



# Telecom & Fiber Services

---

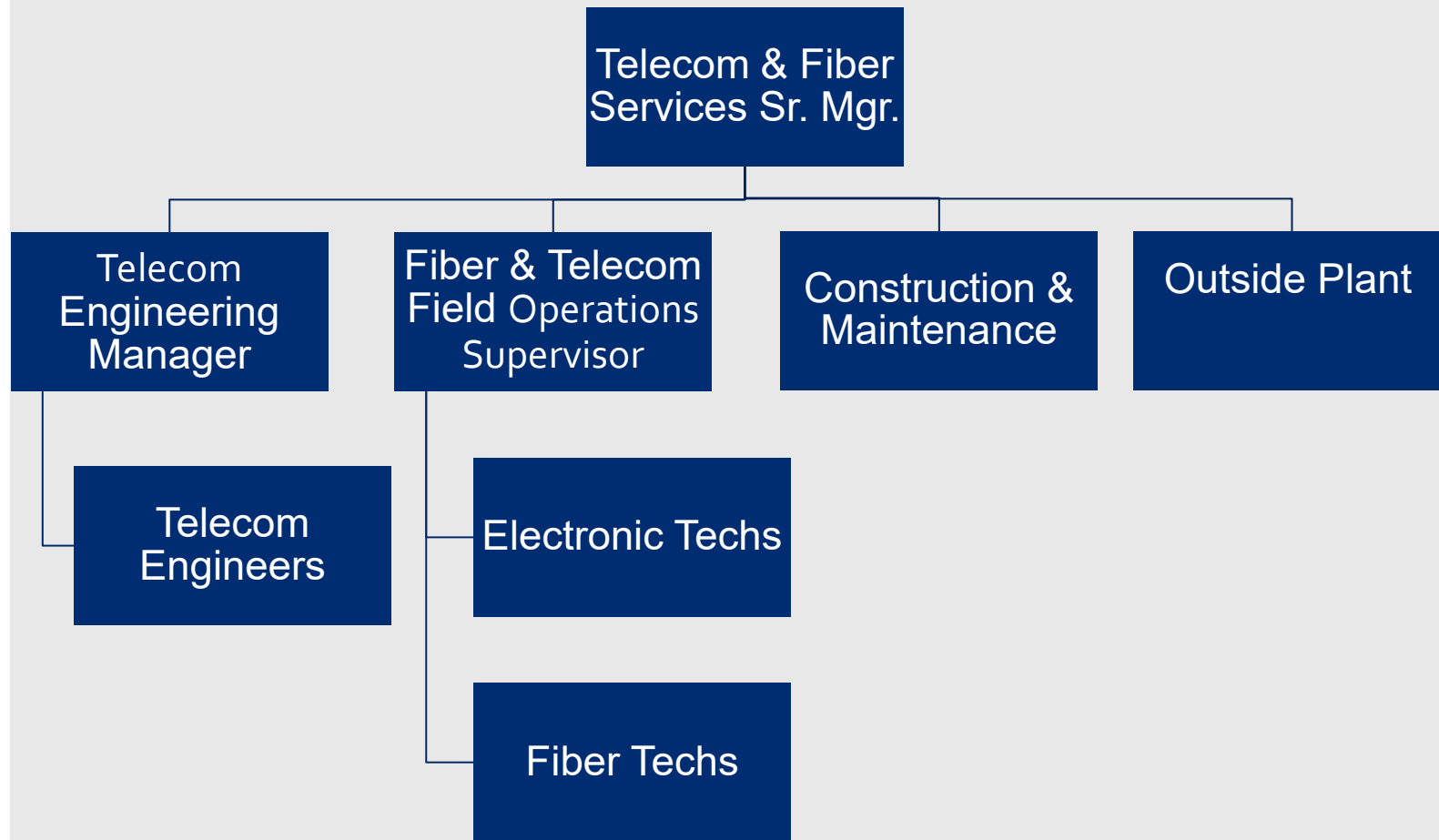
Quarter 4  
2023 Business Report

January 9, 2024

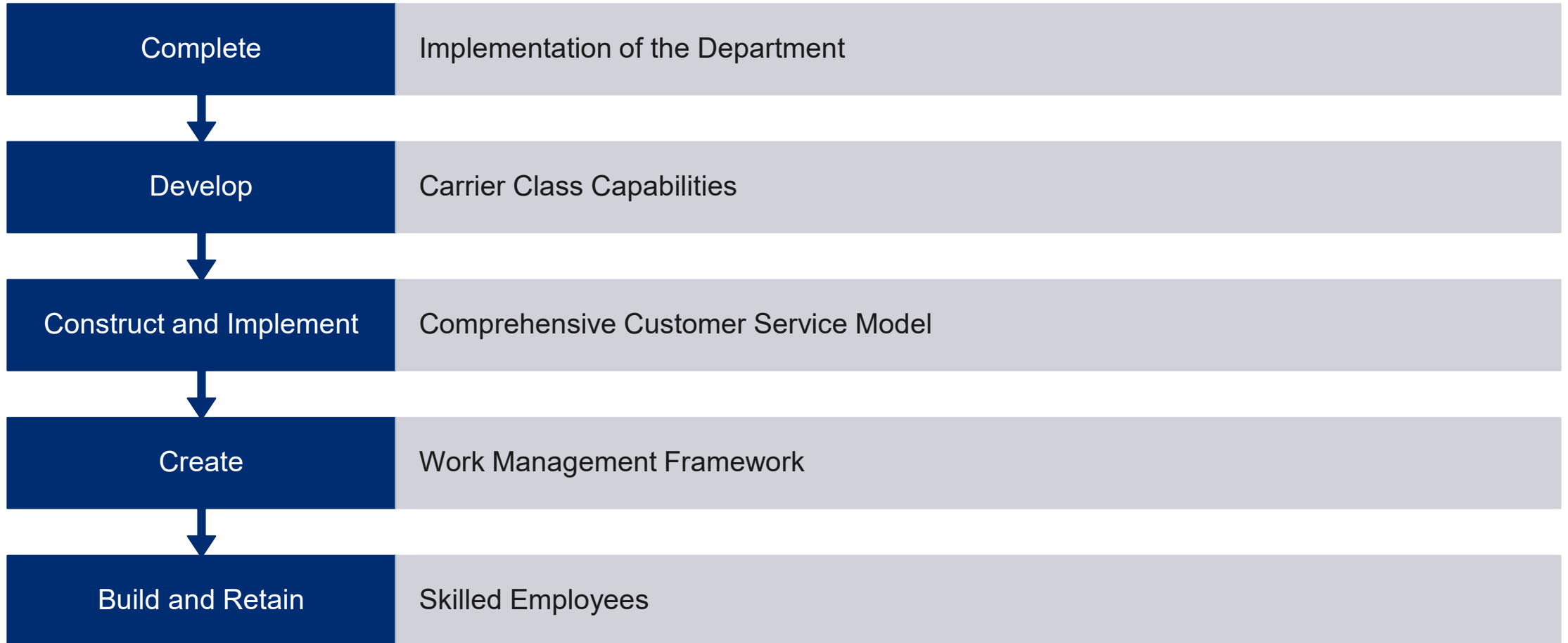


Powering our way of life.

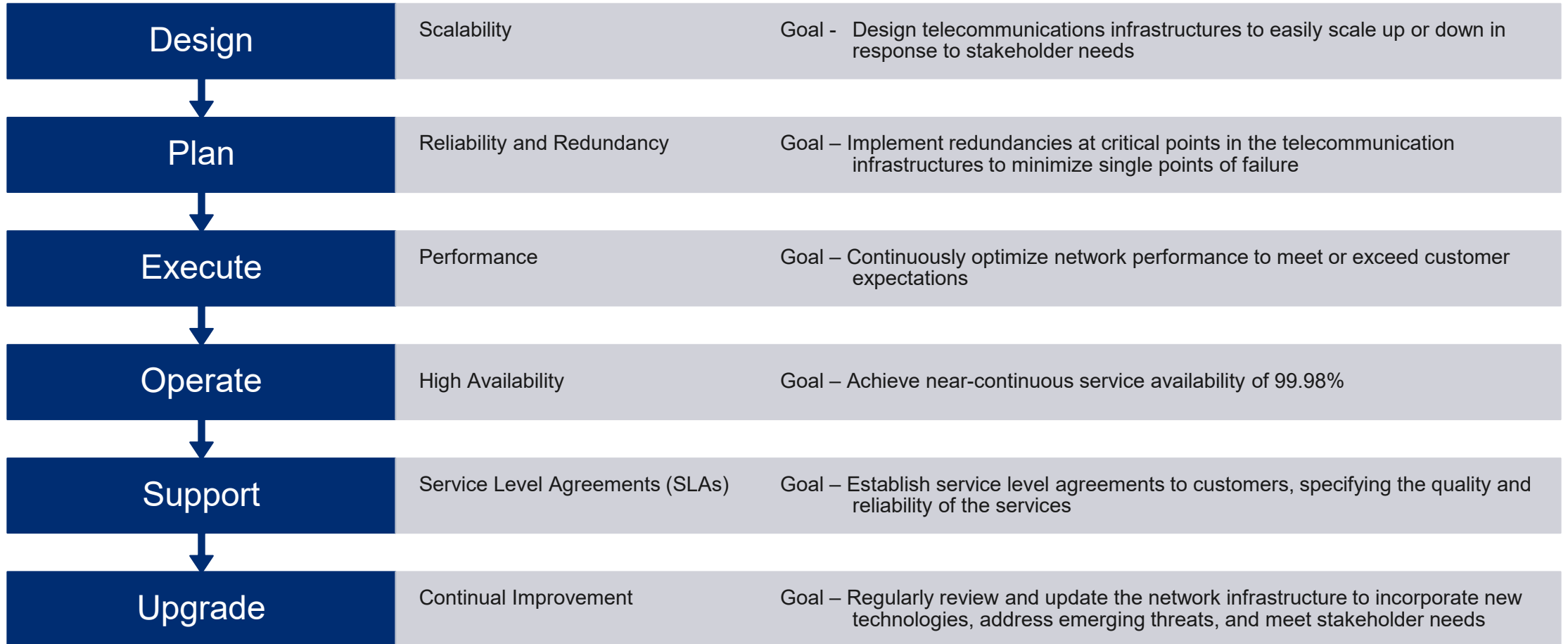
# Telecom & Fiber Services



# Strategic Pillars



# Telecom & Fiber Priorities



# Telecom Engineering and Electronic Technician Workload

Information Technology (IT) systems	Operational Technology (OT) systems	Fiber Technology (FT)
Israel Lima Joel Curry Isaac Martinez	Ken Moseley Kendall Zaugg	Troy Holt Eugene Anderson Kevin McKee Mara Hornsby
Foreman – Steve Argo	Foreman – Ted Harris	Foreman – Bill Harrison
David Jones, Paul Cline, Bart Knoll,	Silver Flores, Joe Farmer, Dave Boggs, Igor Babak, Brandon White	Rene Vela, Rob Haley, JD Bowkett
<ul style="list-style-type: none"> <li>• Business Routers, Switches, and Networks               <ul style="list-style-type: none"> <li>• Business Wireless and Business Wired Networks</li> </ul> </li> <li>• Phone Systems               <ul style="list-style-type: none"> <li>• Telephony, Cisco UCCX, headsets, voicemail systems, cell phone booster etc...</li> </ul> </li> <li>• Avtech Dispatch Console</li> <li>• Data Center Coordinator(manages the labor effort associated in said location)</li> <li>• Mobile Radio Systems</li> <li>• Business Firewalls</li> <li>• Security Systems, Genetec</li> <li>• A/V and PA systems</li> <li>• DC plants for IT</li> </ul>	<ul style="list-style-type: none"> <li>• SCADA</li> <li>• RTUs/Telemetry</li> <li>• OT Transport/ICON and Transfer Trip Comms</li> <li>• OT Firewalls</li> <li>• EMS</li> <li>• GMS</li> <li>• Power Production Coordinator</li> <li>• DC plants for OT</li> <li>• Microwave Systems</li> <li>• Water Quality and Air Quality monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• The FTTH System               <ul style="list-style-type: none"> <li>• ONTs/Gateways</li> <li>• Hut/Hub</li> <li>• Electronics</li> <li>• DC Plants</li> </ul> </li> <li>• Distribution</li> <li>• Backbone Electric System fiber</li> <li>• AMI media convertors, Transport/Nokia</li> <li>• Wholesale Wireless</li> </ul>

# Construction and Maintenance

Date	Project	Departments
October	Quincy to Royal ASR Cut Over and Upgrade	Telecom Engineering, Fiber Techs, and Electronic Techs
November	Hub 107 Expansion (Ephrata Airport)	Fiber Techs
	Hub 71 Backbone Removal	Fiber Techs
December	Ephrata and Moses Lake VSS Upgrade	Telecom Engineering and Electronic Techs
	Soap Lake Substation Rebuild	Telecom Engineering, Fiber Techs, and Electronic Techs
	Ephrata Data Center Upgrades	Telecom Engineering and Electronic Techs

# Firewall Project Work

2023

Substation	Site Visit (TSA, E-Tech, Telecomm, Substation Electrician)	Fiber Assignment (Telecomm)  Mara	TSA Work Package (TSA)  Max	Telecomm Work Package (Telecomm)  Kendall	Configure Firewall (CSE)  DonL	Install Firewall (E-Tech)  PaulC	Configure Router (Telecomm)  Kendall	Install Router (E-Tech)  PaulC	AC / DC Power (Substation Electrician) Jeremy, RonD, MattV	Go-Live (E-Tech, TSA, CSE, Telecomm)  All
Moses Lake (20)	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete on 8/24
Paxson Drive (24) (MOD)	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete on 9/13
Dover substation (10)(MOD)	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete on 9/13
Larson Distribution 13.2 kV substation (16) (MOD)	Complete	Existing	Complete	Complete	Complete. Not Needed	n/a	Existing. Add new SFP card	n/a	Complete	Complete on 10/23
Graham Road (12)	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete on 10/23
Central Ephrata (8)	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete on 12/5
Peninsula (26)	Complete	Complete	Complete	Complete	Complete	Complete	Existing. Complete	Existing	Complete	Complete on 12/14
McDonald (19)	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete on 12/7
Columbia Ridge (48)	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete on 12/5

•The Firewall Modernization project is complete, a lot of coordination between shops and departments, appreciate the great work. Thanks for the project manager, Jesse B. and the project team members Kendall Z., Mara S., Paul C., Silverio F., Brandon W., and Ted H.

