

December 2022 Storms: Successes and Improvements

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February 2023 | OPUC Presentation



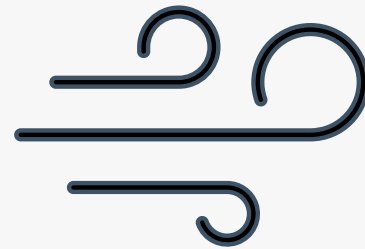
December weather events



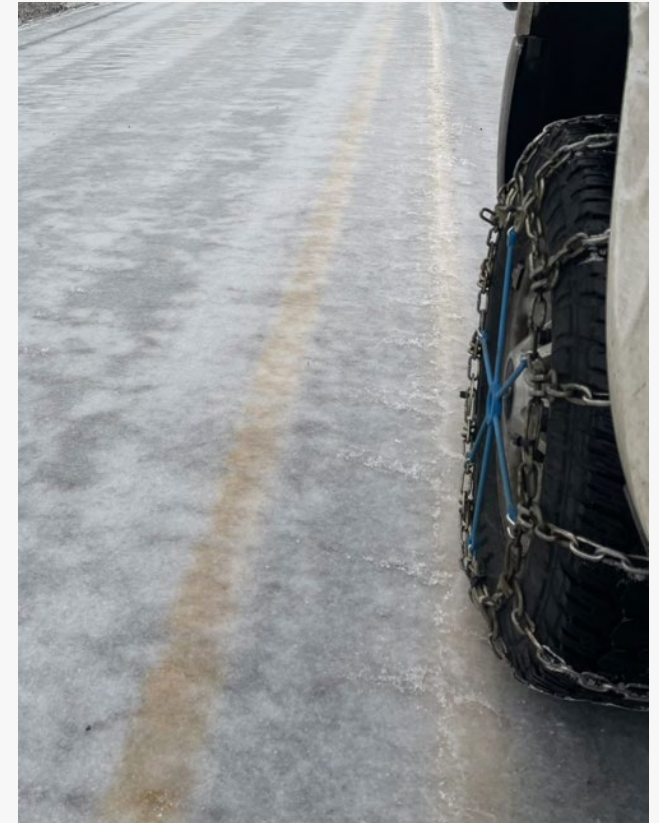
**December
22-24**



**December
26-27**



**December
27-31**



Advanced warning

Ice Storm

Friday, Dec 16: PGE Meteorologist briefed operations leadership team on expected weather

Monday, Dec 19: PGE CIMT on standby

Tuesday, Dec 20: PGE Meteorologist updated operations leadership with warning of possible ice accumulation

Windstorm

Friday, Dec. 23rd: Potential for high winds mentioned on the Daily Ops. Call

Sunday, Dec 25: PGE Meteorologist raised concern to management regarding wind forecasts Sunday, Dec. 25th.

PGE Utility Weather Impacts

Monday, December 19, 2022

- Main Points:
- Weather system Tuesday into Wednesday bringing a mix of light rain and snow to the lowlands, 6-10" of snow for high Cascades
 - Very cold temperatures and gusty Gorge east winds Wednesday night - Thursday
 - Potential for light freezing rain Thursday night into Friday service territory, best chance along the Gorge. Potential will spread east Friday.
 - Warming trend with rain for the holiday weekend.

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
<i>Location</i>	<i>19-Dec</i>	<i>20-Dec</i>	<i>21-Dec</i>	<i>22-Dec</i>	<i>23-Dec</i>	<i>24-Dec</i>	<i>25-Dec</i>
Portland	☔*	☔*	☔	☔	☔	☔	☔
Gresham	☔*	☔*	☔*	☔*	☔*	☔	☔
Salem		☔	☔		☔	☔	☔
Government Camp	☔	☔	☔	☔	☔	☔	☔
WestGen	☔	☔	☔	☔	☔	☔	☔
Hillsboro	☔*	☔*	☔*	☔*	☔*	☔	☔
Biglow/EastGen		☔		☔	☔		
Pelton Round Butte		☔		☔	☔		
Tuccannon		☔	☔	☔	☔	☔	

