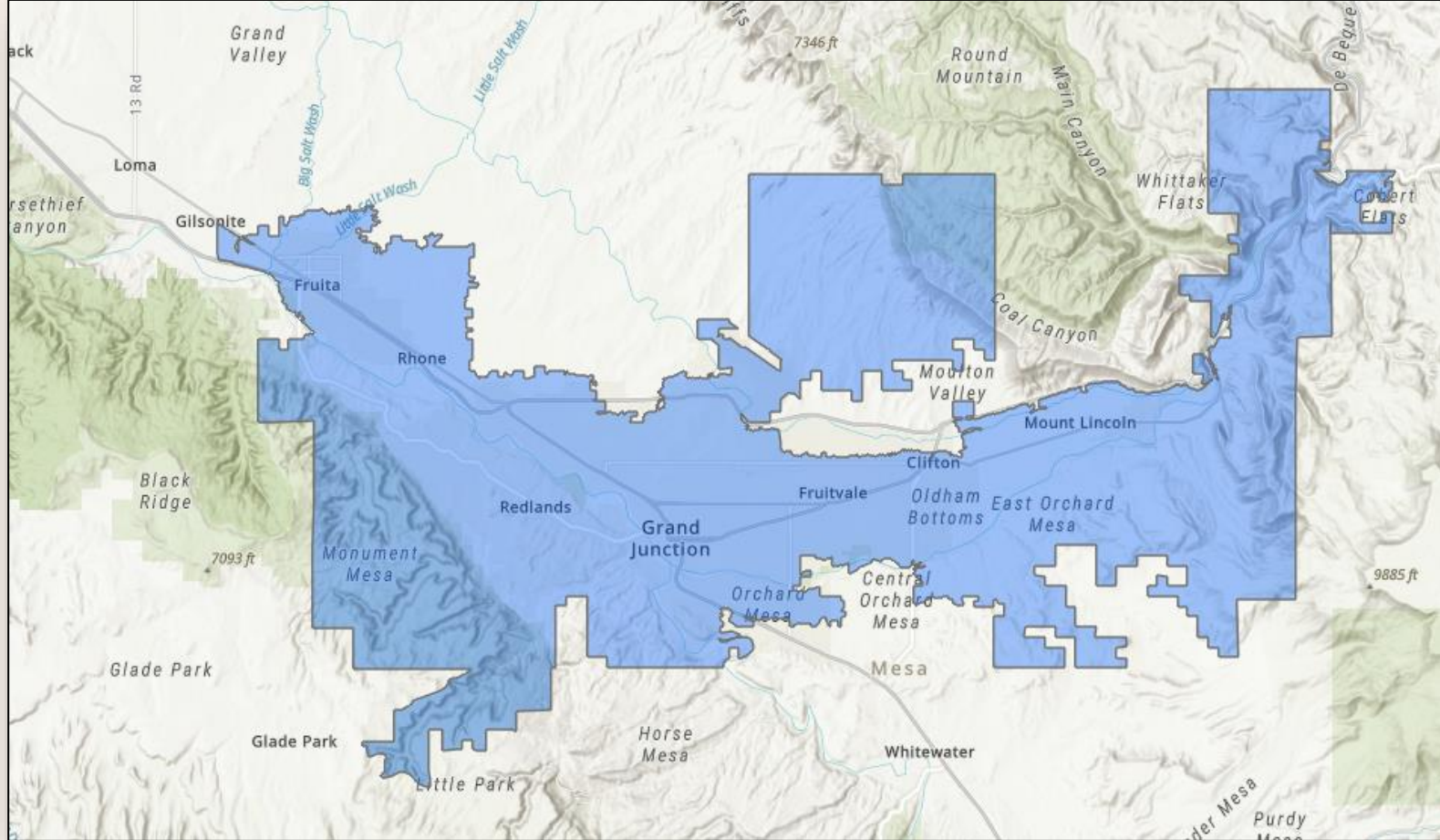
Customers Affected: 17

Cause: Unplanned

Comments: Crews are working to restore power as quickly and safely as possible. Please continue to check back for estimated restoration time updates. Thank you for your patience.