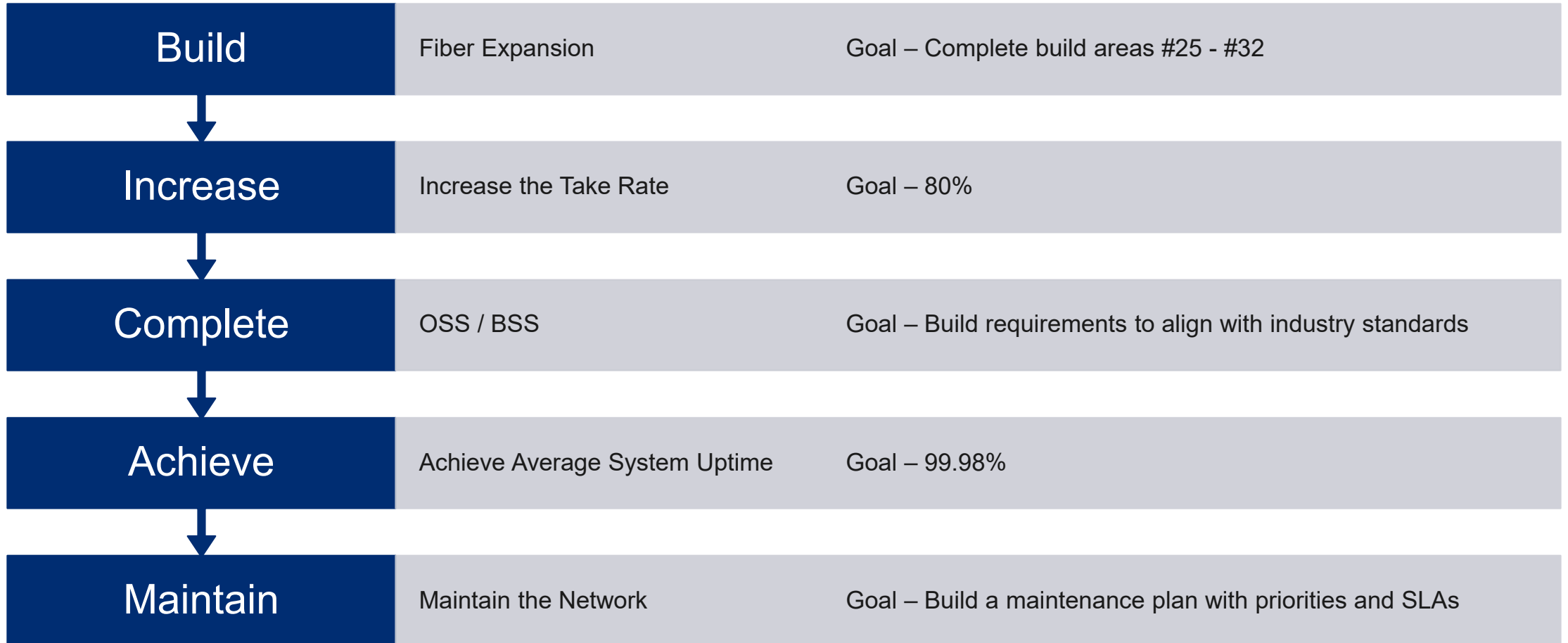
# Strategic Plan – Objective 7

## Develop A Sustainable Fiber Optic Network

We are committed to expanding and maintaining our wholesale fiber optic network to all the people of Grant County. We seek to identify and offer services that meet customers' needs and increase network revenue for the utility. As with all utility services, we make decisions that best serve present and future generations of customers.



# Wholesale Fiber Priorities



# Fiber Expansion

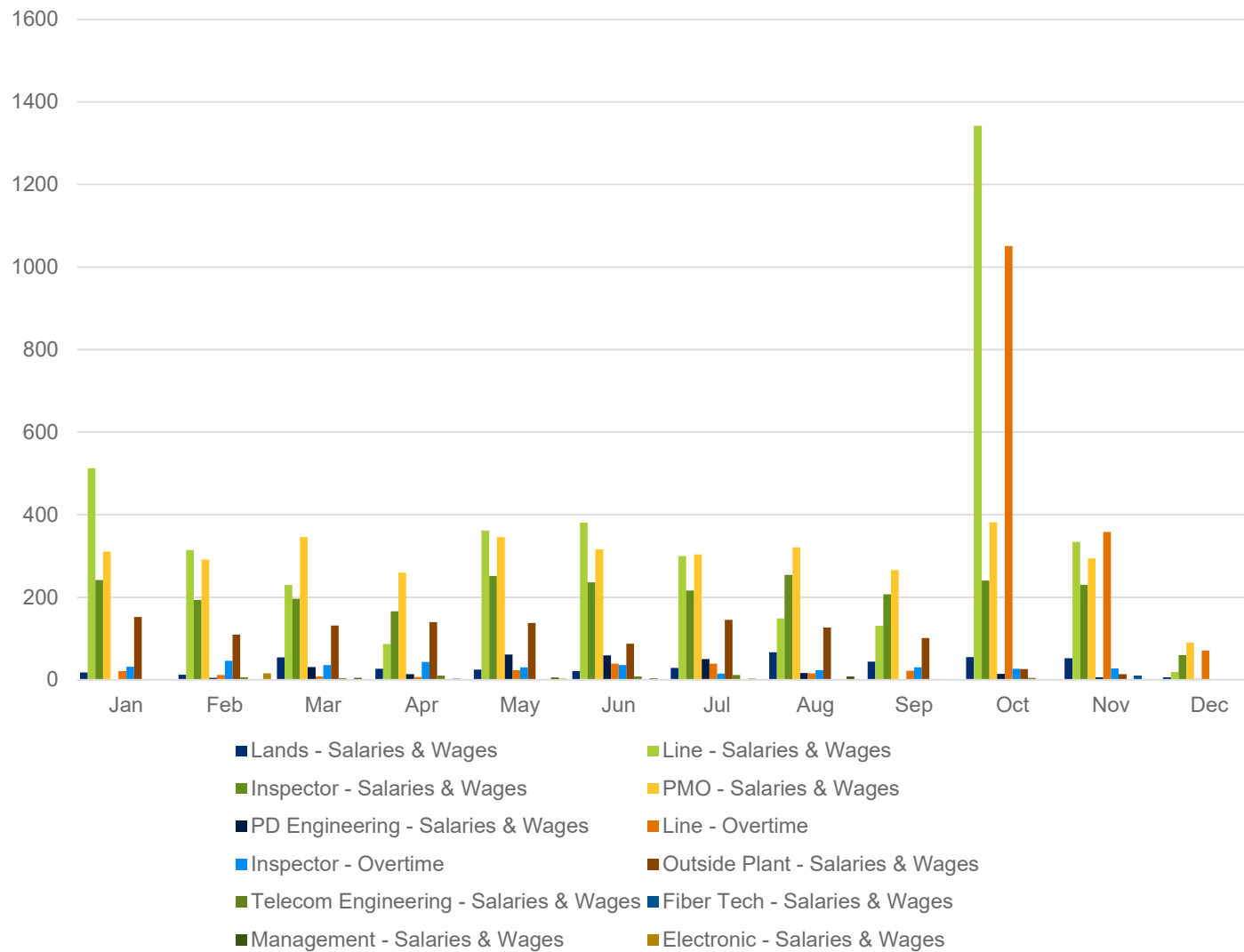
## Schedule

Area	Location	Make Ready Remaining	Release Date
25	Warden Area	Complete	June 13th – 100% Complete
26	North, East and South of Quincy	Complete	June 15th – 100% Complete
27	NW/SW Quincy	Complete	9/15/2023 – 100% Complete
28	Rd A SE/Smyrna	Complete	11/22/2023 – 100% Complete
29	Jericho	Complete	2/26/2024
30	Dodson to Frenchman	Complete	3/11/2024
31	Wahluke Area East to Mattawa	51	4/5/2024
32	Desert Aire to Rd O	Complete	4/19/2024
33	I-90 Rd U NE/SE	16	5/10/2024
34	Hwy 281 N. of I-90 to Rd. 3	57	5/22/2024
35	Stratford/Summer Falls/Billy Clapp	32	6/10/2024
36	Adams Road NW to Winchester Wasteway N. of I90 to Rd. 7	72	7/1/2024
37	Braden to George and Black Sands	33	7/15/2024
38	Ruff	68	8/29/2024
39	Wilson Creek Area	45	10/3/2024
40	Sagebrush Flats/Johnson Rd. NW	40	10/31/2024

# Fiber Expansion Labor by Departments

As of December 27, 2023

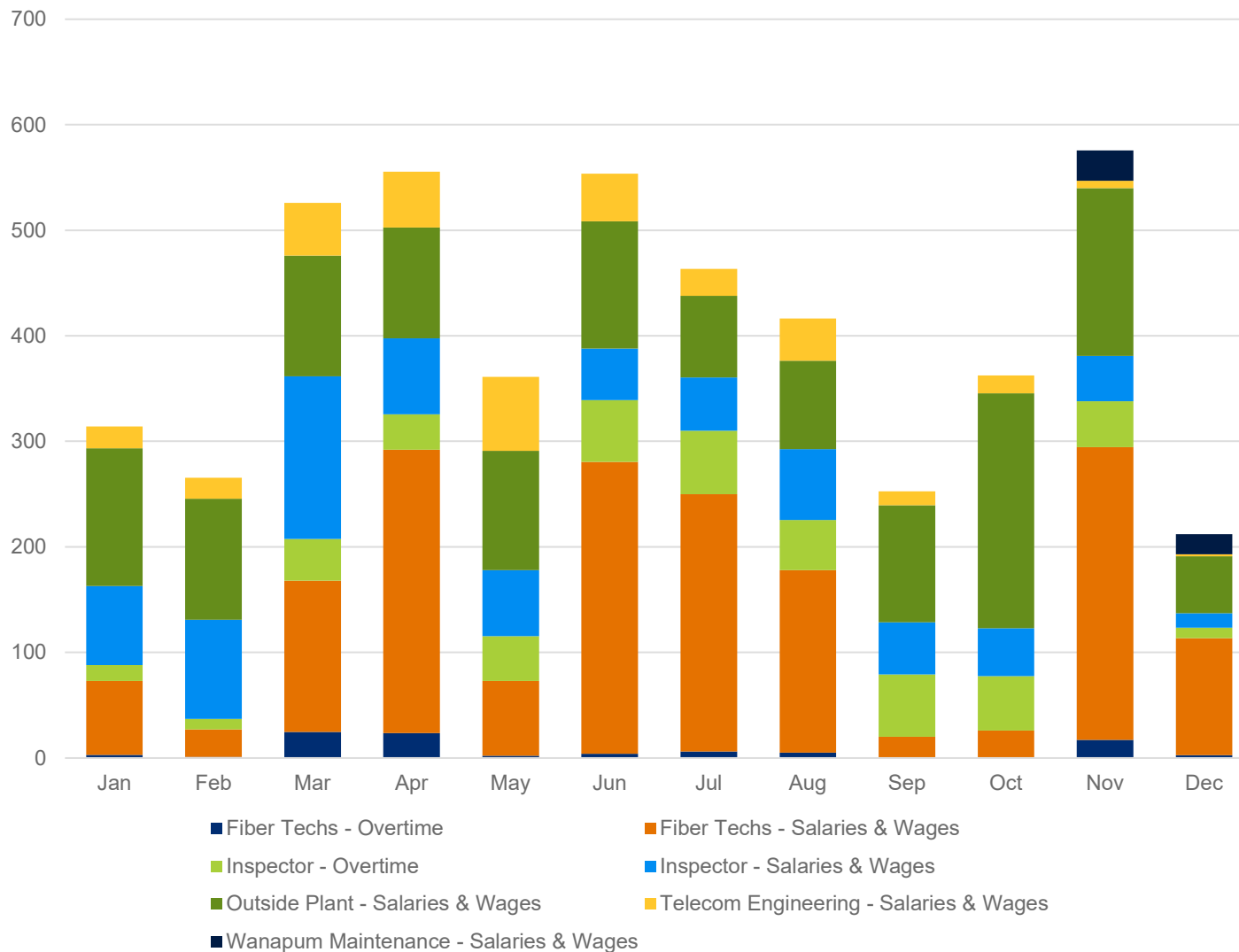
## 2023 Fiber Expansion Labor



# Connect the Customer Labor by Departments

• As of December 27, 2023

2023 Connect the Customer Labor



# Active Wholesale Fiber Participation

**As of November 30, 2023**

Area	Potential Subscribers	Actual Subscribers	Participation Actual
Coulee City	985	521	53%
Desert Air	1,142	1,097	96%
Electric City	767	502	65%
Ephrata	5,309	3,912	74%
Grand Coulee	663	416	63%
Hartline	181	115	64%
Mardon	683	461	67%
Mattawa	1,859	1,528	82%
Moses Lake	18,291	13,415	73%
Quincy	4,036	3,113	77%
Royal City	1,398	969	69%
Soap Lake	2,541	1,635	64%
Warden	1,523	827	54%
Wilson Creek	163	97	60%
George-Burke	1,052	887	84%
	<b>40,593</b>	<b>29,495</b>	<b>73%</b>

## Grant Fiber Activity Report (CSR Workload)

As of December 26,  
2023

Customer Ports Provisioned	
1/2023 -	863
2/2023 -	904
3/2023 -	1,007
4/2023 -	1,058
5/2023 -	998
6/2023 -	1,284
7/2023 -	1,009
8/2023 -	1,711
9/2023 -	1,236
10/2023 -	973
11/2023 -	1,133
12/2023 -	795
<b>Total:</b>	<b>12,971</b>

Customer Ports Deprovisioned	
1/2023 -	775
2/2023 -	675
3/2023 -	712
4/2023 -	697
5/2023 -	885
6/2023 -	1,100
7/2023 -	1,120
8/2023 -	1,287
9/2023 -	1,018
10/2023 -	1,009
11/2023 -	1,027
12/2023 -	723
<b>Total:</b>	<b>11,028</b>

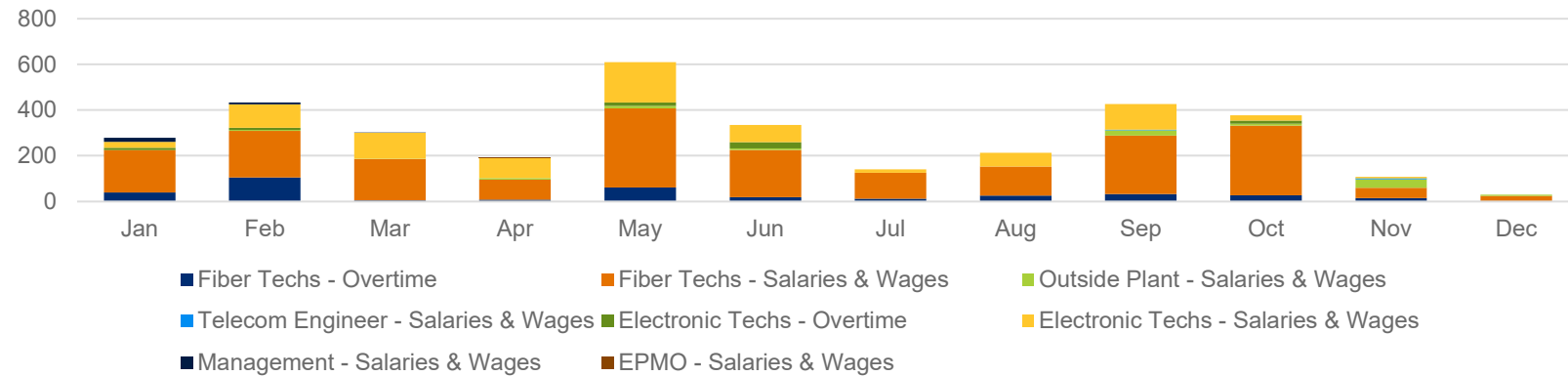
New Gateway New Applicant	
1/2023 -	86
2/2023 -	136
3/2023 -	147
4/2023 -	164
5/2023 -	130
6/2023 -	251
7/2023 -	165
8/2023 -	137
9/2023 -	156
10/2023 -	163
11/2023 -	133
12/2023 -	125
<b>Total:</b>	<b>1,793</b>