Key

- ☔ Rain
- ☔☔ Heavy Rain
- ☔ Snow
- ☔☔ Heavy Snow
- ☔ Freezing Rain

Potential high impact

High impact

Preparing for the Storm

Conducted operational and resource planning



Mutual aid requested



Communicated with customers



Combined storm impact

Materials issued

- Cross Arms Issued: **145**
- Poles Issued: **329**
- Transformers Issued: **156**
- Wire/Cable (excluding bare): **10.6 Miles**
- Bare Wire: **7.4 Miles**

211,825

* Total unique meters affected

3686

**Unique critical customers affected (level 1-3)

61%

Percent of outage events affecting 2 or less customers

*Outages cover Dec 22-24 and 27-31

**Critical Customer Definitions:

- Level 1: Life Saving
- Level 2: Life Sustaining
- Level 3: Situational Awareness



Customer updates on web, email, social



Update regarding the outage status at ~~ServAddress~~

We're following up to make you aware that your original estimated restoration time, listed on portlandgeneral.com/outage, has been

ex
US
T...



Una actualización sobre el estado del apagón en ~~ServAddress~~

Nos ponemos en contacto con usted para informarle de que el tiempo estimado para el restablecimiento del servicio, que listada en portlandgeneral.com/outage, se ha prolongado hasta `Format(ERT, "MMM dd, yyyy h:mm tt", "Date", "en-US")` y proporcionar información adicional.

El temporal de viento del martes dejó sin electricidad a más de



Portland General Electric

December 27, 2022 · 🌐

All downed and sagging power lines are dangerous, please stay away from them. Our crews are working as quickly as safety allows through these conditions to get power back up and running.

Todas las líneas eléctricas caídas y flojas son peligrosas. Aléjese de ellas, por favor. Nuestras equipos están trabajando tan rápido como la seguridad lo permite en estas condiciones para restablecer la energía.



👍👍👍 67

83 42



Portland General @portlandgeneral · Dec 23, 2022

Buenos días. Nuestros equipos están trabajando lo más rápido posible para restaurar la energía con seguridad. Agradecemos a nuestros clientes por la paciencia mientras los equipos trabajan. Consulte el mapa de apagones que se actualiza en directo: bit.ly/3Vmqtrp. (2)



2 5 4 10.7K

Show this thread



Portland General @portlandgeneral · Dec 23, 2022

Good morning. Our crews are working as quickly as possible to safely restore power. Thank you to our customers for your patience while crews work. Check our outage map for live updates: bit.ly/3Vmqtrp. (1/2)

