

TPU SD 7

Reliability & Resiliency

Power, Water, & Rail Emergency Management

Public Utility Board Study Session
March 9, 2022



● ● ● OVERVIEW

- Progress to Date
- Challenges and Barriers
- Priorities for 2022.

● ● ● Measurement 1:



On an average basis, TPU expects power outages among all residential customers within its service area, on average, one outage per year and those outages will not exceed 75 minutes in duration. TPU will calculate the outage frequency and duration measures using industry-standard methods.

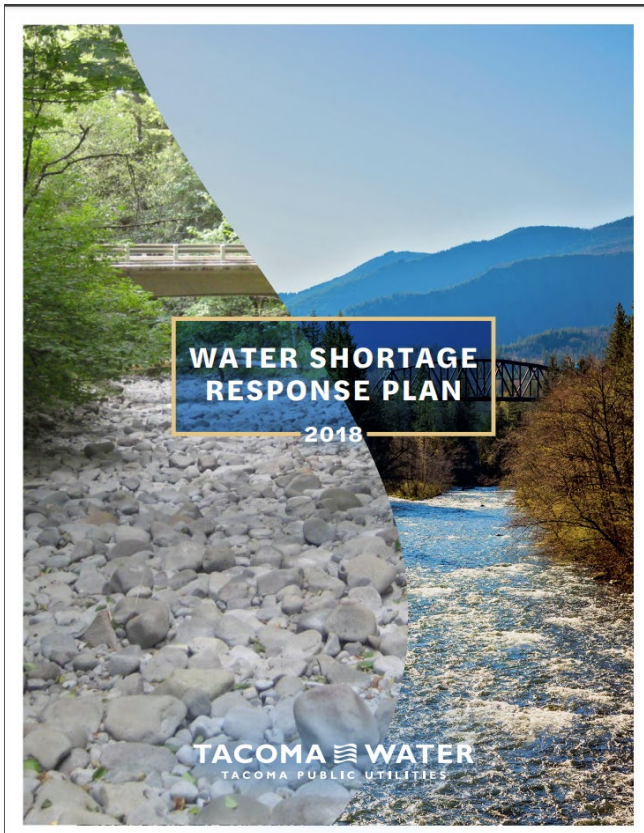
*On average Tacoma Power **Customers** have experienced 0.70 outages lasting an average of 91 minutes in 2021.*

● ● ● Measurement 2:



Tacoma Water will maintain sufficient source supply to avoid residential customer curtailments 99 percent of the time on average.

- *No residential customer curtailments have occurred the past year.*



Measurement 3:



Tacoma Water will maintain compliance with state and federal drinking water regulations 100 percent of the time.

- *Tacoma Water has no violations to report.*
- *Water will report on this measure annually in the Annual Water Quality Report*

Three-Year Compliance History by Quarter

[Download Data](#) 

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
	RCRA (Source ID: WAD114685373)	04/01-06/30/19	07/01-09/30/19	10/01-12/31/19	01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified

Statute	Violation Type/Category	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12	QTR 13*
	SDWA (Source ID: WA5386800)	10/01-12/31/18	01/01-03/31/19	04/01-06/30/19	07/01-09/30/19	10/01-12/31/19	01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21
	Facility-Level Status	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation
	Category	Violation Type												

*Quarter 13 data is voluntarily entered and/or incomplete, and may not form a complete picture for that quarter. [Read more](#)

SDWA Compliance Data Last Reported: 12/13/2021

Measurement 4:

Tacoma Rail expects to deliver intermodal trains at least 95 percent on-time and will deliver commercial carloads at least 85 percent on-time

2021 Commercial KPI:

99.1% On Time Performance

2021 Intermodal Train

Departure KPI:

100% On Time Performance

2021 Customer Satisfaction

Survey: Dependability Rating:

3.52 out of 4 points (88%)



● ● ● Measurement 4:



Tacoma Rail will maintain compliance with all aspects of our OSCP; and continue to refine our ability to implement rapidly with other key stakeholders.

- *Ecology, Coast Guard, Puyallup Tribe, TFD and Port of Tacoma*
- *2 deployment drills and 1 Tabletop per year (1 worst-case per triennial cycle)*
- *Unannounced Drills*



● ● ● Measurement 5:



TPU will chart the time taken to activate emergency plans against the complexity of the incident or disaster.

Measurement 5:



2021 Activations:

- *COVID-19 Response*
- *Power*
 - *January 13th windstorm*
 - *September 17th windstorm and Tower 143 Replacement*
 - *October 24th windstorm*
 - *November 15th windstorm (no ICS activation)*
- *Water*
 - *Chemical Supply Disruption (Sodium Hypochlorite)-Water*

2021 Exercises

- *Rail*
 - *OSCP Worst Case – Nov. 3rd*
 - *OSCP Deployment – March 3rd*
- *Power & Water*
 - *GridEx-Nov. 2021*
- *Power*
 - *Annual Full Power EAP Emergency Siren Test (Cowlitz & Cushman) – April 7th*
- *Water*
 - *EOP Tabletop – Dec. 2021*