Existing Gateway New Applicant	
1/2023 -	255
2/2023 -	278
3/2023 -	326
4/2023 -	288
5/2023 -	287
6/2023 -	396
7/2023 -	318
8/2023 -	305
9/2023 -	399
10/2023 -	260
11/2023 -	387
12/2023 -	214
<b>Total:</b>	<b>3,713</b>

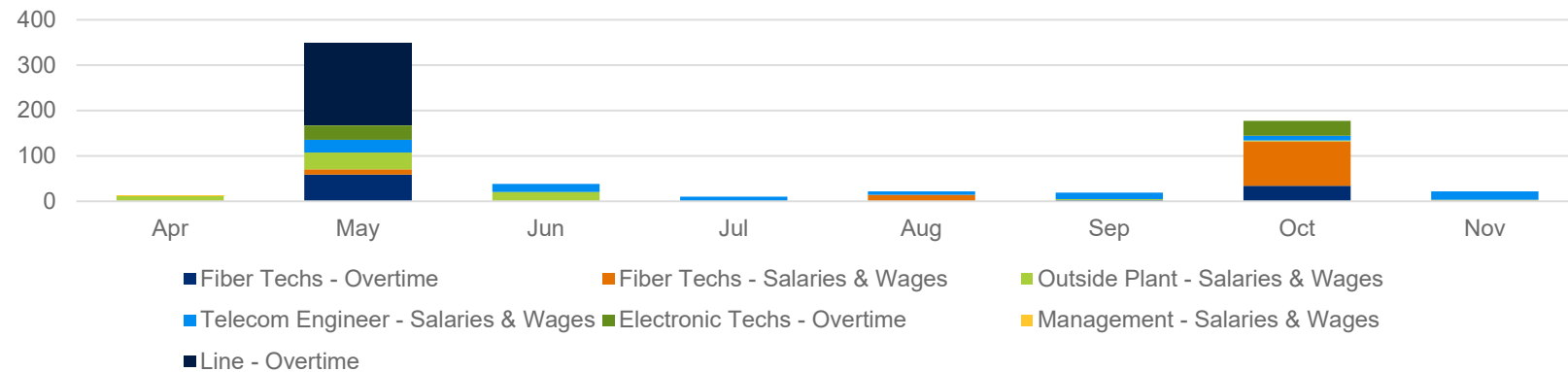
# Cable Replacement

As of December 27, 2023

### 2023 Cable Replacement - Wholesale Fiber

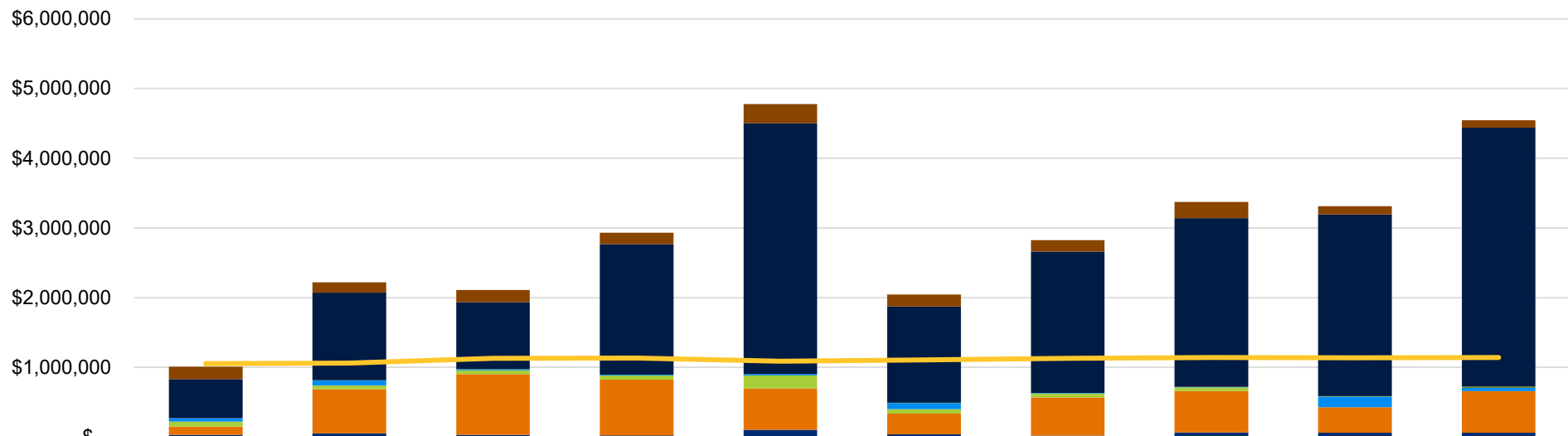


### 2023 Cable Replacement - Electric



# 2023 Capital, O&M and Billed Revenue

## Wholesale Fiber



	January	February	March	April	May	June	July	August	September	October
Sum of O&M Labor	\$181,546	\$145,139	\$171,880	\$162,138	\$273,094	\$173,237	\$163,822	\$231,944	\$115,618	\$104,501
Capital Fiber Build	\$556,351	\$1,259,014	\$959,097	\$1,872,828	\$3,601,238	\$1,381,325	\$2,029,234	\$2,420,753	\$2,609,231	\$3,717,365
O&M Purchased Services	\$-	\$1,256	\$4,581	\$-	\$-	\$1,685	\$193	\$2,493	\$5,447	\$19,563
O&M Equipment & Utilities	\$52,607	\$71,938	\$15,589	\$12,089	\$19,590	\$87,139	\$9,703	\$5,675	\$154,387	\$45,325
Capital OSS / BSS Project	\$70,784	\$53,672	\$54,865	\$61,053	\$186,781	\$64,897	\$53,874	\$51,692	\$-	\$-
Capital Connect the Customer	\$118,782	\$635,203	\$871,665	\$800,931	\$592,858	\$299,161	\$550,186	\$596,584	\$363,239	\$595,688
Capital Cable Replacement	\$30,044	\$51,484	\$29,694	\$21,546	\$102,474	\$37,555	\$18,774	\$62,973	\$62,223	\$62,285
Wholesale Fiber Revenue	\$1,051,930	\$1,059,149	\$1,127,068	\$1,134,147	\$1,086,919	\$1,104,402	\$1,130,001	\$1,138,864	\$1,134,754	\$1,140,272



# Questions



Powering our way of life.

# Wholesale Fiber Product and Service Schedule 100 Updates

Commission Meeting - January 24, 2024

Resolution No. XXXX, approved (date) and effective (date).



# Rate Schedule 100 Changes

Section	Description
<b>Wholesale Fiber Product and Service Schedule 100</b>	Change District to Grant PUD
<b>G. Service Level Commitment</b>	Removed the language about purchasing third party network operations center (NOC) because the contract was canceled.
<b>K. IP Addresses</b>	Setting up a service provider using Grant PUDs upstream internet may require IP addresses which cost our Telecom Engineering time to request, process, implement and the cost of the IP addresses and this cost will be passed to the service provider plus 10%.
<b>Basic Access 100x100 Mbps</b>	Increase of \$2.50 per month
<b>Enhanced Access 250x250 Mbps</b>	Increase of \$2.50 per month
<b>Gigabit Access</b>	Increase of \$2.50 per month
<b>Special VLAN Ethernet Services</b>	Added a 250 Mbps service, a management VLAN, and included a 3-year term at a lower cost.

# Rate Schedule 100 Communication

- On November 16<sup>th</sup>, the service providers had two meeting opportunities to learn about the changes on Rate Schedule 100.
  - GC Powernet, Localtel, Fordair Wireless, SiteStar, 509 Fiber, iFiber, Evergem, Advanced Stream, Vyve, Startouch and Crescent Bar Internet.
- The service providers requested 30-60 days to prepare their system(s) and communicate to their customers, the effective date will be April 1, 2024.

# Passive Optical Networks

---



Powering our way of life.

# Overview

---



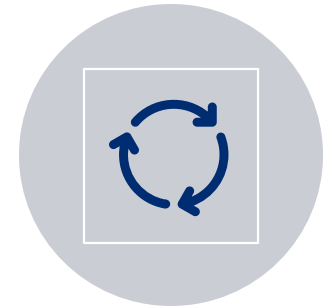
NETWORK  
ARCHITECTURE



SERVICES



NETWORK  
SECURITY



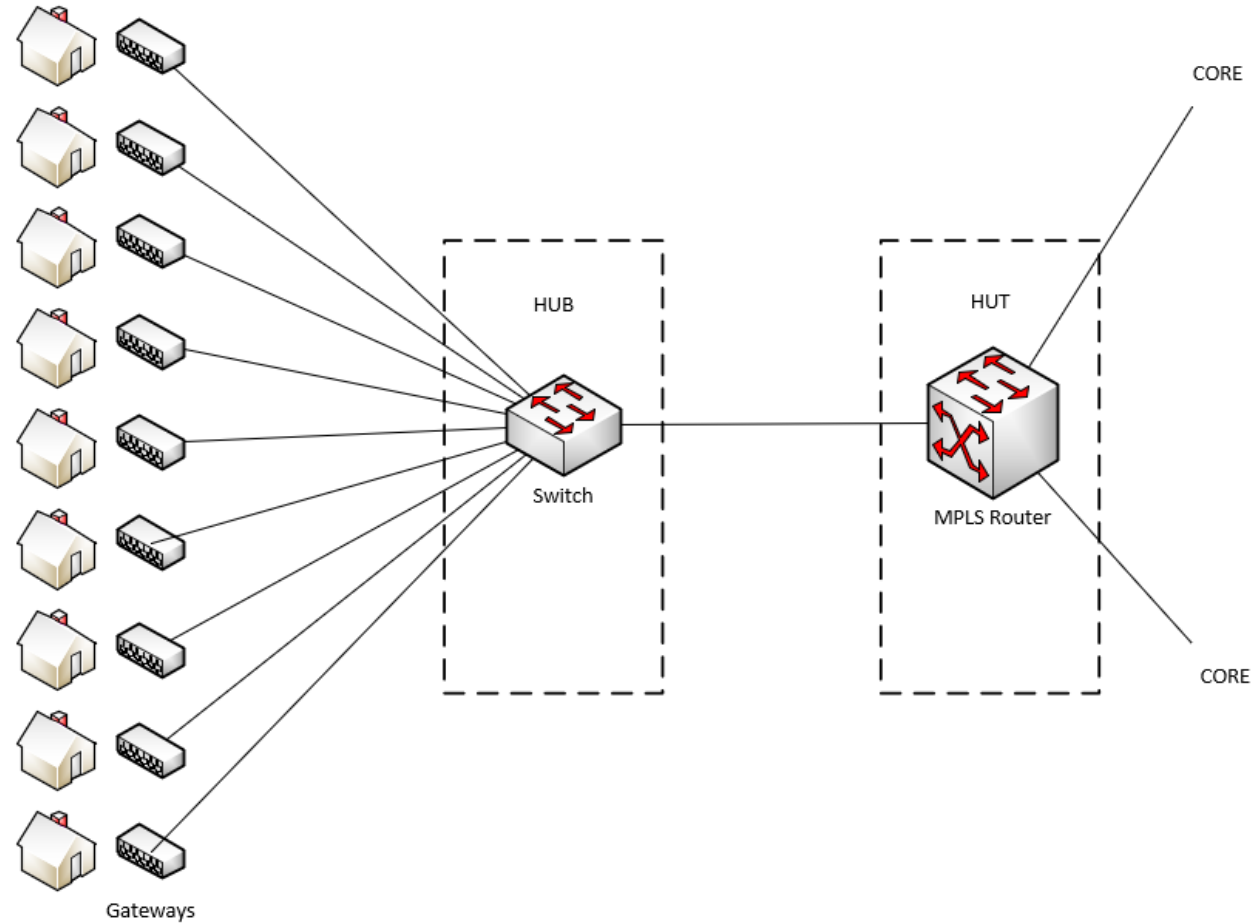
IMPLEMENTATION

# 1 Network Architecture

# Active Ethernet Network

Current District design

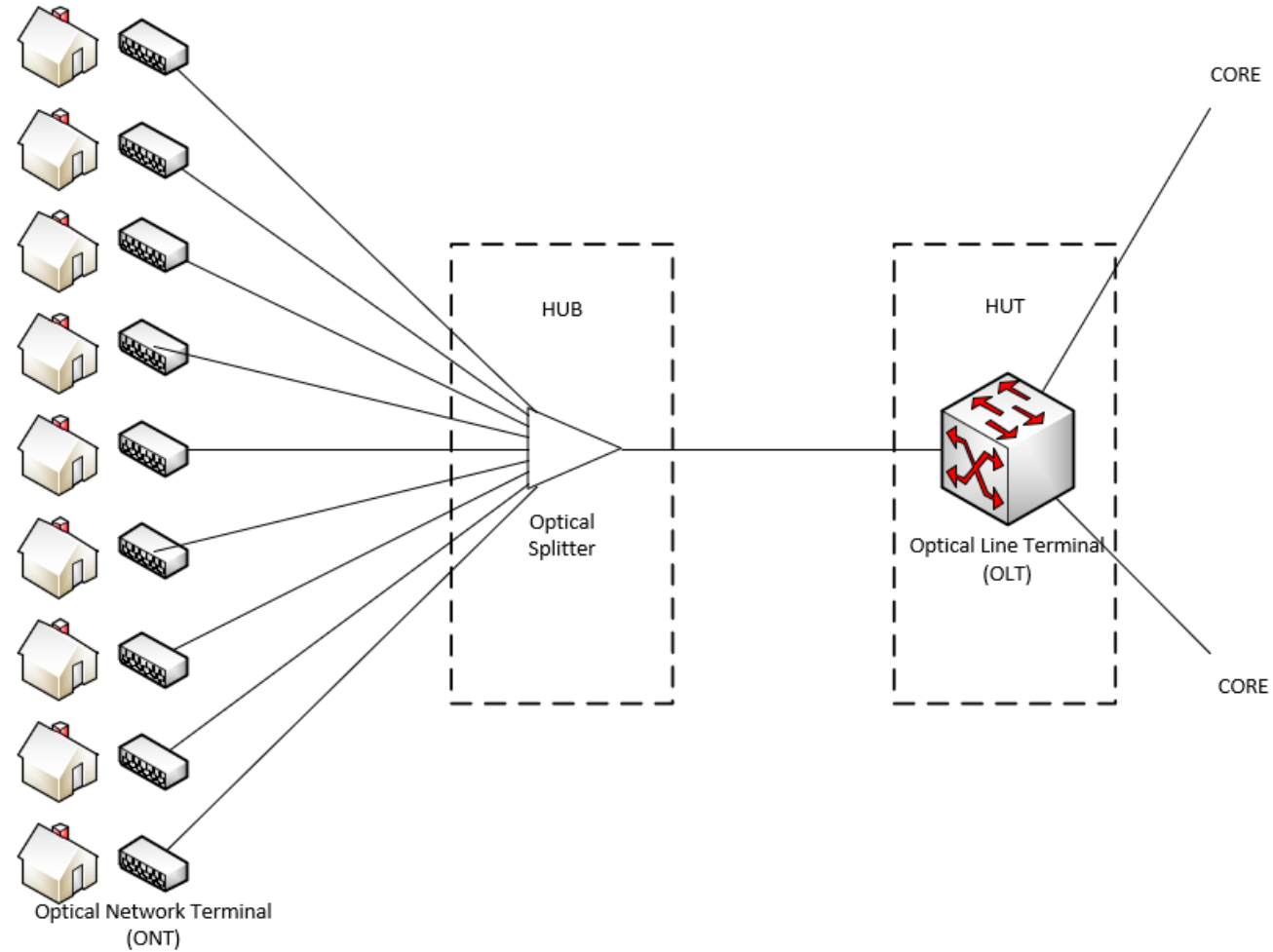
Electricity and environmental controls (A/C) at hubs and huts