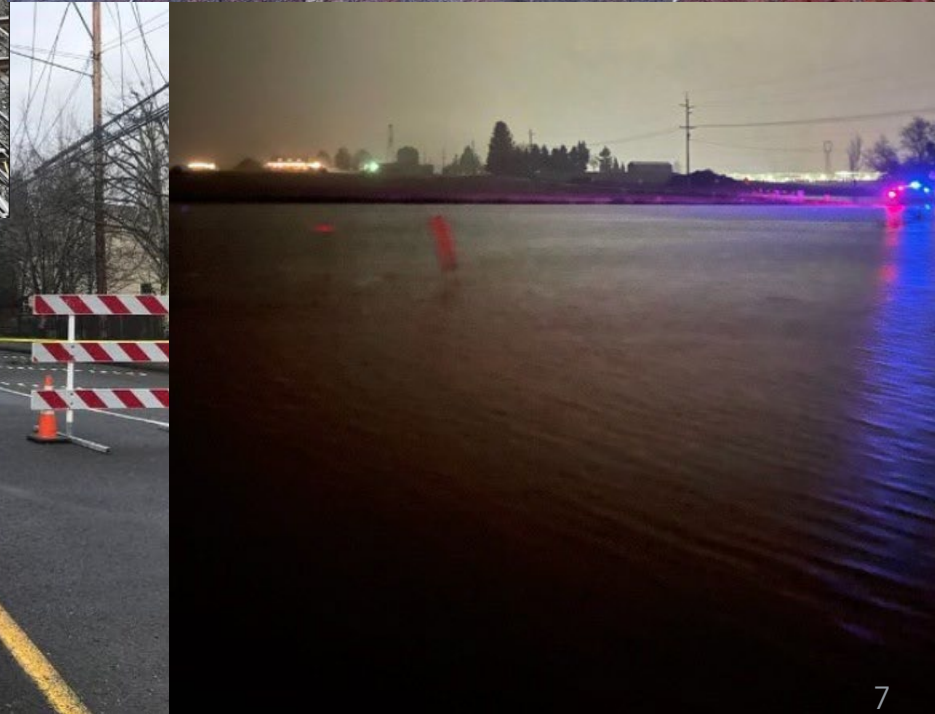
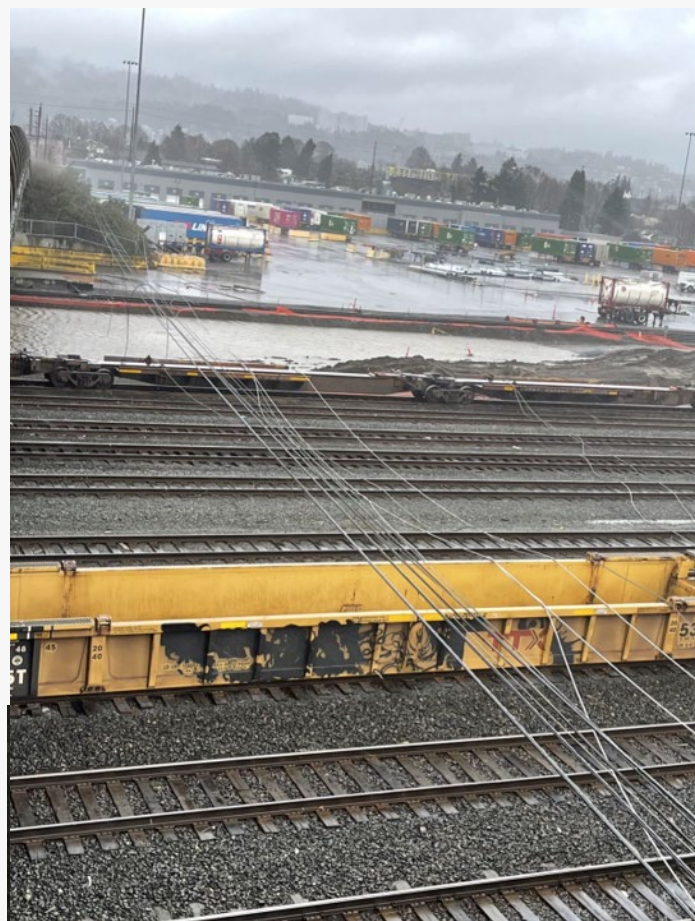


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Challenging Conditions

Crews worked to restore customers across difficult conditions:

- **Frozen roads**
- **Urban Flooding**
- **High Winds**
- **Debris**
- **Access impacts**
- **Short daylight hours**





NOTICE
GATE CLOSED
from DUSK until DAWN
FOR EMERGENCY ACCESS
CONTACT: 503-630-8361
GATE OPERATES AUTOMATICALLY
(MAY BE CLOSED AFTER 4:00 PM IN THE WINTER)

