



Boulder Xcel Advisory Panel Meeting

May 13, 2024

5:30-7:30pm, Zoom

[This Photo](#) by Unknown Author is licensed under [CC BY-NC-ND](#)

Agenda

- **New Panel Member**
- **Project Updates**
 - 30 Pearl Launch
 - Heat Pump Accelerator Pilot
- **Xcel Updates**
 - Power Outage Learnings, Next Steps & Discussion
 - Emissions Target
 - Open House
- **Panel Membership Terms & Renewals**
- **Wrap Up & Next Steps**

Project Updates

30 Pearl Launch

- EV carshare with bi-directional charging is now operational at 30 PRL.
- Goals: expand access to affordable electric mobility, test ability to reduce electricity costs through bi-directional charging paired with car share.
 - Builds on successful pilot at North Boulder Recreation Center.
- Partnership between City of Boulder, Xcel Energy, Boulder Housing Partners, Colorado CarShare.

Heat Pump Accelerator Pilot

Overview

- Focused effort to test our approach for accelerating the adoption of heat pumps through an applied pilot project.

Target Audiences

- Residential customers with electric resistance heating
- Contractors who would install heat pump systems

April 25th Workshop

AP Members: George, Wayne, Pat, Steph, Justin, Julie;
Xcel: Selena, Allison, Grace; **Energy Smart:** Jasmine; **City:** Carolyn, Emily; **IBE:** Josie



This Photo by Unknown Author is licensed under [CC BY-NC-ND](https://creativecommons.org/licenses/by-nc-nd/4.0/)

Desired Outcomes & Timeline

Desired Outcomes

- Detailed case studies, including financials
- Marketing materials
- Contractor programs & education

Timeline

- Resident and contractor focus groups in late spring / early summer
- Develop program plan – summer
- Target launch in October 2024

We need your help!

- Do you know anyone who has recently installed a heat pump?
- Anyone who currently has electric resistance heating?
- Anyone who is thinking about adding AC or doing a major renovation?
- Any HVAC contractors?
- *We will be sending out information in the coming weeks and you can help spread the word for focus groups.*

Xcel Updates

Power Outage

Process

- Xcel will present information
- Panel members will each have 1-2 minutes to respond in turn with their questions for Xcel and the City
- Xcel and the City will respond
- Open dialogue

As you listen, consider...

- What are your clarifying questions?
- What do you want to know more about?
- What are your thoughts / questions for next steps?

Operational Mitigations Utilized for High Fire Risk

WSO

Wildfire Safety Operations (WSO)

- Basic capability: **Disabling of auto reclosing** of both feeder and transmission protection devices
 - Mitigates ignition risk by preventing auto-reclosers from repeatedly attempting to reclose into a fault, which could cause sparks
 - Mitigates risk of line reclosing after sparking and causing ignition without knowledge of ignition
 - Lines with a **“hot line tag”** (for crew safety when performing hot work) able to trip very fast, further mitigating ignition risk
- Most sophisticated capability: WSS (discussed below)

WSS

Wildfire Safety Settings (WSS) – Sometimes referred to as *Enhanced Powerline Safety Settings (EPSS)* by other utilities

- Feeders **sectionalized** with WSS devices, limiting areas subject to potential outages and reducing restoration time
- **Auto-reclosing disabled** and **fast-trip wildfire protection settings** enabled
- **Operated remotely** using the SCADA system, limiting need for truck rolls to implement protective settings
- Piloting on 8 feeders; will require investment and time to implement across the system

PSPS

Public Safety Power Shutoff (PSPS)

- Mitigation of **last resort** for highest risk events
- **Proactive de-energization** of lines ahead of anticipated significant wildfire risk
- Currently performed at the feeder level for distribution lines (WSS sectionalization will increase granularity)

April 6-7 Wind Event Overview

Weather Forecast

The NWS office in Boulder, CO issued a Red Flag Warning effective 12 p.m. Saturday, April 6, to 6 p.m. Sunday, April 7, for Boulder and Jefferson Counties for wind speeds possibly reaching 100 mph and low relative humidity levels of between 18-25% with a combination of strong winds, low relative humidity, and warm temperatures, which can contribute to extreme fire behavior.

The NWS forecast further advised that “damaging winds could blow down trees and power lines. Widespread power outages are possible. Travel could be difficult, especially for high profiled vehicles.”

Moderate-low dead fuel moisture levels (8-11%), and very low live fuel moisture levels (33%) existed.