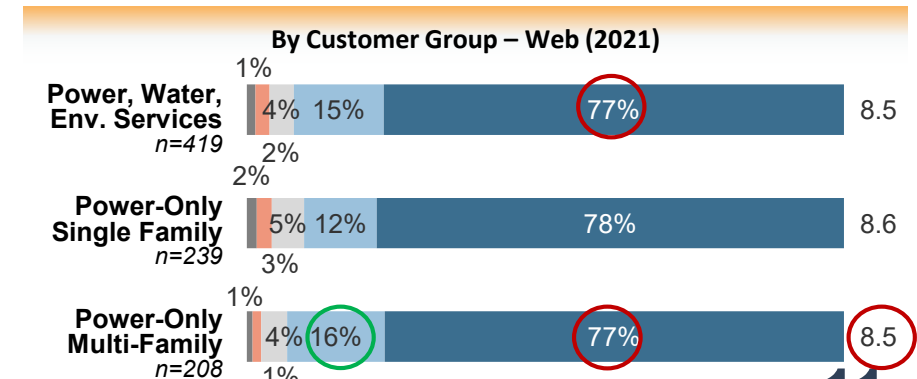
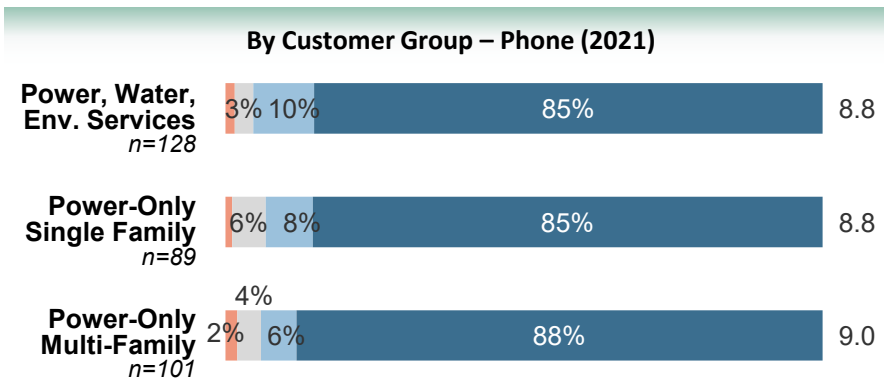
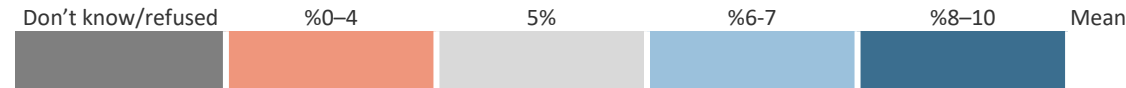
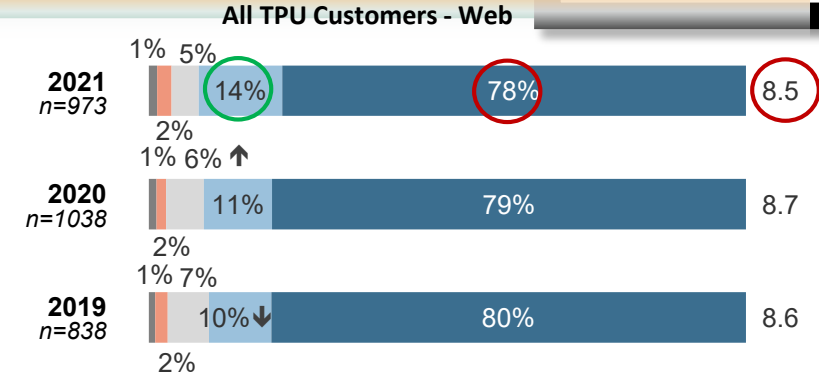
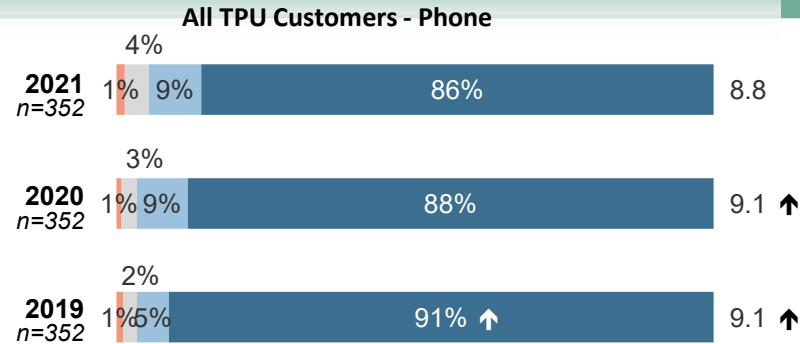
● ● ● Measurement 6:



Customer satisfaction regarding restoration of utility services after disruption is one measure of effectiveness of emergency planning.