# Passive Optical Network

Passive network components at the hub level



# Unpowered Hubs

---

No requirements for electricity at the hubs

- Neighborhood hubs do not require power or environmental controls
- Switches replaced with 32-way or 64-way splitters
- Patch panels connect residential ONTs to optical splitters



# Optical Network Terminal (ONT)

Equipment installed at the home

- Hardened devices are typically installed on the outside of the house and inside an enclosure
- Residential ports
  - High Speed Internet (up to 10Gb/s)
  - Telephone (POTS)
  - DS1
  - RF Coaxial for RF Overlay systems
- Powered by homeowner
- Cannot be provisioned directly



ONT and enclosure

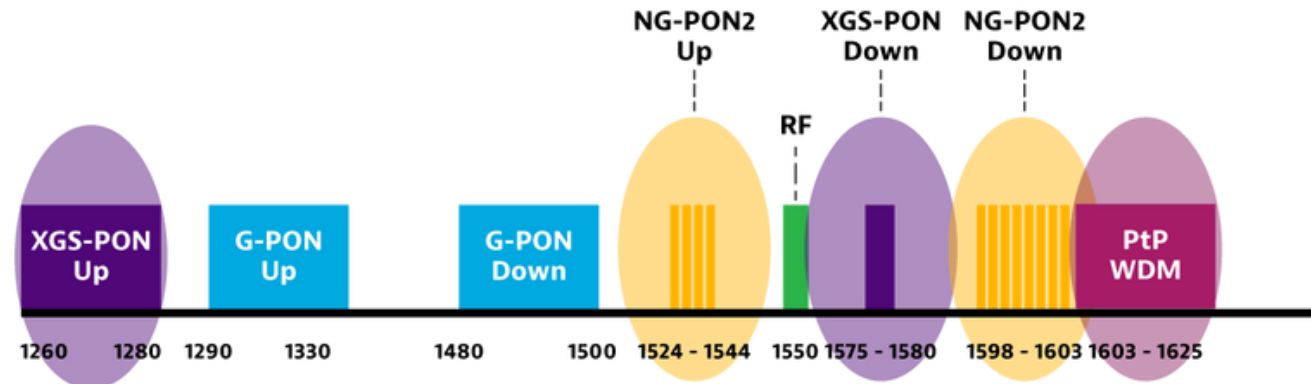
# Optical Line Terminal (OLT)

Aggregation equipment installed in the HUT

- Manages 32/64 ONTs on each PON port (8K on a single box)
- Provisions and monitors all ONTs
- Routes data back to the core network



# PON versions



- PON versions use different wavelengths and can be combined on the same splitter
  - G-PON
    - 2.4 Gb/s down, 1.2 Gb/s up
    - Largest installed base. New installations surpassed by XGS-PON in 2022
  - XGS-PON
    - 10 Gb/s symmetrical
    - Highest number of new installations in 2022
  - NG-PON2
    - 40 Gb/s symmetrical using tunable optics
    - Price has kept installed numbers low
  - 25G-PON
    - 25 Gb/s symmetrical used for cell towers

# 2 Services

# Service Challenges

Fiber-To-The-Home at a decision point

---

Bandwidth usage is doubling every 2-3 years

---

Competitors are offering >1 Gb/s HSI

---

Wholesale infrastructure was not designed to provide this level of service.

---

The RFP will replace the core, but does not address the access switches



TP-Link Tri-Band 7 Stream AX3200 Wi-Fi 6 Wireless Router

Item 1490466 | Model AX3200

★★★★★ 4.4 (708) [Write a review](#)

**C** Member Only Item

[Sign In to See Price](#)

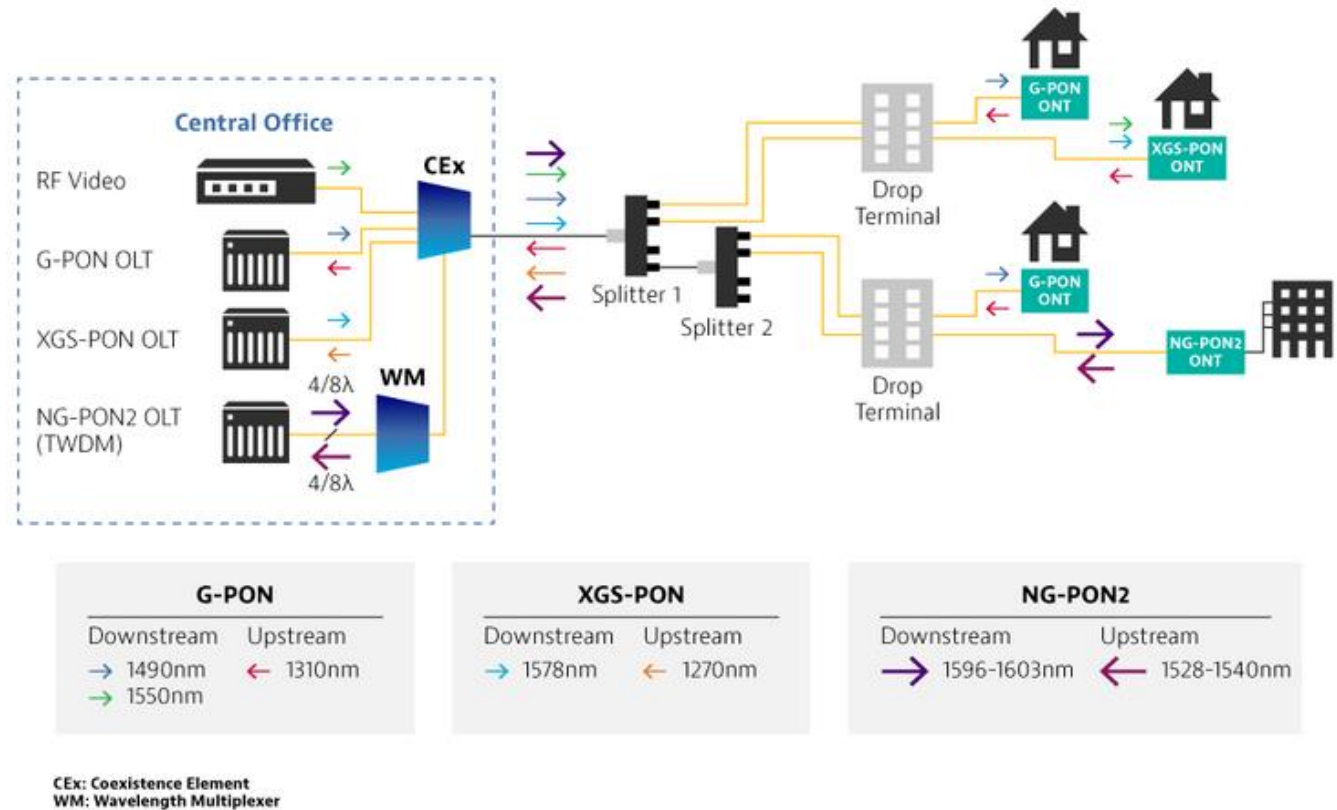
Shipping & Handling Included\*

Features:

- Wi-Fi 6 Tri-band Speeds up to 3.2 Gbps
- Connect up to **4x More Devices** without losing speed
- **2.5 Gbps WAN/LAN Port** for high-speed internet plans
- 1.5 GHz CPU for buffer-free 8K/4K streaming and gaming
- Easy Setup with All WiFi-Enabled Devices and Internet Service Providers

# PON Services

- XGS-PON can provide 1/2.5/5 Gb/s HSI
- As PON technology improves the lightwaves can be combined on the same PON
- Dedicated 25G-PON or NG-PON can be added to provide 10G to a cell tower or data center
- PON ONTs can support HSI, POTS, DS1, and RF Video





**3**

# **Network Security / Reliability**

# Active Ethernet Security Issues

---

- Security

- HUBS

- Located in neighborhoods and are challenging to secure or monitor physical access
    - Console port can be exploited
    - Fibers can be moved to different switch interfaces at the Hub

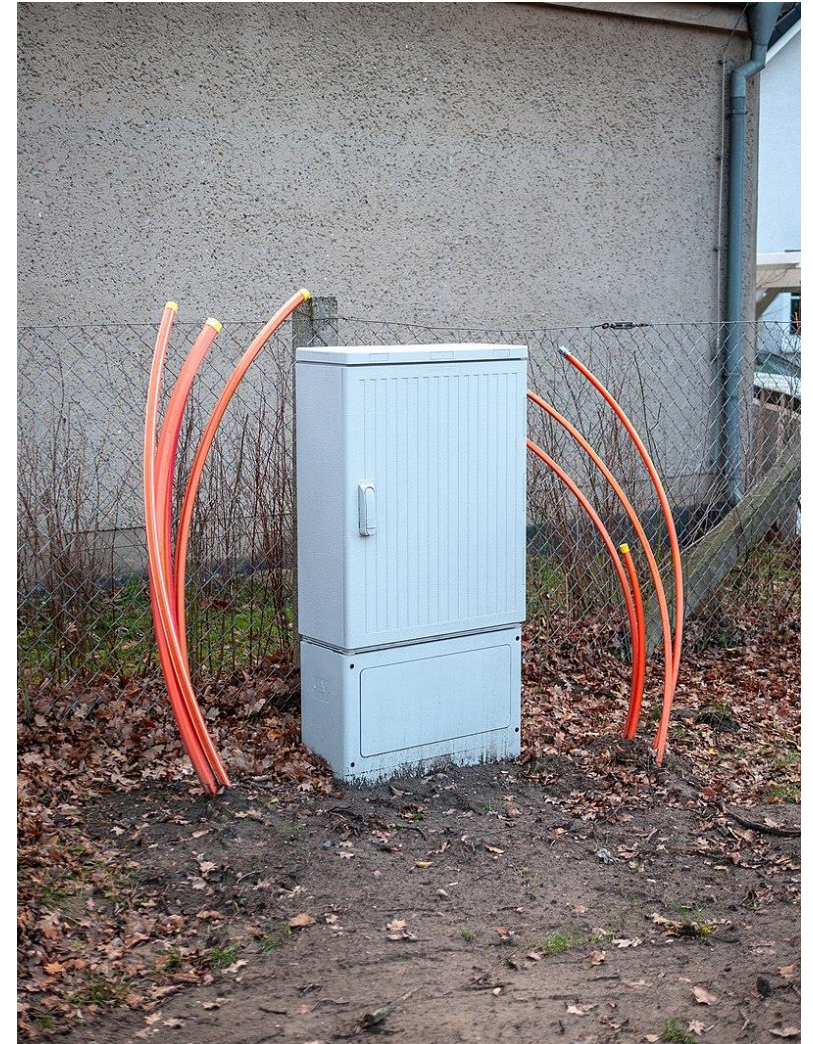
- Gateways

- Can be configured locally
    - May be replaced by a similarly configured device

# PON Security

PON more secure than Active Ethernet.

- Hubs are patch panels and splitters
- Data passed through fiber connections at the Hub use GEM packets, not Ethernet
- Security risks become lower at the Hub
- ONTs are not designed to be provisioned directly. They are provisioned by the OLT and management software based on the location and serial number
- No console access to the ONT



# 4 Technology Comparision

# Active Ethernet

---

## Pro

- Current wholesale network has 30,000 Active Ethernet devices
- Broad District knowledge of the technology

## Con

- Gateway cost is rising while availability is going down
- Battery replacement and maintenance is a recurring cost
- Electricity usage
- A/C maintenance at 150 sites during summer heat
- Less research into FTTH applications
- Upgrade path beyond 1 Gbps services is very expensive

## Pro

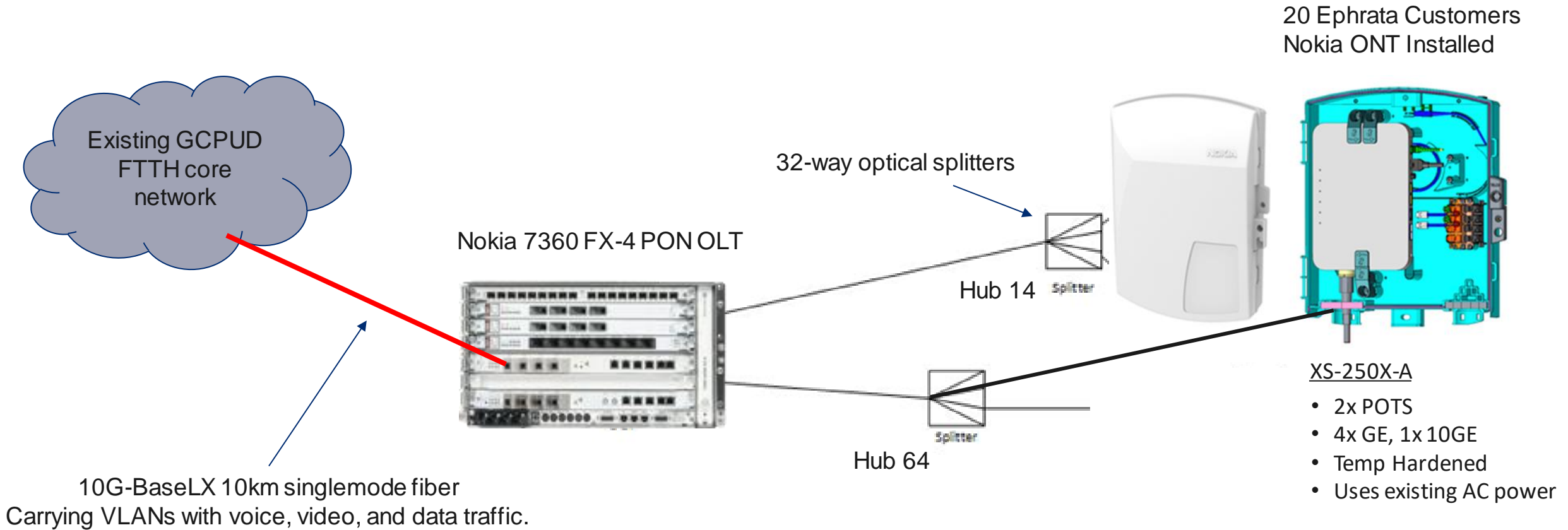
- Wide availability of inexpensive gateways
- Industry focused R&D in the technology
- Remove batteries and A/C from backyards
- Increased network security
- Lower cost with higher bandwidth
- Provides >1Gbps services with a path to future upgrades

## Con

- District technology retraining
- Maintaining two systems during the transition
- Additional fiber needed between OLT and some hubs
- Limited rack space at hubs and nodes for new equipment during the transition

# 5 Implementation

# XGS-PON Proof of concept





# Passive Optical Network Proof of Concept



## Passive Optical Network (PON) Proof of Concept (POC)

- The PON POC project commenced on August 14<sup>th</sup> through August 22<sup>nd</sup> with a total of 20 customers that participated in the replacement of gateways on at their houses with new PON ONTs (Optical Network Terminals).
- On average, each replacement took approximately 45 minutes to complete. The new ONTs have been actively monitored for just over a month, no issues with customer service have been reported.