Outage

Approximately 275,000 customers experienced outages during the event.

Proactive de-energization impacted 24 feeders across approximately 680 miles of distribution lines and impacted approximately 52,000 customers.

Damage

Replaced approximately:

- 94,000 ft. of wire/cable
- 124 poles
- 186 cross arms
- 34 transformers
- 777 fuses
- 95,000 pieces of pole hardware

Deployed 85 construction crews and 47 tree crews, representing approximately 580 crew members.

April 6-7 Wind Event Overview

**Tree branch breakage
in distribution line
Boulder, CO**



**Tree fall into
distribution cross-arm
Arvada, CO**



**Tree Impact with
distribution line
Littleton, CO**



**Tree impact with service
and cross-arm
La Porte, CO**



Event Restoration

Prioritization of Distribution Feeder Restoration

- Total customers impacted (i.e., customer count)
- The length of outage on the feeder
- Identification of critical need customers

Restoration Process for WSO and PSPS Lines

- Crews assigned to feeders
- Segment feeders by removing taps and isolating sections of the line
- Patrol impacted lines and stage for energization
- Inspections began at the exit point of the applicable substation and continued to a reclosure
- When feeder section deemed safe it's energized
- Patrols continued to the next section of the feeder
- After a feeder is energized, crews patrol each line tap
- As taps cleared as safe, they are energized
- For WSO a larger area is patrolled than for storm outages to ensure the safety of the facilities for re-energization
- For PSPS outages the entire de-energized feeder is patrolled

Restoration Timeline

- 580 crewmembers working 16-hour shifts
- Crews conducted repairs for outages not related to WSO or PSPS throughout event

Sunday April 7

12:00 noon – Conditions deemed safe, and crews begin segmentation and tap removal

2:00 pm – Patrolling begins

5:00 pm – 45% of all outages (40% of PSPS outages) restored

11:00 pm – 58% of all outages (58% of PSPS outages) restored

Monday April 8

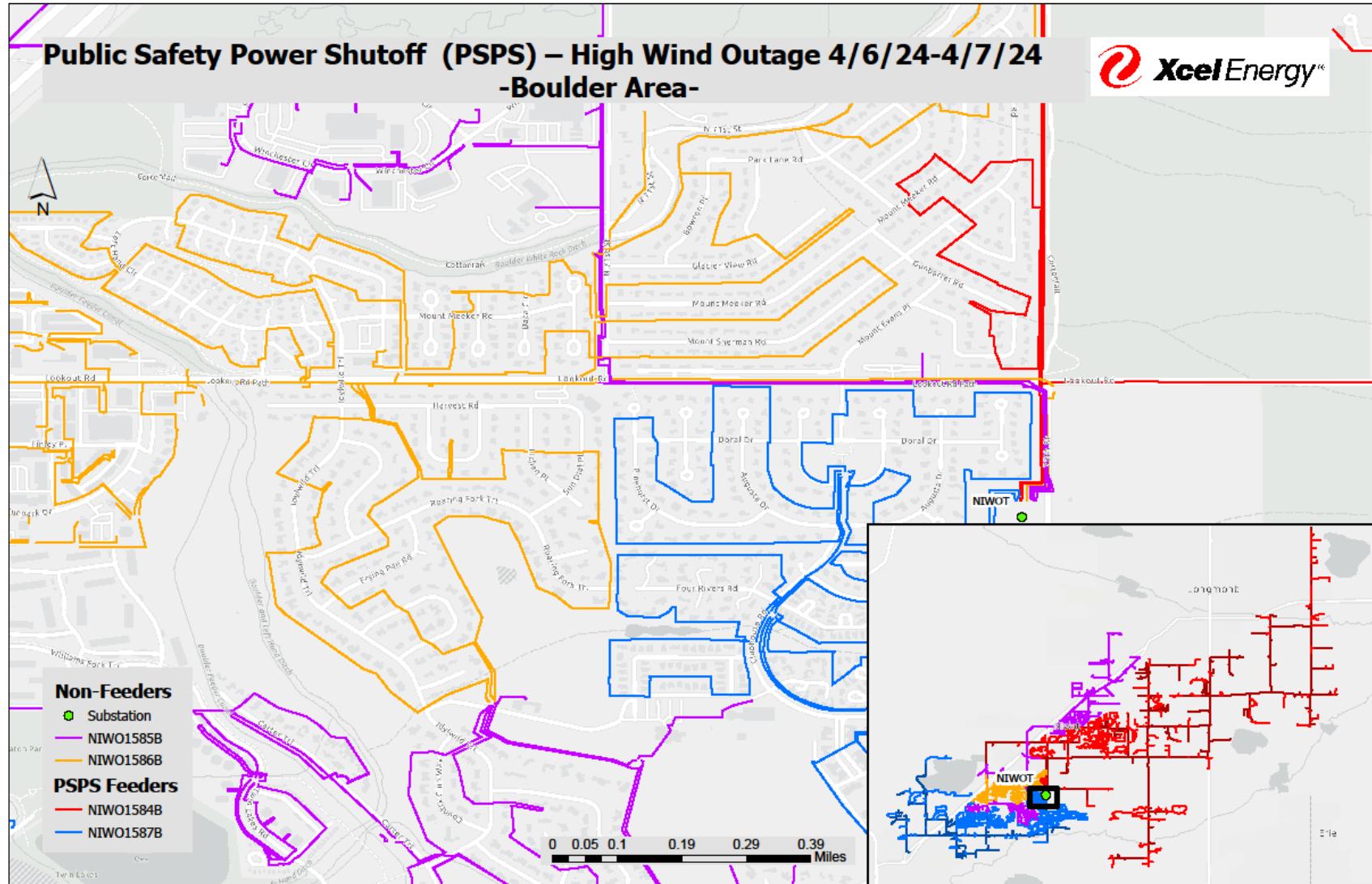
12:00 noon – 76% of all outages (75% of PSPS outages) restored