Providing Reliable Electric Service

— Tacoma Power



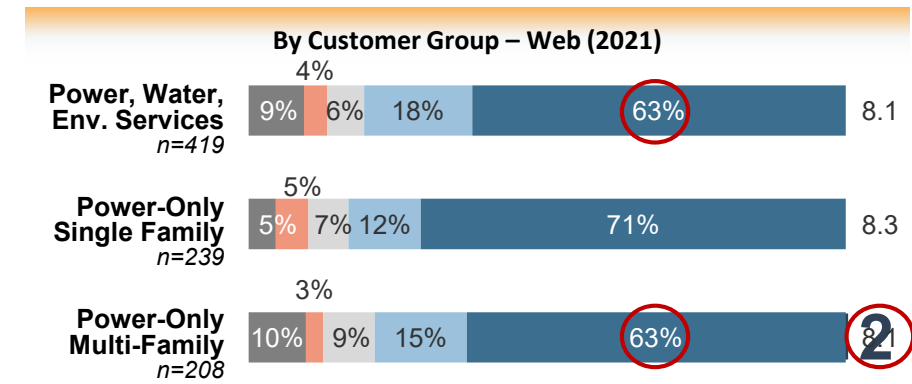
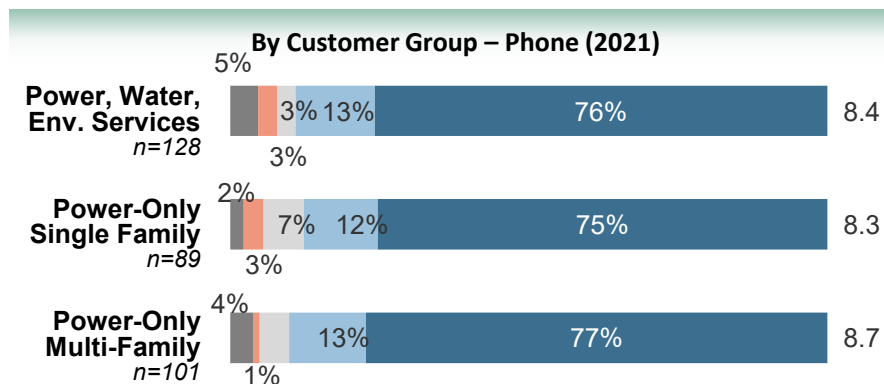
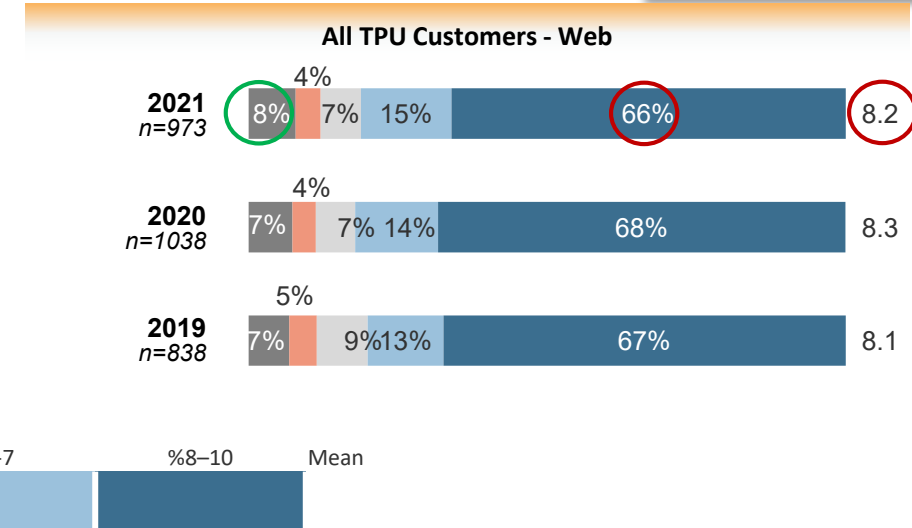
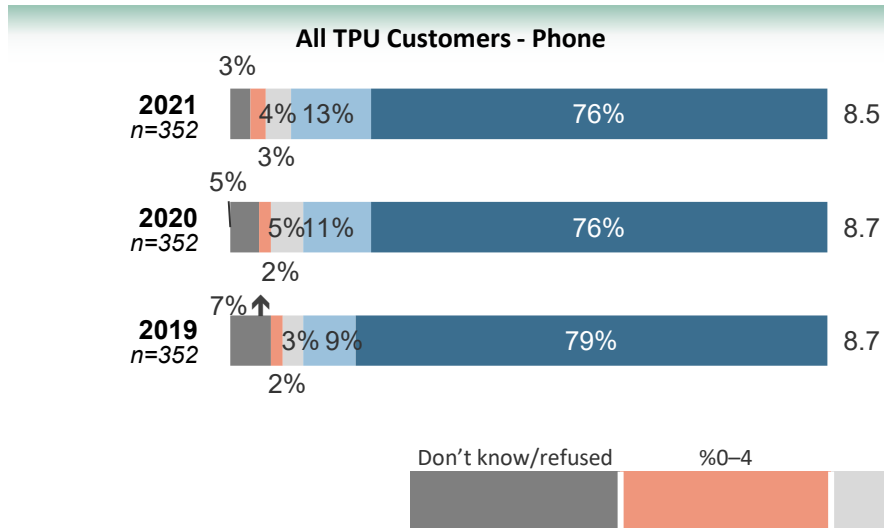
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How would you rate T-P-U's performance with regard to...?

RELIABLE. Providing reliable electric service

↑↓ Indicate significant differences between the current wave and previous waves. ● / ○ circles indicate significantly higher/lower percentages for web results versus the 2021 phone results.

Restoring Power After an Interruption-Tacoma Power



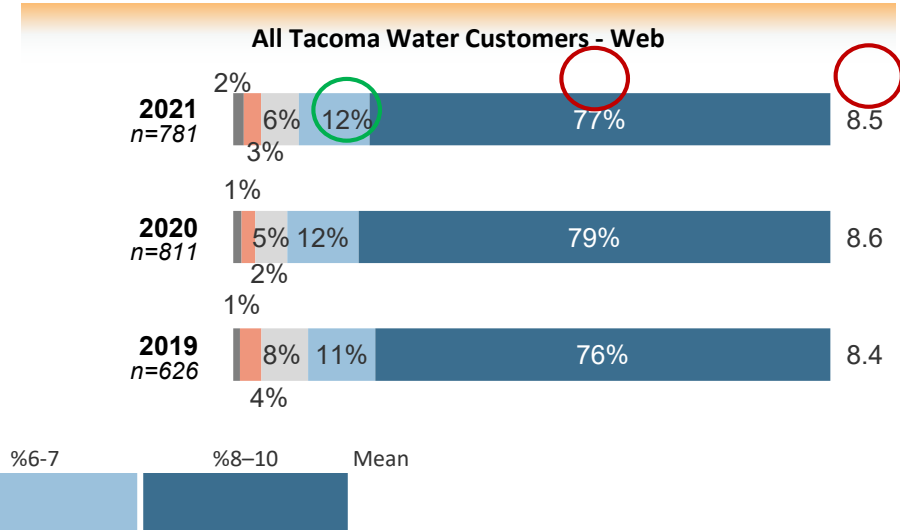
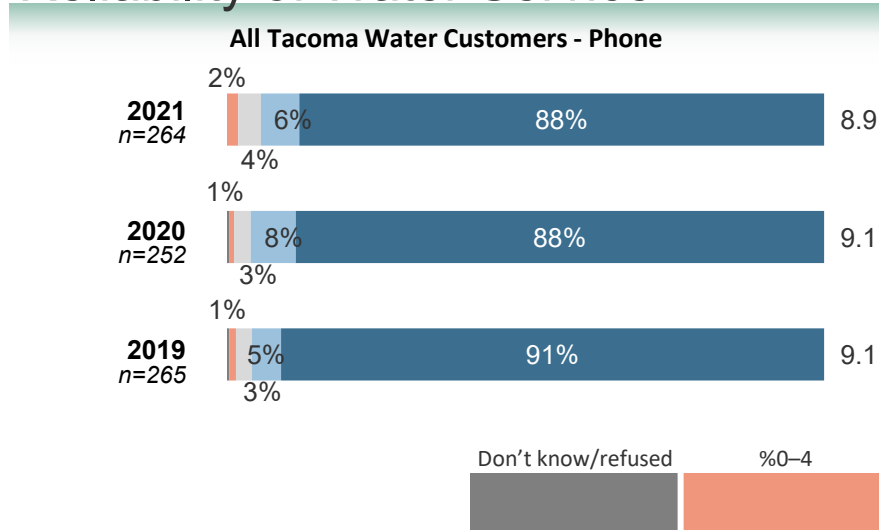
How would you rate T-P-U's performance with regard to...?
ELECTREST. Restoring electric service at your residence after an interruption occurs