# PON POC Results

---



HUB 14 Neighborhood Location

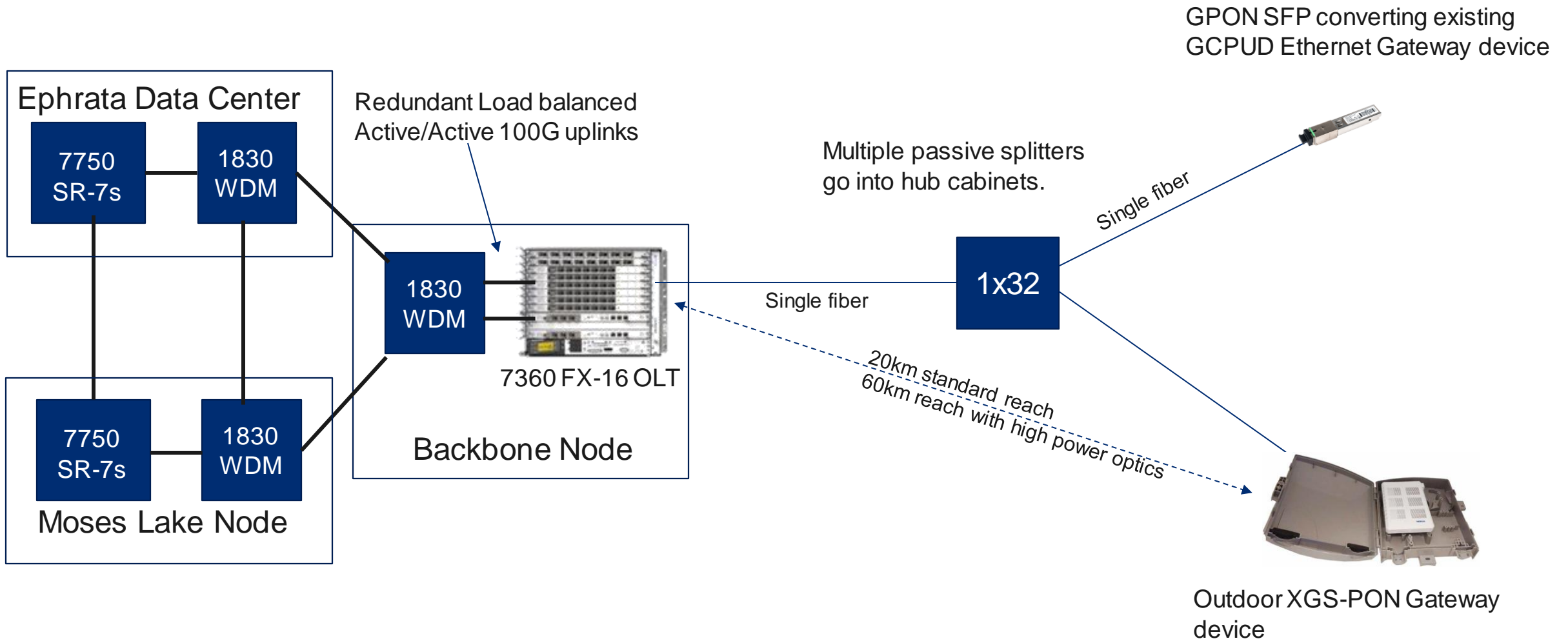
Proof of Concept completed in August using Hub 14 and Hub 64 in Ephrata.

Hub 14 overheated and shut down during the first week of installs.

All Hub 14 Active Ethernet services were interrupted.

Hub 14 PON customers were not impacted

# XGS-PON Network



# Implementation Plan

---

## #1 – Cap and Grow

1. PON OLTs installed at Hut/1830 locations
2. A single fiber is connected from the Hut to the Hub and connected to a 32/64-way splitter
3. When higher speed connections are requested:
  1. Customer's gateway is replaced with an ONT
  2. At the hub, the customer's fiber is disconnected from the switch and connected to the splitter
4. New customers and areas will be connected to the splitters rather than the switches
5. Failed gateways will be replaced with ONTs
6. At some point in the future, the remaining customers on a hub will transition to an ONT and the Hub's switch, electricity, and A/C can be retired.

# Implementation Plan

---

## #2 – Hub Upgrade

1. PON OLTs installed at Hut/1830 locations
2. Fiber cables are upgraded from the Hut to the Hub and connected to multiple 32/64-way splitters
3. All customers at a hub will be upgraded to PON ONTs during the same series of maintenances.
4. Active Ethernet equipment will be decommissioned and removed from the hubs

# Questions?





Powering our way of life.

# License Compliance & Lands Services

## 2023 Business Review & 2024 Q1 Forecast

---

Grant PUD Commission Meeting – January 9, 2024



Powering our way of life.



# Departmental Purpose and Goal

- In alignment with Grant PUD's safety, financial, and compliance goals, the License Compliance & Lands Services Department is responsible for the protection of Grant PUD's natural resources through implementation of the Priest Rapids Project license, management of Grant PUD's lands and waters within the Project Boundary, and in providing company-wide real property, permitting, and geographic information system (GIS) services.



# License Compliance & Lands Services 2024 Goals

- Conduct all work in a manner that sends everyone home safely at the end of the day
- Identify and resolve reservoir safety issues
- Support District projects with high-quality real estate, permitting, and GIS services
- Develop a service request procedure for real estate services
- Continue enhancement of the Regulatory Scoping Tool to streamline the NCRRP and permitting processes
- Complete 2023 Recreation Usage Report and update Crescent Bar Golf Course Analysis
- Complete risk/compliance review of flowage easements on private property
- Ensure exit of orchard operations results in minimal impact to resources

# 2023 Compliance Review



- Safety
  - Recordable incidents = 0
  - Injuries = 1
  - Non-recordable incidents = 2
  - Vehicle incidents = 1
  - Safety meeting attendance = 96%
  - Job Site Reviews = 10
- Regulatory Review (LCLS only)
  - FERC filings by Grant PUD = 1
  - Filings by third-parties = 0
  - FERC approvals/orders/notices = 3

# Lands & Permitting Services – 2023 Review

- QTEP

- Col-MV, MH Loop 1, MH-RF segments

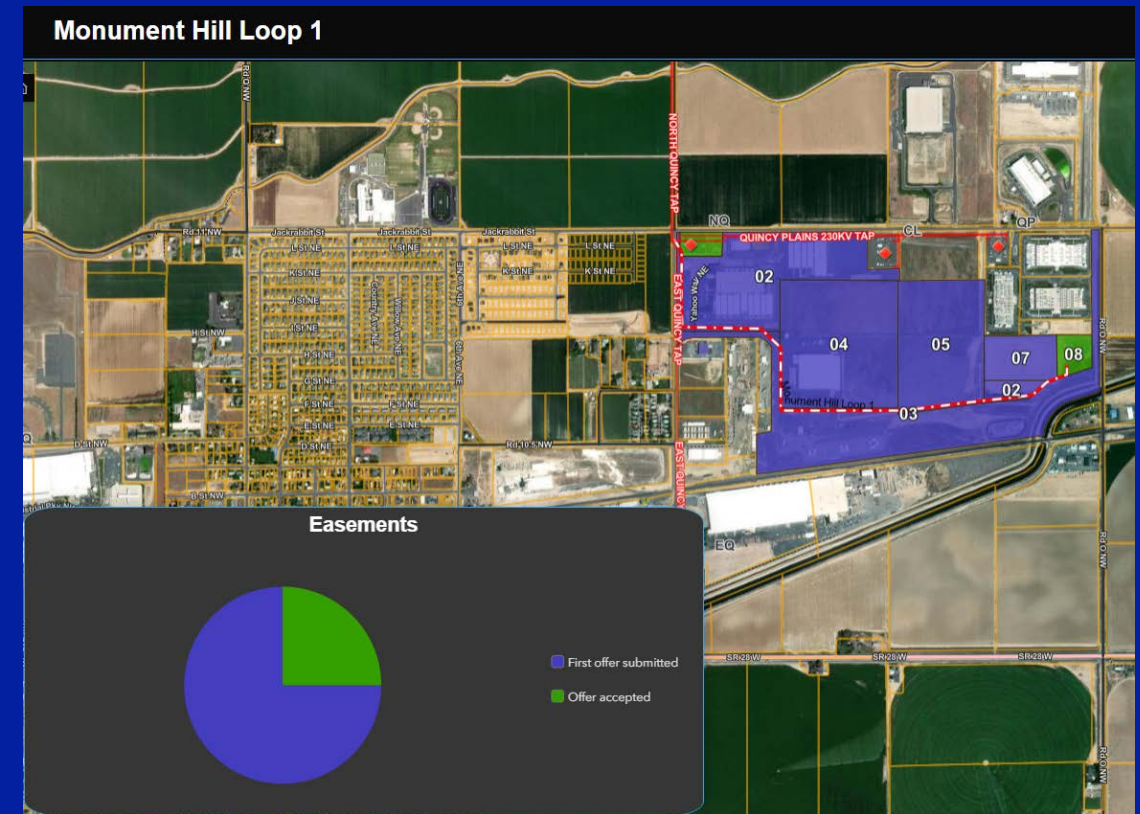
- ✓ 33 Rights-of-Entry obtained
    - ✓ 31 Active easement negotiations ongoing
    - ✓ 2 easements secured

- Wan-MV segment

- ✓ Environmental studies complete
    - ✓ USBR engagement for license Q4 2023 and Q1 2024
    - ✓ Anticipating right-of-entry efforts beginning in Q1 2024

- Power Delivery Facilities

- ✓ Property negotiations continue



# Lands & Permitting Services 2023 Review

- **Larson/Stratford 115kV relocation**
  - ✓ All Rights-of-Entry secured (for Road 20 NE to Stratford Substation).
- **Fiber Expansion**
  - ✓ Wrapping up permitting support for final phase of this project.



# Lands & Permitting Services – 2023 Review

- **PR Siphon Intake and PR Anchoring projects**
  - ✓ Permit application development underway
- **WSDOT franchise consolidation**
  - ✓ Preparing for I-90 and SR-28 submittal to WSDOT
- **Environmental Affairs support**
  - ✓ Aquatic vegetation management permits
  - ✓ PRRA fencing permits
  - ✓ Vantage day use boardwalk decking permits
  - ✓ Crescent Bar North RV Park bulkhead replacement



# Lands & Permitting Services – 2023 Review

<b>2023 Lands Service Requests</b>	<b>Total</b>
<b>NCRRPs processed</b>	<b>44</b>
<b>Rights-of-Entry obtained</b>	<b>45</b>
<b>Transmission easements currently in negotiation</b>	<b>33</b>
<b>Fiber permits obtained</b>	<b>196</b>
<b>Distribution work orders processed</b>	<b>200</b>
<b>Fiber easements obtained</b>	<b>135</b>
<b>Land-use and shoreline permits obtained</b>	<b>6</b>
<b>GIS service requests fulfilled</b>	<b>120</b>

# Lands & Permitting Services – Q1 Forecast

- **QTEP**
  - ✓ Wanapum-Mountain View Rights of Entry and USBR submittal
- **WSDOT franchise consolidation**
  - ✓ Preparing for I-90 and SR-28 submittal to WSDOT
- **Larson-Stratford**
  - ✓ Appraisal and survey staking; easement negotiations begin
  - ✓ Prepare for second phase of project from Road 16 NE to Road 20 NE
- **Other**
  - ✓ Priest Rapids Siphon Intake and Spillway Stabilization permit submittals
  - ✓ Service Centers 1 & 2 - property acquisition offers
  - ✓ SEPA Policy update



# License Implementation – 2023 Review

- Completed and presented Crescent Bar 5-year Golf Course Analysis
- Prepared for and supported FERC environmental compliance inspection
- Continued reservoir assessments to identify potential hazards
- Completed recreation visitor surveys
- Operated and maintained recreation areas and worked with GPUD Security to manage crowds
- Completed Wanapum Visitor Center repairs
- Resolved encroachments



# License Implementation – 2023 Review



- Completed Crescent Bar trail and parking lot repairs
- Expanded Crescent Bar kayak loading area and golf cart parking areas
- Completed PRRA boat basin dredging and shoreline erosion stabilization
- Completed removal of Vantage marina debris and secured safety buoy line
- Completed Rocky Coulee wildfire/flood repairs

# License Implementation – Q1 Forecast

- **Preparation for 2024 recreation season**
  - ✓ Hire seasonal maintenance staff
  - ✓ Conduct site inventories
- **Annual agency meeting**
  - ✓ Coordinates shoreline and recreation activities
- **Recreation Usage Monitoring Report**
  - ✓ Complete data analysis and reporting
- **Vegetation management**
  - ✓ Begin pre-emergent spraying



# Crescent Bar Financials – 2022 Expenses/Revenues Actuals

2022 Crescent Bar - Actual Expenses and Revenues					
	CWMG Expenses	KARE Solutions Expenses	Grant PUD Direct Expenses	Total Expenses	Total Revenues
Campground and day-use area	\$482,076			\$482,076	\$332,311
Marina & fuel	\$73,367		\$136,478	\$209,845	\$161,279
Golf course	\$496,523			\$496,523	\$206,683
CWMG admin, overhead, etc.*	\$309,025			\$309,025	
Non-CWMG O&M (public works repairs/services and security)			\$201,936	\$201,936	
Grant PUD staff labor (L&R, LRMs, other)			\$125,891	\$125,891	
Water/wastewater system O&M		\$164,021	\$32,417	\$196,438	
Concessionaires and special events					\$32,419
<b>Total 2022</b>	<b>\$1,360,991</b>	<b>\$164,021</b>	<b>\$496,722</b>	<b>\$2,021,734</b>	<b>\$732,692</b>