SLOW



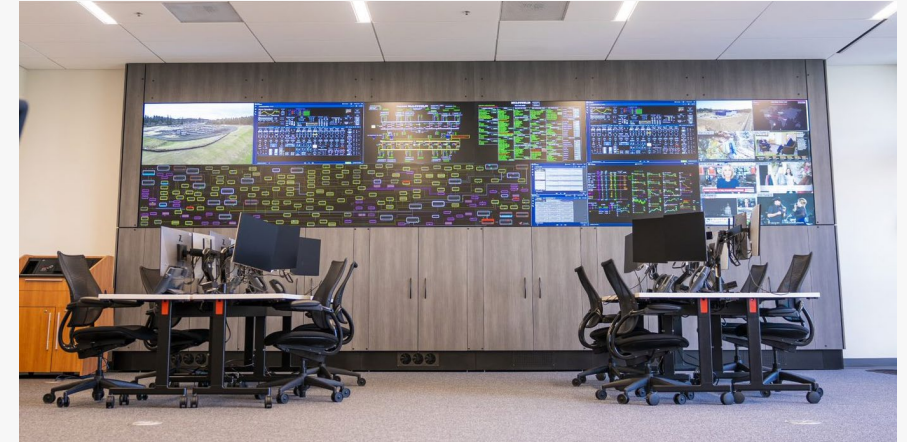
Successes



- Proactive planning, monitoring and communications
- Rapid activation of the Emergency Operations Center to quickly support customers and response partners
- Coordinated set-up of PGE's Processing Site and quick onboarding assisting line crews to increase restoration rate
- Operational and customer communication readiness
- Improved coordination with Portland Water Bureau for safety awareness

Improvements

- Deepen bench strength for larger outage events and to cover seasonal holidays
- Enhance EOC dashboards for crew monitoring and calibrate with outage information to support robust situational awareness
- Improve day-ahead strategic planning for IMT staff to improve communications and logistics support
- Formalize hazard communication and coordinated planning with Portland Water Bureau Dam Safety staff for safety of responders



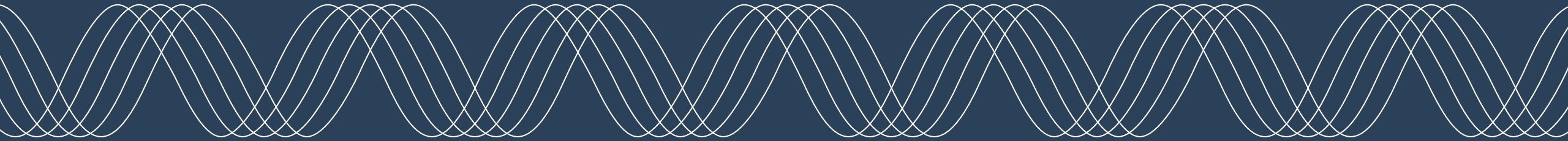
Thank you

Please email BCEM@PGN.com for any clarifications, additional questions, or to share feedback



**Let's
meet the
future
together.**

Appendix



Weather Overview

Dec. 22-24 Ice Event

Ice Accumulation

Overall:	0.1 - 0.3 inches
Cascades:	0 - 0.01"
Cascade Foothills:	0.10 - 0.25"
I-5 N. of Ore. City:	0.10 - 0.25"
I-5 S. of Ore. City:	0.01 - 0.10"
Coastal Range:	0.25 - 0.33"
Gorge Exit Region:	0.25 - 0.5"