↑↓ Indicate significant differences between the current wave and previous waves. ○ / ○ circles indicate significantly higher/lower percentages for web results versus the 2021 phone results.

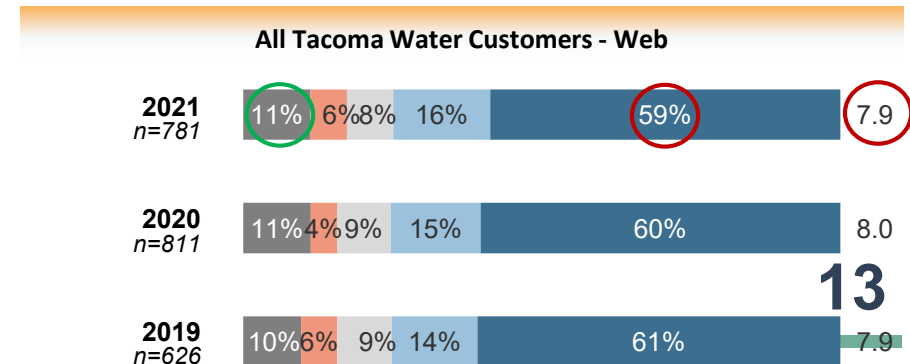
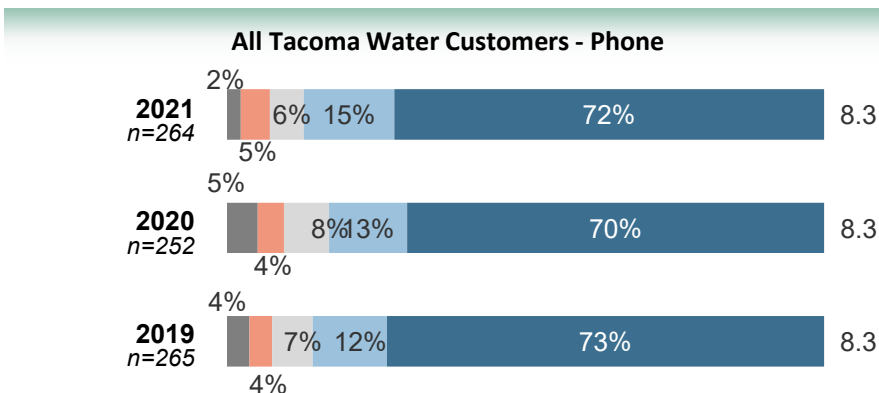
Tacoma Water Service Reliability & Maintenance



Reliability of Water Service



Water Lines are Well-Maintained



How would you rate Tacoma Water's performance with regard to...?

WTRREL. Overall reliability of water service

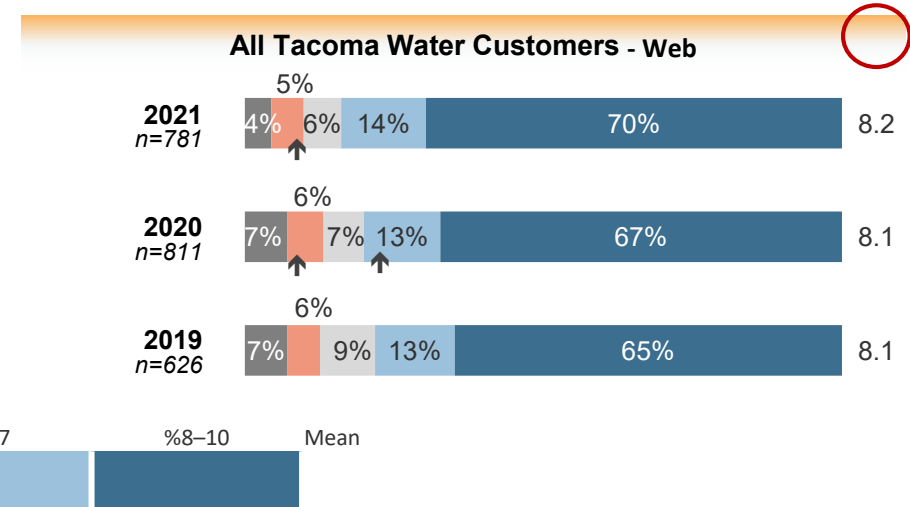
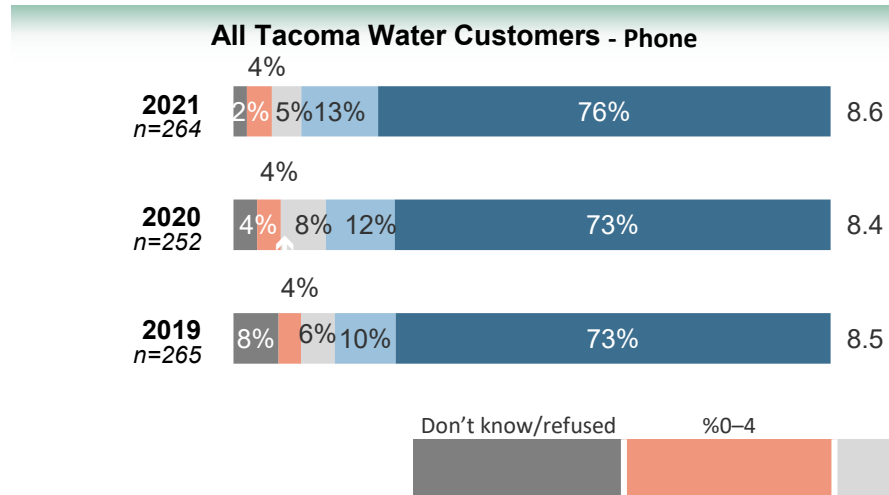
WTRMNT. Making sure all water lines are well-maintained