11:00 pm – 92% of all outages (97% of PSPS outages) restored

Wednesday April 10

12:00 noon – 100% of all outages restored

Neighborhoods Impacted by PSPS



Commitment to Improve

Wildfire Mitigation Plan for 2025-2027 to be filed in Q2 2024

Comprehensive plan to implement mitigation programs and lead to more surgical use of PSPS including

- Undergrounding lines in high-risk areas
- Improved Situational awareness through new tools – cameras, weather stations, etc.
- Deployment of WSS including sectionalizing devices to narrow the area of possible PSPS

Company Commitments

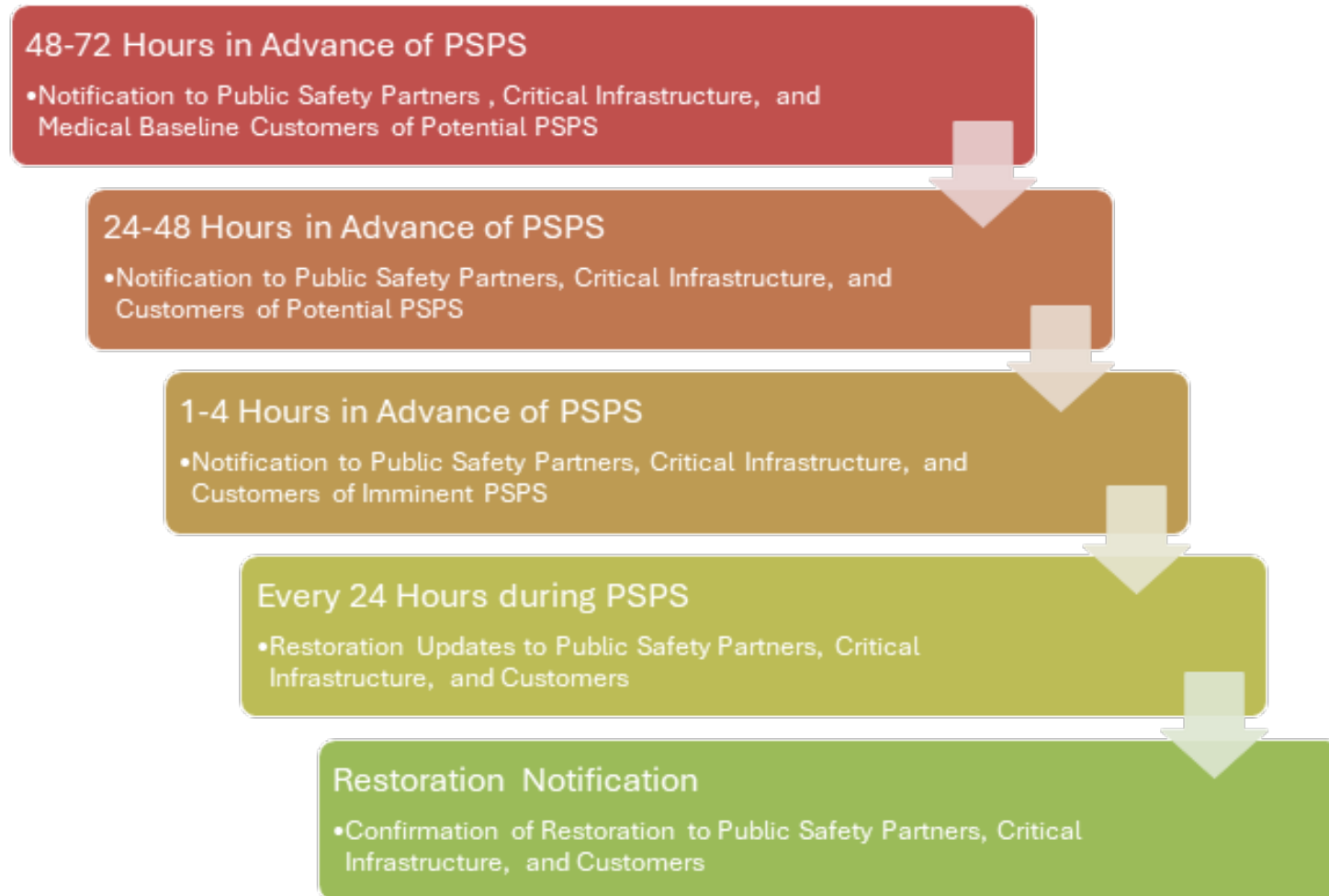
- Improve our proactive communications about extreme weather events so our customers can better prepare.
- Better inform our customers about what PSPS events are, when they occur, and how to prepare for them.
- Quickly publish maps of the affected areas to keep customers informed of where outages are and the state of our restoration efforts.
- Continue to support line workers who rapidly respond to outages so we can restore the power as quickly and safely as possible.