\*excludes taxes

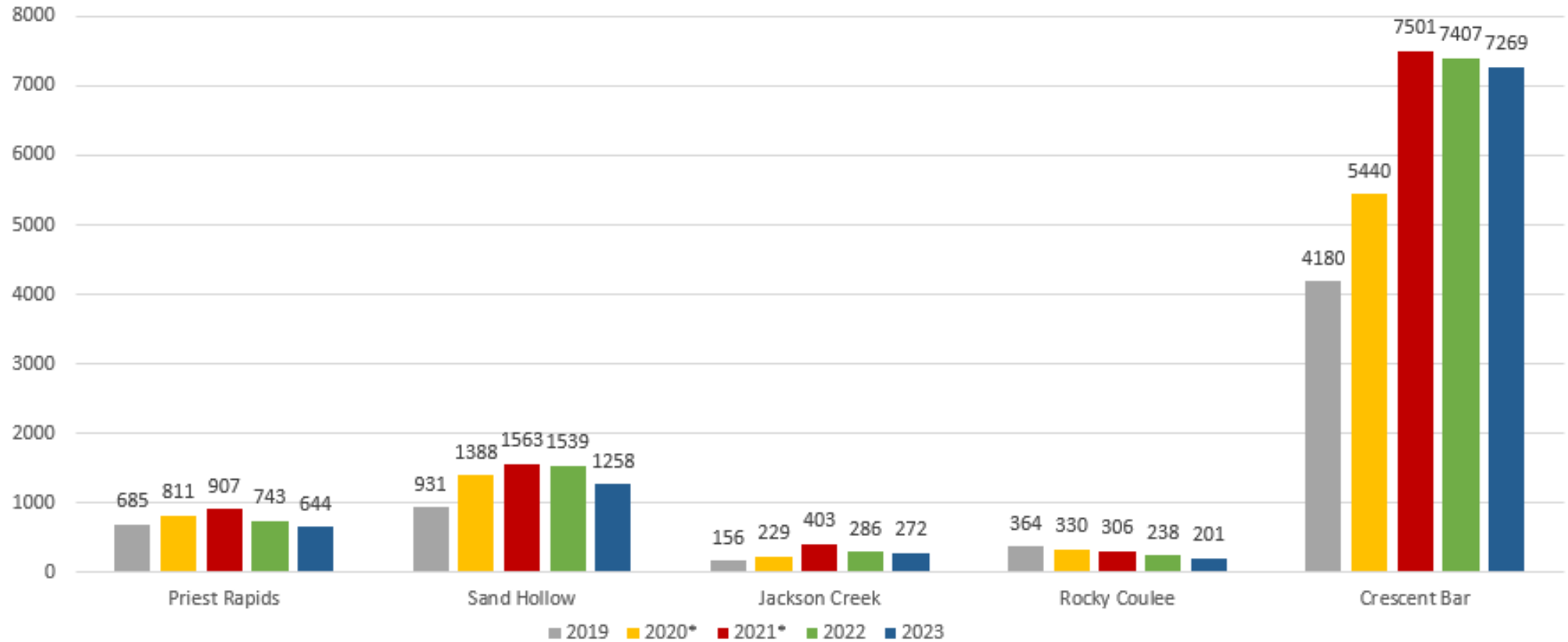
# Crescent Bar Financials – 2023 Expenses/Revenues Estimates

2023 Crescent Bar - Expenses and Revenues Estimates					
	CWMG Expenses	KARE Solutions Expenses	Grant PUD Direct Expenses	Total Expenses	Total Revenues
Campground and day-use areas	\$494,673			\$494,673	\$379,357
Marina & fuel	\$73,420		\$154,794	\$228,214	\$167,041
Golf course	\$444,285			\$444,285	\$228,234
CWMG admin, overhead, etc.*	\$306,253			\$306,253	
Non-CWMG O&M (public works repairs/services and security)			\$342,498	\$342,498	
Grant PUD staff labor (L&R, LRMs, other)			\$103,730	\$103,703	
Water/wastewater system O&M		\$160,854	\$16,022	\$176,876	
Special events					\$28,638
<b>Total 2023</b>	<b>\$1,318,631</b>	<b>\$160,854</b>	<b>\$617,044</b>	<b>\$2,096,529</b>	<b>\$803,270</b>

\*excludes taxes

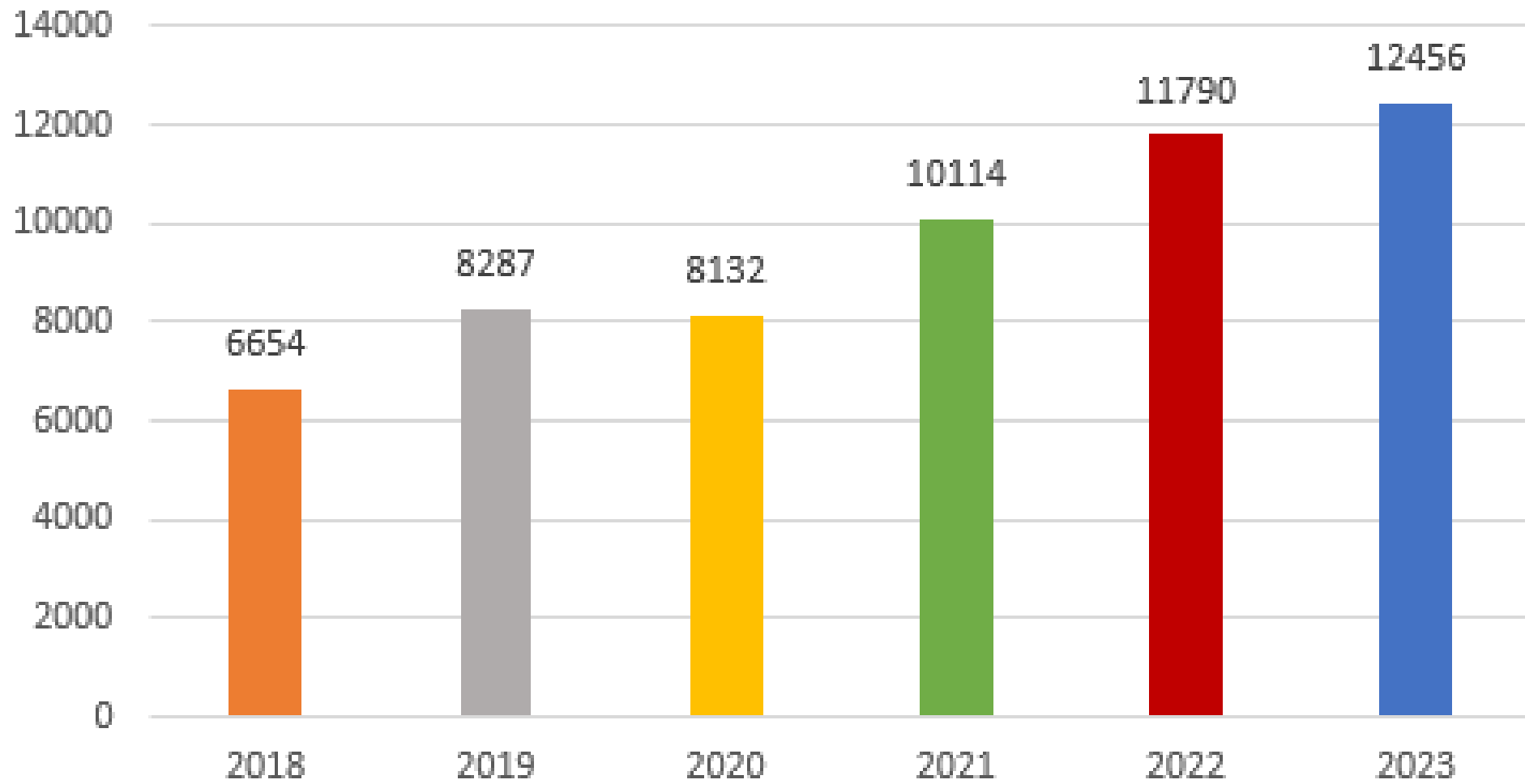
# **2023 Recreation Facility Usage Data and Visitor Survey Results**

## Nights Stayed at Grant PUD Campgrounds



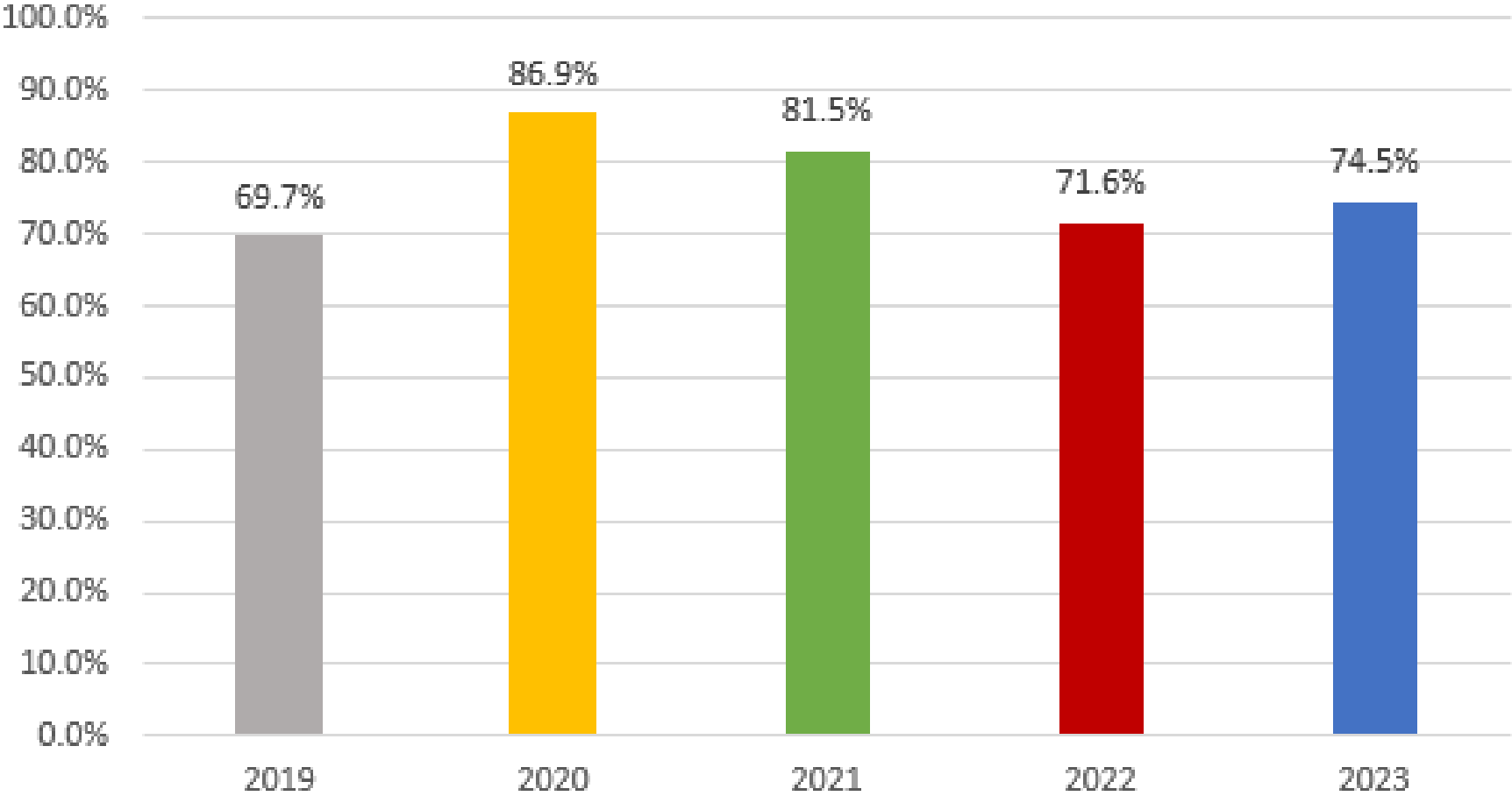
\*Usage impacted by Covid - 19

## CB Golf Course-Rounds Played



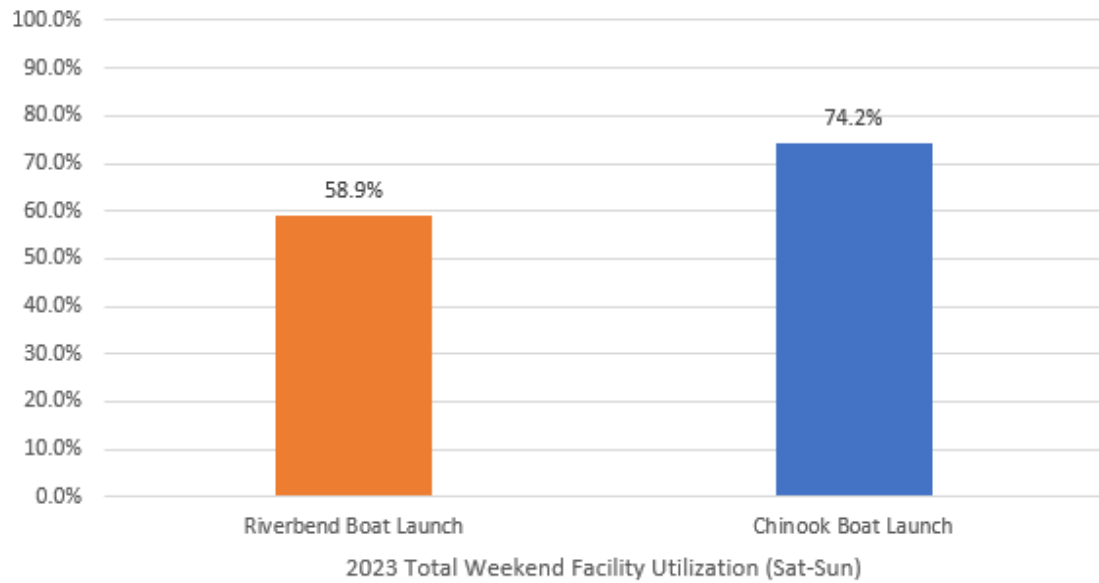


# Vantage Boat Launch Parking Capacity

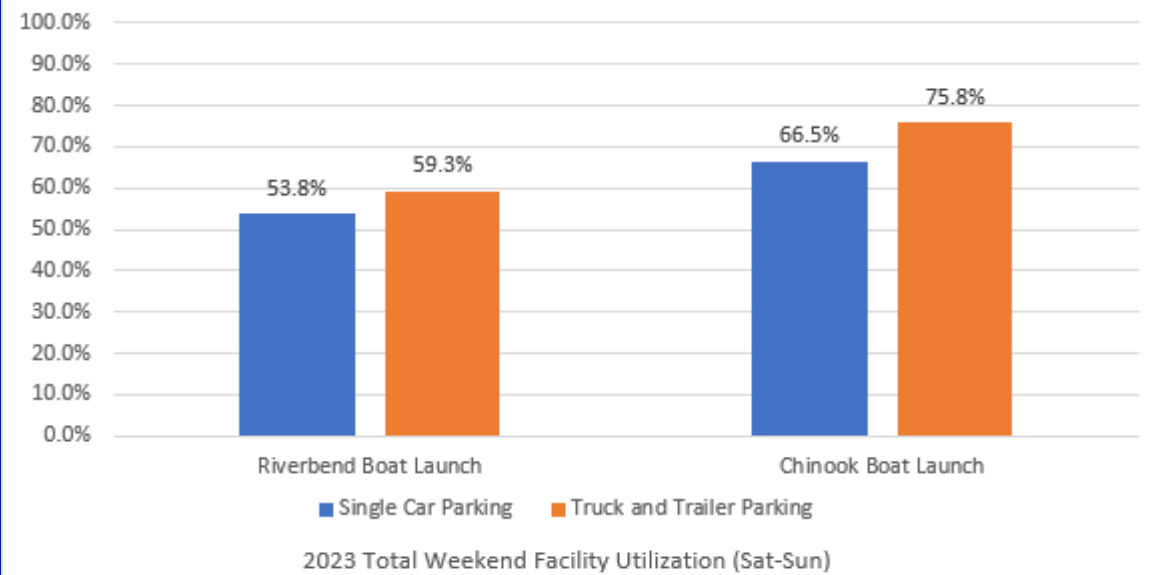


Total Weekend Facility Utilization (Sat-Sun)