↑↓ Indicate significant differences between the current wave and previous waves. ○ / ● circles indicate significantly higher/lower percentages for web results versus the 2021 phone results.

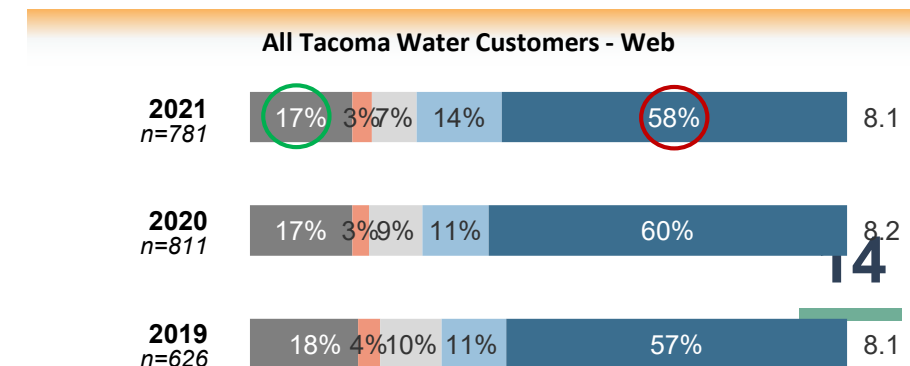
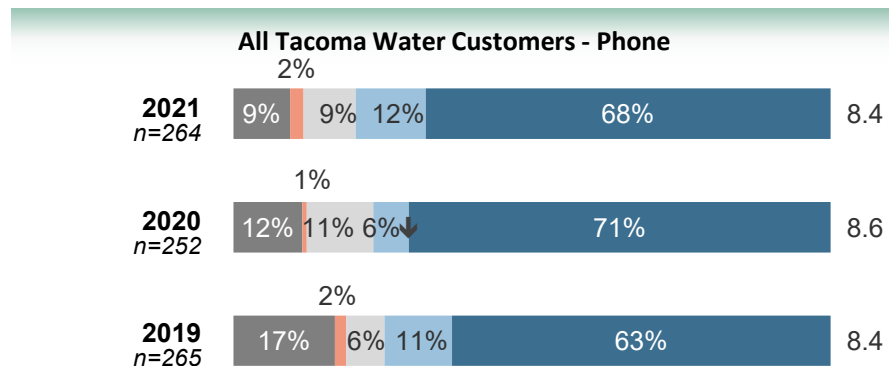
Notification of Planned Outages & Restoration



Notification of Any Planned Outages



Restoring Water After an Interruption



How would you rate Tacoma Water's performance with regard to...?
 NOTMNT. Notifying you of any planned disruptions due to water system maintenance or repairs
 WTRREST. Restoring water service at your residence after an unexpected disruption

↑↓ Indicate significant differences between the current wave and previous waves. ○/● circles indicate significantly higher/lower percentages for web results versus the 2021 phone results.

● ● ● Measurement 7:



Significant emergency preparedness plans (such as Continuity of Operations Plan), policies and procedures should be reviewed annually and updated as need to reflect changes in planning goals, available resources and changing threat assessments.

Measurement 7: COOP



TACOMA PUBLIC UTILITIES CONTINUITY OF OPERATIONS PLAN (COOP)

VERSION 2.0 | FINAL DRAFT | DECEMBER 30, 2021



ANNEX A: MISSION ESSENTIAL FUNCTION (MEF) ASSESSMENTS



TACOMA PUBLIC UTILITIES CONTINUITY OF OPERATIONS PLAN (COOP)

This Annex provides information on each individual Mission Essential Function (MEF). It is formatted in such a way that MEF Leaders and Continuity Personnel can "tear out" individual assessments during continuity incidents.

MEF Assessments include the following information:

- Division/Department/Section responsible for the MEF
- MEF description
- Recovery Time Objective
- Consequence if not performed
- MEF Leader(s)
- List of mandated laws/statutes and regulatory compliance
- Any supporting functions need to perform MEF
- Internal and external stakeholders
- Applicable plan, procedures, policies, and essential records
- Staffing needs and requirements
- Primary and alternate (if applicable) work locations
- Telework availability
- Equipment, backup communications, and IT/OT requirements
- List of acronyms

ANNEX A: MEF Assessments



Tacoma Public Utilities Employee Emergency Response Plan



Tacoma Public Utilities
3628 South 35th Street
Tacoma, WA 98409

CONTINUITY OF OPERATIONS PLAN (COOP)

Our plan for continuing critical services during emergencies and disasters.

TPU COOP



- Applies to all utility facilities and employees.¹
- Addresses all types of hazards and emergencies.²
- Identifies Mission Essential Functions (MEFs).³
- Identifies continuity roles and responsibilities.⁴
- **CONSISTS OF FOUR OPERATIONAL PHASES.**

PHASE I – READINESS & PREPAREDNESS¹

- Maintain plan, update as needed, and review annually.
- All TPU staff receive COOP Awareness training.
- Continuity Personnel participate in annual exercises.