Time Off: 9:26 a.m., 3/23/2026

PUBLIC SAFETY PARTNER PORTAL (PSPP)



Map tool that allows vetted users access to GIS data layers of Xcel assets and critical infrastructure locations.

Targeted for OEM, Public Safety (Fire, LE, Comms), Water/Wastewater, Forestry, Addition Response Partners



ADDITIONAL RESOURCES



ADDITIONAL LINKS FOR RESIDENTS

Wildfire Preparedness

Wildfire Preparedness

Our most important job is to provide reliable, safe, affordable and clean energy to power your day-to-day.

[Sign Up for Alerts](#)

[Outage Map](#)

[Check Outage Status](#)

[PSPS Event Update Page](#)



Preparing for an Outage



Outage Checklist



Restoring Outages



ADDITIONAL PROGRAMS

Red Truck

- Direct customer support
- Resolve billing concerns
- Enroll in energy-saving programs
- Rebates
- Bill education

Safe for Colorado

- Notifications
- Medical Certification
 - Suspend late fees/disconnection
- Colorado Medical Exemption
 - Discounted electric rates
- Battery Energy Storage System



QUESTIONS?



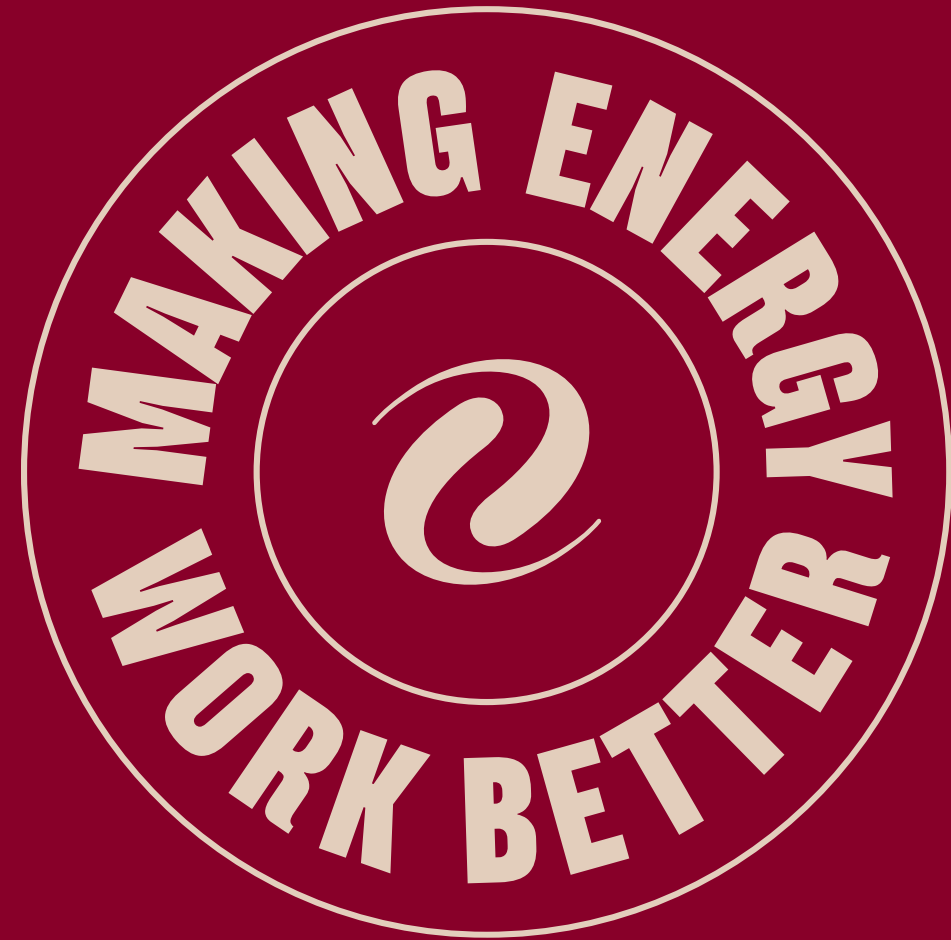
THANK YOU.

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