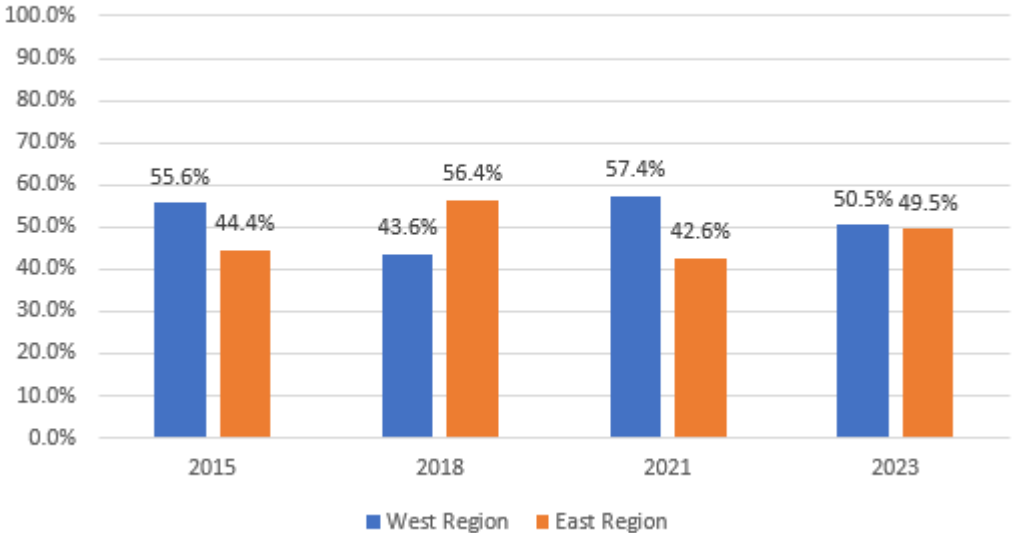
### Crescent Bar Boat Launch Parking Capacity



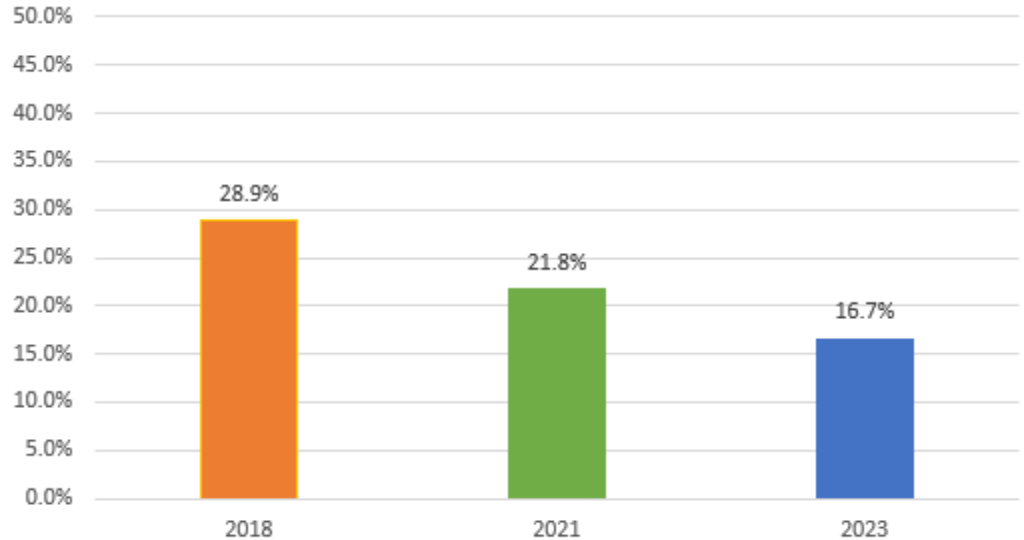
### CB Boat Launch Capacity-Single Cars vs Trailers



Regional Breakdown of WA Survey Respondents



Percentage of Grant PUD Utility Customers





"Liked Most" themes	Theme examples
<b>Site development</b>	Everything pertaining to the recreation site including boat launches, beach, water, ease of access, facilities, parking, bathrooms, and safety
<b>Quality of operations and maintenance</b>	Quiet, good staff, lack of crowding, atmosphere, safety, cleanliness, no fees
<b>Aesthetics</b>	Scenic beauty, nature, natural features, or characteristics
<b>Location</b>	Close to home, easy to access, great location right on the water, close to the Gorge Amphitheatre, conveniently located
<b>All of the above/everything</b>	Answers mentions "everything" or multiple themes from above



# Enterprise Risk Management

---

ERM Semi-Annual Report

January 9, 2024



Powering our way of life.

- 
- Executive Summary
  - Current and Future Work Initiatives
  - Top 10 Risks for Key Business Units – Completed External Affairs & Treasury
  - Claims/Insurance Update
  - Evolving Risks



# Executive Summary

- Risk = Effect of Uncertainty on Objectives
- Risk Register Updates for Top Risk Business Units
  - External Affairs (Records, Gov Affairs) – *new*
  - Treasury – *new*
  - Large Power Solutions
  - Maintenance Center/Ditch Plants
  - Human Resources (Benefits, Payroll, Recruiting)
  - Line Maintenance
- Wholesale Marketing Support:
  - *Energy Risk Responsibilities Moving to IPD*
- Insurance Inspections and Renewals
  - Insurance Renewed 11/1
  - Responses to Reports from Liability and Property Inspections
  - Claims Management Automation Successful
- NERC Risk Priorities Report
  - New Legislation
  - Extreme Natural Events
  - Human Performance & Skilled Workforce
  - Physical/Cyber Security Vulnerabilities
  - Loss of Situational Awareness

Key Conclusion: We are seeing a significant increase in accountability of risks by business units, and our ability to connect risks across all business units resulting from the enhanced enterprise risk culture we are promoting.



# Current and Future Work Initiatives

- Key work initiatives that were added this year to improve the ERM process:
  - Our team includes Tracy Johnson – Manager, Enterprise Risk Management & Michael Reimers – Insurance Risk Lead
  - Risk Register development in 22 business units
  - Positive liability insurance inspection of Power Delivery resulting in a good report
  - Positive property insurance inspection of Power Production resulting in a good report
  - Personalized ERM approach to GCPUD needs – Contract risk management, ERM support of policy/procedure development, business case support, GCPUD site visits, and risk analytics
  - Complete the Automation of *Insurance Claim Management*
- Upcoming work initiatives that will be the focus for ERM during the 1st half of 2024:
  - Continued practical engagement with Risk Owners to improve awareness of risk management techniques
  - Complete next round of key business unit Risk Register development
  - Continue the Automation of *Insurance Claim Management*
  - Continue expanding our team's risk assessment capabilities used to support risk-based business unit initiatives

By Business Unit

# Top 10 Residual Risks



**Know what's below.**  
**811** before you dig.

# Grant PUD Risk Universe

*Risk = Effect of Uncertainty on Objectives*

*ERM: Thoroughly Understand Risks so we can Effectively Manage*

<b>Strategic Risk</b>	Strategic priorities, assumptions, and vision that may impact our ability to achieve objectives	<b>Internal Risks:</b> Corporate Support, Partnering/Alliances, Governance, Product Development  <b>External Risks:</b> Industry, Economy, Regulatory, Environmental Volatility, Competitor, Customer Needs
<b>Operations Risk</b>	People, processes, and compliance requirements that may impact our ability to achieve operational goals	<b>Process Risks:</b> Infrastructure, Supply Chain, Business Disruption, Quality, Customer Satisfaction, Security  <b>Compliance Risks:</b> Regulatory, Environmental, Health & Safety, Litigation, Third Party  <b>People Risks:</b> Governance, Authority, Performance, Integrity, Human Capital, Leadership
<b>Finance Risks</b>	Financial controls, investments, capital & cash management that may impact our ability to achieve operational goals	<b>Treasury Risks:</b> Financing, Cash Flow, Foreign Exchange  <b>Credit Risks:</b> Bank Covenants Compliance, Collateral, Default, Capital Market  <b>Price Risks:</b> Commodity Price
<b>Information Risks</b>	How information is gathered, stored, analysed, checked, and shared that may impact our ability to achieve operational goals	<b>Reporting Risks:</b> Accounting, Budgeting, Financial Reporting, Taxation  <b>Operational Risks:</b> Commitment, Performance Measurement, Operational Reporting, Economic Decision  <b>Technological Risks:</b> Cybersecurity, Data Integrity, Technology Relevance/Availability/Infrastructure

## Inherent Impact (e.g., consequence or severity)

Rating	Generic Meaning	Financial Loss	Legal/Compliance	Reputation
1-2 – Insignificant	Little or no impact on the achievement of goals or capability	< \$500K	Minor legal & compliance issues. Unsubstantiated, or substantiated, low impact, low profile	Minor, adverse local public attention or complaints
3-4 – Minor	May degrade the achievement of some goals or capability	\$500K - \$2.5M		Attention from media and/or heightened concern by local community
5-6 – Moderate	Will degrade the achievement of some goals or capability	\$2.5M - \$30M	Serious breach of regulation with investigation or report to authority and/or moderate fine possible	Significant adverse national media/public/NGO attention
7-8 – Major	Significantly degrades the achievement of goals or capability	\$30M - \$100M	Major breach of regulation or major litigation	Serious public or media outcry, loss of customer/investor confidence
9-10 – Catastrophic	Significant capability loss and the achievement of goals is unlikely	> \$100M	Significant prosecution and fines. Very serious litigation including class action.	Complete loss of public, customer, and/or investor confidence

# External Affairs



KeyTopics-ClimateCommitmentAct

## Stay away from downed power lines!

Even the ground near a downed line can be dangerously charged with electricity. Never come in contact with anyone who is being shocked or anything that is touching a power line.

Top risks include strategic external and coordination and communication risks.

Risk Category	Risk Subcategory	Risk Indicator	Inherent Index	Residual Index
Strategic Internal Risks	Organizational Structure Risk	Internal customers uninformed/uncomfortable with web interface or app	80 I: 8 / L: 10	72 M: 9
Strategic External Risks	Economy Risk	Commission unwilling to restructure rates	81 I: 9 / L: 10	64.8 M: 8
Strategic External Risks	Industry Risk	Poor local Business Development climate in Grant County	90 I: 9 / L: 10	63 M: 7
Strategic External Risks	Industry Risk	Increased wholesale competition - new players have access	81 I: 9 / L: 9	56.7 M: 7
Strategic External Risks	Legal & Regulatory Change Risk	Washington State Carbon Legislation	80 I: 8 / L: 10	56 M: 7
Operations People Risks	Leadership Risk	Conflicting priorities or agendas	64 I: 8 / L: 8	51.2 M: 8
Operations People Risks	Governance Risk	Inadequate accountability for and enforcement of policies and procedures	72 I: 8 / L: 9	50.4 M: 7
Operations Process Risks	Business Interruption Risk	Disruption scenarios are not developed or disseminated and organizational tolerance to disruption scenarios is unknown	72 I: 8 / L: 9	50.4 M: 7
Strategic Internal Risks	Corporate Support Risk	Ineffective coordination or communications	72 I: 8 / L: 9	50.4 M: 7
Information Risks - Technological Risks	Data Integrity Risk	Lack of system support	70 I: 7 / L: 10	49 M: 7

Key to scoring shown on slides 18 and 19

# Treasury

Risk Category	Risk Subcategory	Risk Indicator	Inherent Index	Residual Index
Information Operational Risks	Economic Decision Risk	Inability to organize data sufficiently for analysis	80 I: 8/L: 10	64 M: 8
Finance Treasury Risks	Financing Risk	Major cost over runs on operations or strategic projects	72 I: 8 / L: 9	43.2 M: 6
Operations People Risks	Governance Risk	Uninformed Board of Directors	48 I: 6 / L: 8	38.4 M: 8
Strategic Internal Risks	Organizational Structure Risk	Conflicting priorities or agendas	48 I: 6 / L: 8	33.6 M: 7
Strategic Internal Risks	Strategic Planning Risk	The strategic framework does not support long-term viability	49 I: 7 / L: 7	29.4 M: 6
Finance Credit Risks	Capital Market Risk	Commission unwilling to restructure rates	48 I: 6 / L: 8	28.8 M: 6
Finance Credit Risks	Capital Market Risk	Fluctuations in financial markets	42 I: 6 / L: 7	25.2 M: 6
Information Reporting Risks	Taxation Risk	Applicable regulations and guidelines are not known and understood	60 I: 6/L: 10	24 M: 4
Strategic Internal Risks	Strategic Planning Risk	Interest Rate exposure	49 I: 7 / L: 7	19.6 M: 4
Strategic Internal Risks	Legal and Regulatory Change Risk	Incomplete or inadequate filings	64 I: 8 / L: 8	19.2 M: 3

Key to scoring shown on slides 18 and 19



Many of these top risks have to do with leadership decisions\priorities and how that impacts the work that they do, represented in various risk categories

# Claims and Insurance Update

- Insurance Renewed November 1
  - Coverages, terms, and SIR retained the same as recent years
- Insurance Liability and Property Inspections
  - Successful inspections concluded
  - Reports received and reviewed by business units
  - District is reviewing recommendations and preparing responses
- Claims Management Automation Completed
  - New system in operation October 1
  - Incident identification, collection of cost and dispatch information, generation of letters, invoices, and records automated



# Grant PUD Evolving Risks

---

Our Look Ahead





# Top Evolving Risks

*Risk = Effect of Uncertainty on Objectives*

## ■ New Legislation

- Resource mix continues to rapidly change, causes uncertainty in quantifying our future resource needs
- Education for policymakers and regulators to increase awareness of the reliability implications of policy decisions.

## ■ Extreme Natural Events

- Increasing intensity & frequency of events. Longer term trends, higher average temperatures.
- Formal mutual aid agreements. Accelerate planning & construction of strategic, resilient transmission

## ■ Physical/Cyber Security Vulnerabilities

- Recent coordinated physical attacks, and increased cyber activity
- Supply chain risk management, and focus on early detection and response

## ■ Human Performance/Skilled Workforce

- Continue to focus on attracting, developing, and retaining the skilled workforce needed to plan, construct, and operate our transforming needs

# Thank You



Powering our way of life.