PHASE II – ACTIVATION⁵ & RELOCATION⁶

Senior Leadership determines if the emergency warrants the activation of COOP, which MEFs need to continue, and whether to partially relocate or fully relocate to alternate facilities. TPU staff receive activation notification or appropriate information.

PHASE III – CONTINUITY OPERATIONS

- Continuity Personnel assume their roles/responsibilities.⁷
- Communications with stakeholders and partners.⁸
- MEFs performed until further notice by Senior Leadership.



PHASE IV – RECONSTITUTION⁸ & RECOVERY

Senior Leadership determines when to return MEFs to normal operations. The Reconstitution Team focuses on returning to an existing facility, relocating to a long-term temporary facility or a new permanent facility.

REFER TO THESE COOP SECTIONS FOR MORE INFO:

- 1 – Applicability and Scope, page 12
- 2 – Potential Threats and Hazards, page 14
- 3 – Mission Essential Functions, page 20
- 4 – Roles and Responsibilities, page 16

- 5 – Program Management, page 32
- 6 – Activation and Notifications, page 24
- 7 – Relocation/Alternate Facilities/Telework, page 28
- 8 – Reconstitution and Recovery, page 30.



February 2022
TPU Emergency Management
Secret@tkn.tacomawa



Measurement 7: COOP

● ● ● Measurement 7: Water EOP



Completed in 2021:

- *Water Emergency Operation Plan*
 - *Tabletop Exercise for Command and Control*
- *Emergency Management Steering Team*
- *Standard Operating Procedures/Guidelines (SOP/SOG) update project plan*
- *3 Preparedness Lunch and Learns for all of Water Employees*

Planned for 2022:

- *All SOPs and SOGs listed in the EOP will be updated*
- *Post event potable water supply plan*



Measurement 7: Water ICS

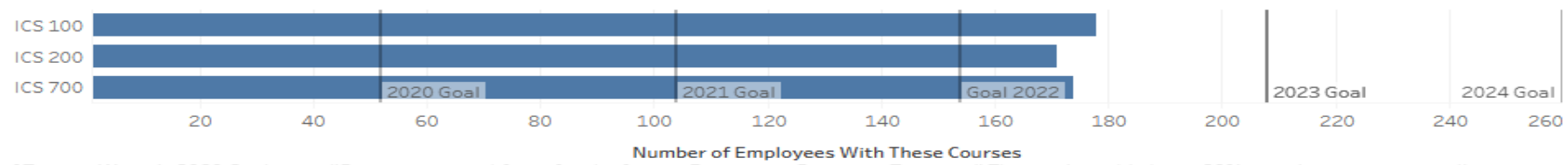


FEMA ICS Courses Summary



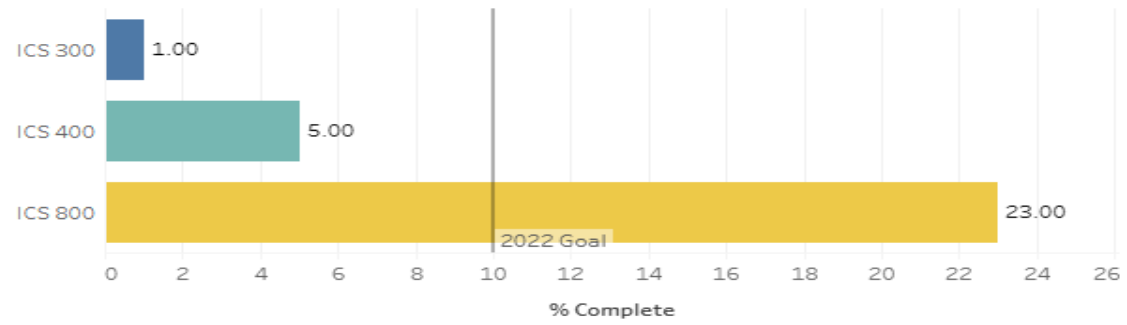
Hover over the info button for more information.

Required Training for All TW Employees



One of Tacoma Water's 2020 Goals is to "Prepare our workforce for the future: Emergency Response Training." This goal establishes a 20% completion rate annually to get to 100% compliance in five years. Note: we have used 260 as the total staff number to calculate these percentages.

Recommended Training for ICS Command and General Staff



TW Employees who may serve in ICS Command or General Staff roles are strongly recommended to take these courses.

We seek to reach 14% of our current staff being trained in these three courses in three years time. This will staff a full ICS implementation with two deep backup.

Because we have a longer way to go here than we do for required training, the following logic for goals was utilized:

1. Assume 36 trained employees is our ultimate goal (with each employee having taken ICS 300, 400, and 800). This would provide 2 deep backup for all expected roles in a full ICS deployment.
2. Assume this will occur over 3 years, not five. Therefore, we need 12 trained staff each year. This chart represents starting in 2021, finishing in 2023.