Dec. 27-31 Wind Event

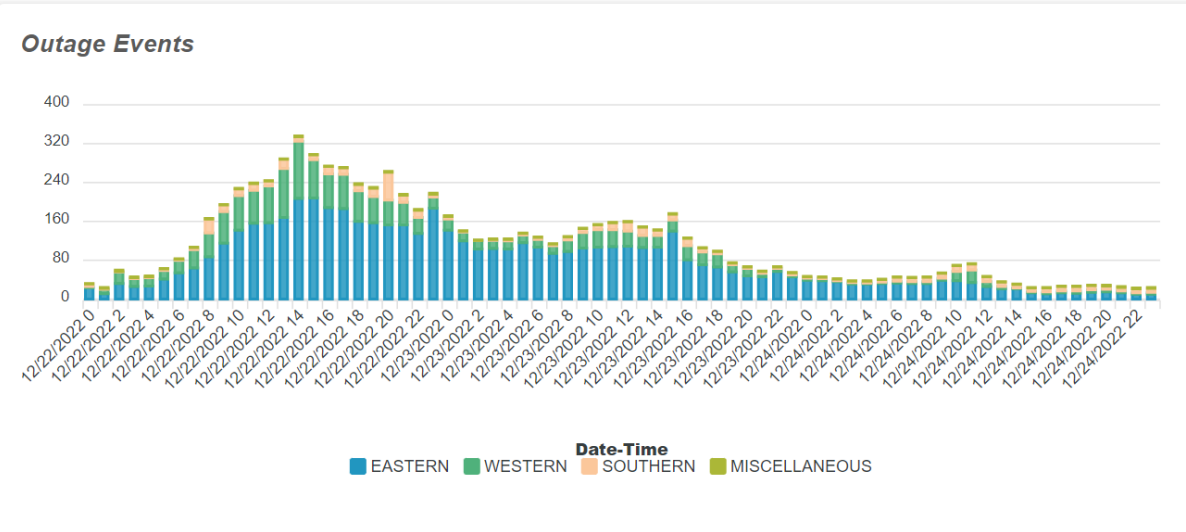
Max Gust

Cascades:	30-45mph, gusts 55-70mph
Cascade Foothills:	30-40mph, gusts 50-65mph
Coastal Range:	30-40mph, gusts 50-65mph
I-5 Corridor:	25-30mph, gusts 45-55mph
Exit Region of Gorge:	25-30mph, gusts 45-55mph

Outages by Storm



December 22-24 Ice Event



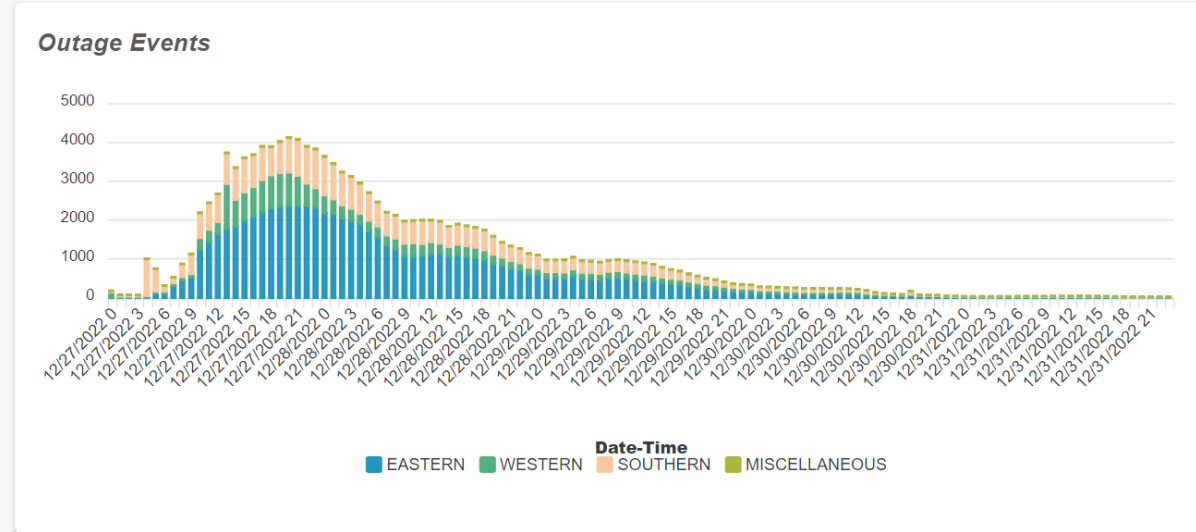
53190 unique customers impacted
63817 total customer impacts (17% multiple outages)

Of 447 Events, 203 (45%) effected ≤ 2 customers

Critical Customer Impacts:

- Level 1 - Life Saving: 103 unique customers
- Level 2 - Life Sustaining: 102 unique customers
- Level 3 - Situational Awareness: 630 unique customers

December 27-31 Wind Event



158635 unique customers impacted
187415 total customer impacts (15% multiple outages)

Of 2602 Events, 1665 (64%) effected ≤ 2 customers

Critical Customer Impacts:

- Level 1 - Life Saving: 399 unique customers
- Level 2 - Life Sustaining: 303 unique customers
- Level 3 - Situational Awareness: 2149 unique customers