# APPENDIX

# Key concepts

- Inherent vs Residual risk
  - **Inherent Risk** – risks that are accepted as a result of the intrinsic nature of operations, materials, features, or activities being undertaken and for which no mitigation has yet been applied
  - **Residual Risk** – those risks that remain after mitigations have been implemented
- Measuring Risk
  - **Impact** (Consequence or Severity) – financial, operational, reputational, health & safety, objectives
  - **Likelihood** (Probability or Frequency) – How likely to happen in next 5 years
  - **Mitigation** (Assurance) – How effective the current mitigations are for lowering Impact/Likelihood
- Risk Categories
  - **Strategic:** Events or circumstances impacted from our strategic vision/priorities
  - **Operations:** Events or circumstances relating to the day-to-day business
  - **Finance:** Events or circumstances relating to financial controls, investments, capital & cash management
  - **Information:** Events or circumstances impacted from how data is gathered, stored, analyzed, checked, & shared

# Grant PUD Risk Universe

<b>Strategic Risks</b>	Strategic priorities, assumptions, and vision that may impact our ability to achieve operational goals	<b>Internal Risks:</b> Corporate Support, Partnering/Alliances, Governance, Product Development <b>External Risks:</b> Industry, Economy, Regulatory, Environmental Volatility, Competitor, Customer Needs
<b>Operations Risks</b>	People, processes, and compliance requirements that may impact our ability to achieve operational goals	<b>Process Risks:</b> Infrastructure, Supply Chain, Business Disruption, Quality, Customer Satisfaction, Security <b>Compliance Risks:</b> Regulatory, Environmental, Health & Safety, Litigation, Third Party <b>People Risks:</b> Governance, Authority, Performance, Integrity, Human Capital, Leadership
<b>Finance Risks</b>	Financial controls, investments, capital & cash management that may impact our ability to achieve operational goals	<b>Treasury Risks:</b> Financing, Cash Flow, Foreign Exchange <b>Credit Risks:</b> Bank Covenants Compliance, Collateral, Default, Capital Market <b>Price Risks:</b> Commodity Price
<b>Information Risks</b>	How information is gathered, stored, analysed, checked, and shared that may impact our ability to achieve operational goals	<b>Reporting Risks:</b> Accounting, Budgeting, Financial Reporting, Taxation <b>Operational Risks:</b> Commitment, Performance Measurement, Operational Reporting, Economic Decision <b>Technological Risks:</b> Cybersecurity, Data Integrity, Technology Relevance/Availability/Infrastructure

## Inherent Impact (e.g., consequence or severity)

Rating	Generic Meaning	Financial Loss	Legal/Compliance	Reputation
1-2 – Insignificant	Little or no impact on the achievement of goals or capability	< \$500K	Minor legal & compliance issues. Unsubstantiated, or substantiated, low impact, low profile	Minor, adverse local public attention or complaints
3-4 – Minor	May degrade the achievement of some goals or capability	\$500K - \$2.5M		Attention from media and/or heightened concern by local community
5-6 – Moderate	Will degrade the achievement of some goals or capability	\$2.5M - \$30M	Serious breach of regulation with investigation or report to authority and/or moderate fine possible	Significant adverse national media/public/NGO attention
7-8 – Major	Significantly degrades the achievement of goals or capability	\$30M - \$100M	Major breach of regulation or major litigation	Serious public or media outcry, loss of customer/investor confidence
9-10 – Catastrophic	Significant capability loss and the achievement of goals is unlikely	> \$100M	Significant prosecution and fines. Very serious litigation including class action.	Complete loss of public, customer, and/or investor confidence

## Mitigation Assurance Table (e.g., how much uncertainty is left)

Rating	Generic Meaning	Effectiveness	Quality	Controls	Accountability
<b>10-9 – Ineffective</b>	Mitigation effectiveness is not driven by the PUD but is dependent on each individual's background & standard	Ineffective and fragmented mitigations	No written guidance for performing tasks	Controls are mostly manual	No documented accountability/ownership
<b>8-7 – Poor</b>	Values & behavior expectations are not well defined or consistently understood beyond management	Mitigations are only partially effective & the area copes as best they can	Some written task guidance in various forms, but may not be immediately available due to inconsistent format and unapproved status		
<b>6-5 – Could be Improved</b>	Policy statements on values and behavior expectations are published to all	Some written standards exist, but may not be comprehensive	Written task guidance for important aspects	Controls are mostly manual and hybrid	Accountability/ownership is not enforced
<b>4-3 – Good</b>	Cultural norms ensure compliance with PUD values and policies at all levels	Mitigations are effective and followed on most occasions	Written task guidance is comprehensive, including (i) how and when to perform tasks; (ii) what tasks are supposed to achieve; (iii) how to handle exceptions	Controls are a combination of automated, hybrid and manual	Clear ownership of mitigation responsibility
<b>2-1 – Effective</b>	Board, management, & employees demonstrate through actions that behavior outside of organizational values is unacceptable	Mitigations are effective, followed & documented		Controls are primarily automated and hybrid	Accountability/Ownership at all levels is culturally driven

# Reliability Compliance

## January 9, 2024

Glen Pruitt

Reliability Compliance Manager



Powering our way of life.



# Agenda

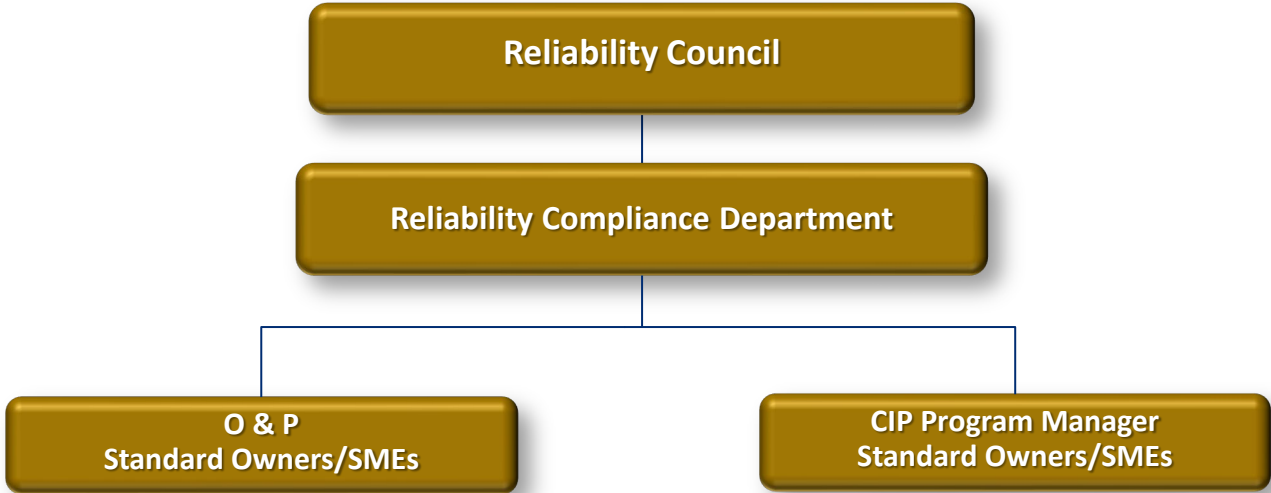
- **GCPD Reliability Organization**
- **Potential Noncompliance Update**
- **Reliability Compliance**
  - 2023 Year-In-Review
  - 2024 Work Plan
- **‘Potential Non-Compliance’ Status**

# GCPD's Reliability Organization

## Reliability Council

- Chief Compliance Officer\*** (CFO) – Bonnie Overfield
- CIP Senior Manager\*** (GM/ CEO) – Richard Wallen
- O&P Senior Manager/ (COO) – Jeff Grizzel
- Chief Customer Officer (CCO) – Ty Ehrman
- Chief Administrative Officer (CAO) – Julie Pyper
- Director Power Delivery – Ron Alexander
- Primary Compliance Contact\*** (Chair) – Glen Pruitt

\* NERC Registered Positions



Reliability Council – provides the leadership, guidance, and direction

Chief Compliance Officer – overall responsibility for NERC Compliance

CIP Senior Manager – executive responsible for NERC CIP Standards

O&P Senior Manager – executive responsible for NERC O&P Standards

Reliability Compliance Dept. – implements direction set by *Reliability Council*

# Potential Non-Compliance – PNCs

## 7 Open PNC's

- ~~\*2 Self-Reported PNCs~~ – ~~2019~~ CE Received
- **2 Audit Findings** – **2020** awaiting final disposition
- **2 Self-Reported PNCs** – **2020** awaiting final disposition
- **1 Self-Reported PNCs** – **2022** awaiting final disposition
- **2 Spot Check Finding** – **2023** awaiting final disposition

### 7 'Potential Non-Compliances'

\* Two Compliance Exceptions (CE's) Received 9/28/2023

- 2019 CIP-006 Self-Reports Closed

# Remaining PNCs

Standard	Requirement	Description	Self-Report Submitted Date	Self-Report of Finding	Status
<del>CIP-006</del>	<del>R1</del>	<del>Tailgating, viewed by camera</del>	<del>2019</del>	<del>Self-Report</del>	<del>CE Received</del>
<del>CIP-006</del>	<del>R2</del>	<del>Visitor Not Logged</del>	<del>2019</del>	<del>Self-Report</del>	<del>CE Received</del>
CIP-010	R1	Baseline configurations did not exist for all assets in scope.	2020	Self-Report	Awaiting Disposition from WECC
CIP-010	R2	Failure to monitor at least once every 35 days.	2020	Self-Report	Awaiting Disposition from WECC
FAC-008	R3	Facility Ratings	2020	Audit Finding	Awaiting Disposition from WECC
FAC-008	R6	Facility Ratings	2020	Audit Finding	Awaiting Disposition from WECC
CIP-004	R4	Unauthorized electronic access	2022	Self-Report	Awaiting Disposition from WECC
<b>CIP-014</b>	<b>R1</b>	<b>500KV bus not included in Study</b>	<b>12/21/2023</b>	<b>Spot Check</b>	<b>Awaiting Disposition from WECC</b>
<b>CIP-014</b>	<b>R2</b>	<b>No Assessment Verification Documentation</b>	<b>12/21/2023</b>	<b>Spot Check</b>	<b>Awaiting Disposition from WECC</b>

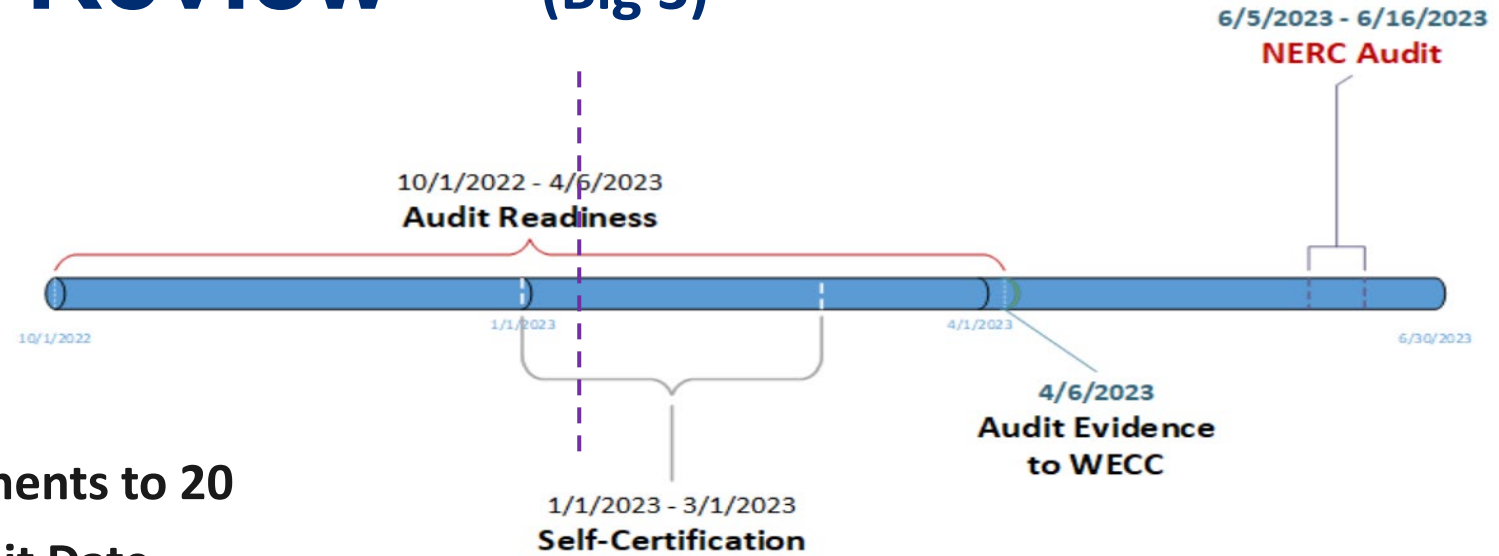
Bolded Items are additions since last update

# 2023 NERC Audit In Review

(Big 3)

## Highlights

- June 5<sup>th</sup> – June 16<sup>th</sup>
- Eight months preparation
- Scope – Reduced from 71 Requirements to 20
- What changed – Fully Remote; Audit Date
- Audit Results:
  - **Zero Findings of Non-compliance**
  - Three Recommendations
  - Zero Areas of Concern
  - One Positive Observation
- New Audit Period February 4, 2023 thru (February 2026)
- Next Audit Q2-2026



# 2023 CIP-014 Spot Check

## Highlights

- November 6<sup>th</sup> – November 17<sup>th</sup>
- Focused on CIP-014 Requirements R1 & R2
  - CIP-014 - Physical Security
- Fully Remote – No Site Visit
- Spot Check Results:
  - **Two Findings of Potential Non-compliance**
  - Two Recommendations for Improvement
- Currently Waiting on Final Report

# RC 2023 Work Plan in Review

## 1) Big Three Initiatives

- Internal Controls Program Framework ✓
- Audit Readiness ✓
- Separation/ Transfer Notification Process

## 2) NERC Compliance Deliverables

- Annual CIP Training ✓
- CIP-014 On-site Review ✓
- New EMS System – CIP Compliance Commissioning **2024 Completion Expected**
- Continue work on CIP Internal Controls Development **Ongoing**
- Refine Compliance Tools – DocMinder, SharePoint, Maximo **Ongoing**
- Internal Compliance Program Document **Early 2024 completion expected**
- Routine tracking, monitoring, and reporting of deliverables **Ongoing**

# RC Work Plan Focus Areas – 2024

## 1) NERC Compliance Deliverables

- Complete Self-Certification (due 3/1/2024)
- New EMS System Compliance Commissioning
- Continue work on Internal Controls Development
- Refine RC Department Tools and Documentation
- Internal Compliance Program Document
- Standard Owner Engagement and Training
- RC Staff Development & Training Opportunities
- Routine tracking, monitoring, and reporting of deliverables



# QUESTIONS