Measurement 7: Power Plans

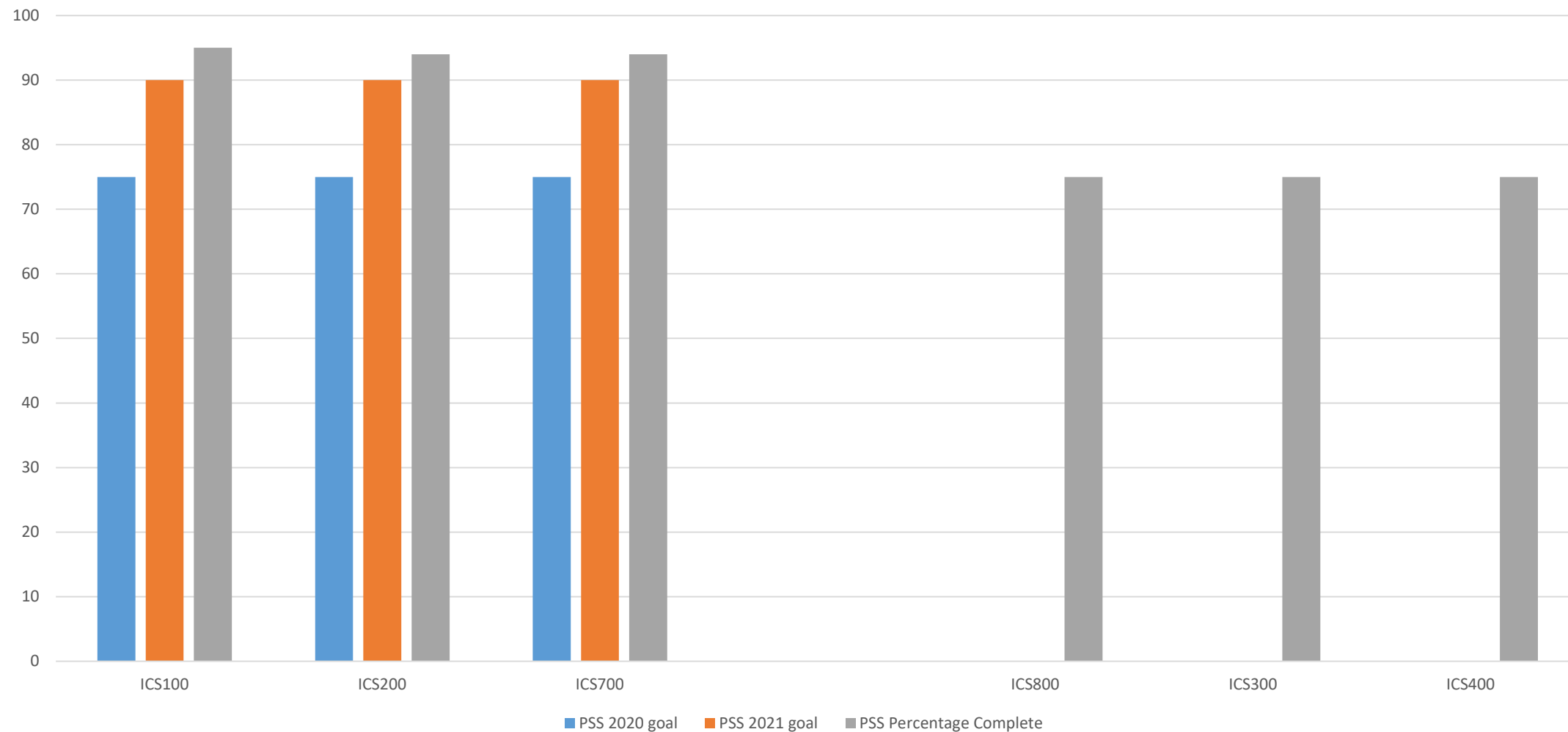


- *Power Plans and Updating:*
 - *Power Generation Emergency Action Plans (EAPs) for all four hydroelectric projects (Cowlitz, Cushman, Nisqually, and Wynoochee)*
 - *Updated: August 2021*
 - *Power Transmission & Distribution (T&D) Emergency Response Plan (ERP)*
 - *Updated: January 2022*
 - *TPU Cybersecurity Incident Response and Recovery Plan*
 - *Updated: February 2022*