Actions Taken and In Process

- Efforts are in progress to validate all critical facility customers, determine status of back up generation, and establish communication and coordination processes, which include 48-72 hour notification or as soon as we are aware of potential PSPS conditions
- Will contact all residential customers in May to inform them of the medical certification program and solicit them to opt-in if eligible.
- Exploring battery programs for vulnerable customers

Future PSPS Communication

The Company is working toward earlier and more frequent PSPS communications



Power Outage: Round Robin

Each panel member will have 1-2 minutes to offer their thoughts and questions to Xcel and the City.

Xcel and the City will respond once all panel members have had a chance to voice their thoughts.

Open dialogue will follow as time permits.



This Photo by Unknown Author is licensed under [CC BY-SA](#)

Emission Targets

- Review process and conversations so far
 - AP meeting
 - City Council Meeting 2.15.24
- Lingering questions?
- Additional Follow Up

Open House

Residential Open House-Wednesday, June 26th 4:00pm-6:30pm

- Topic Areas:
 - Energy Efficiency
 - Red Truck Initiative
 - Solar and Battery Storage
 - Resiliency and Reliability
 - Time of Use
 - Wildfire Mitigation
- Feedback
 - Draft topic
 - Additional panel input

Advisory Panel Membership

Terms

Member	Term Expires
Dennis Arfmann	2026
Justin Brant	2026
George Craft	2025
Eli Feldman	2024
Bryn Grunwald	2025
Patrick Hillmeyer	2025
Stephanie Hsuing	2026
Brian Lindoerfer	2024
Peter Lilienthal	2025
Andy Sayler	2026
Wayne Seltzer	2025
Emily Swallow	2024
Amanda Meader	2026
Julie Zahniser	2024

Plan for Recruitment

We currently have 14 panel members.

- Confirm 2023 to 2026 renewals
 - Steph, Andy, Justin
- Confirm upcoming 2024 renewals
 - Julie, Emily, Eli, Brian

Discussion

- Confirm intent to renew with Carolyn by May 31st for 2023 and 2024 renewals
- Are there any segments/ roles/ perspectives needed at this time?
- Do we need a more deliberate renewal process?
- Evolving the role of the panel? Opportunities to further empower the panel?

Next Steps

Next Steps

- Iffie's New Role
- Upcoming Engagement Opportunities
 - Office Hours – 3pm, June 14th, Civic Center Municipal Building
- Heat Pump Accelerator Pilot Focus Groups
 - We will send invitation info soon for you to help recruit participants
- Next AP meeting
 - August potential meeting with the executives?



Thank You!