Measurement 7: Power ICS



Power Shared Services (PSS)
Employee ICS Training

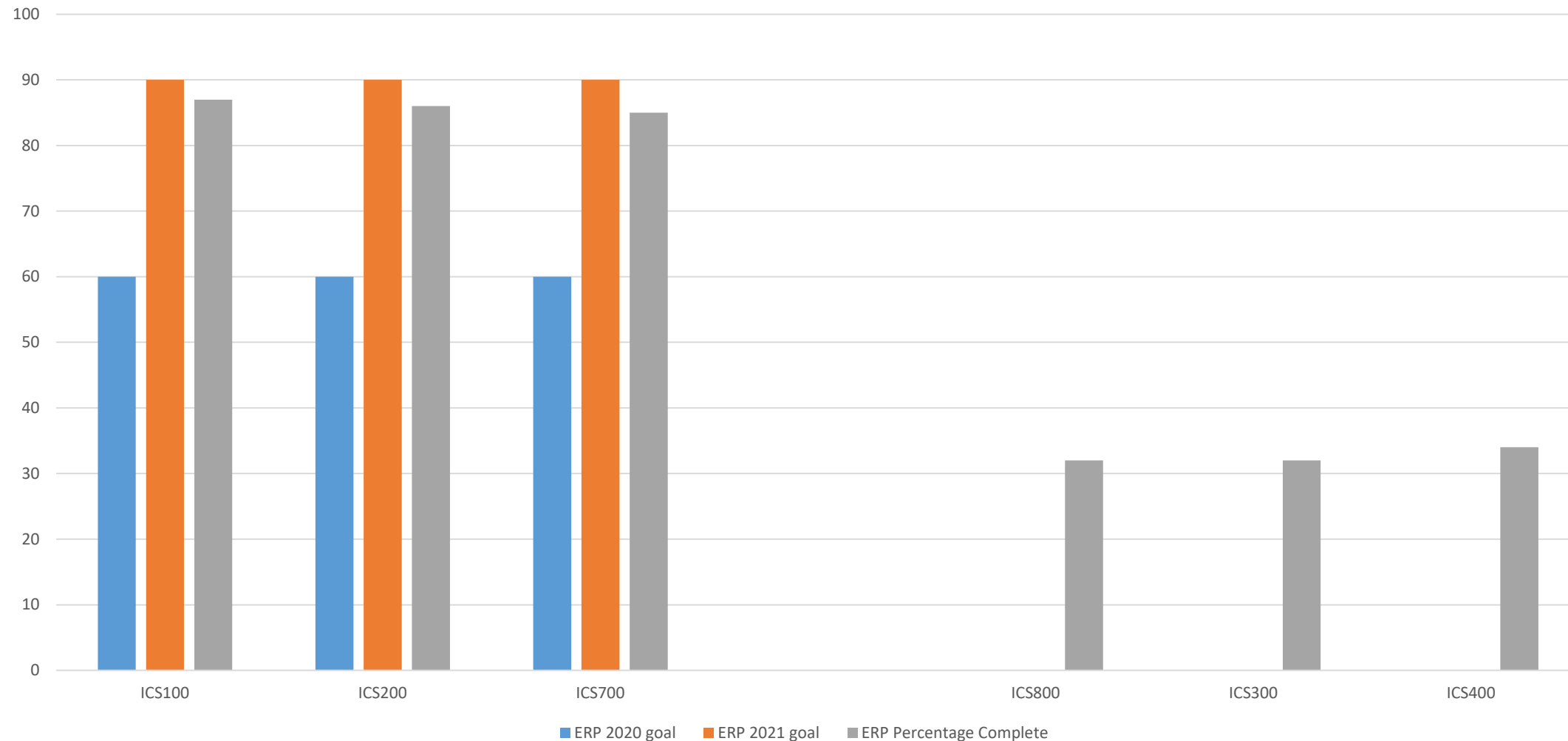


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Measurement 7: Power ICS



Transmission & Distribution (T&D)
Emergency Response Plan (ERP) Employee ICS Training



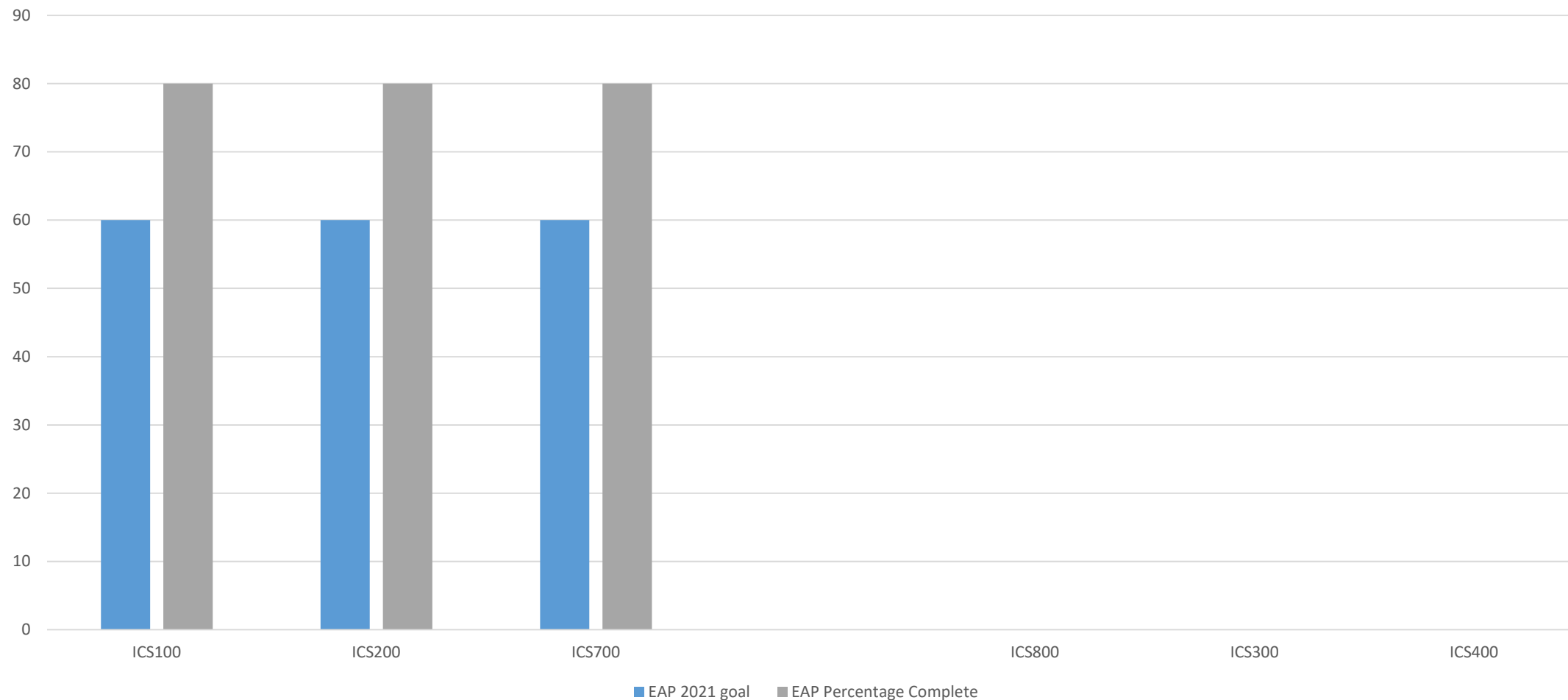
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Measurement 7: Power ICS



Generation Emergency Action Plan (EAP)
Employee ICS Training
2021 Goal



23

... Challenges & Barriers



- COVID-19 Pandemic Response
- Staffing Constraints

● ● ● Priorities for 2022



- Hire additional Emergency Manager (MA II)-Power
- Emergency Preparedness for Employees and Customers
 - Lunch and Learns-Employees
 - SharePoint Site-Employees
 - TPU Website-Customers
- Finalize TPU Continuity of Operations Plan (COOP)
- Incident Command Training
- Cascadia Rising 2022 Exercise
- Continued support to COVID-19 Response and Recovery
- Situational Awareness Platform (WebEOC)
- Fuel Planning
- Satellite Phones

● ● ● Thank You!



Questions?