

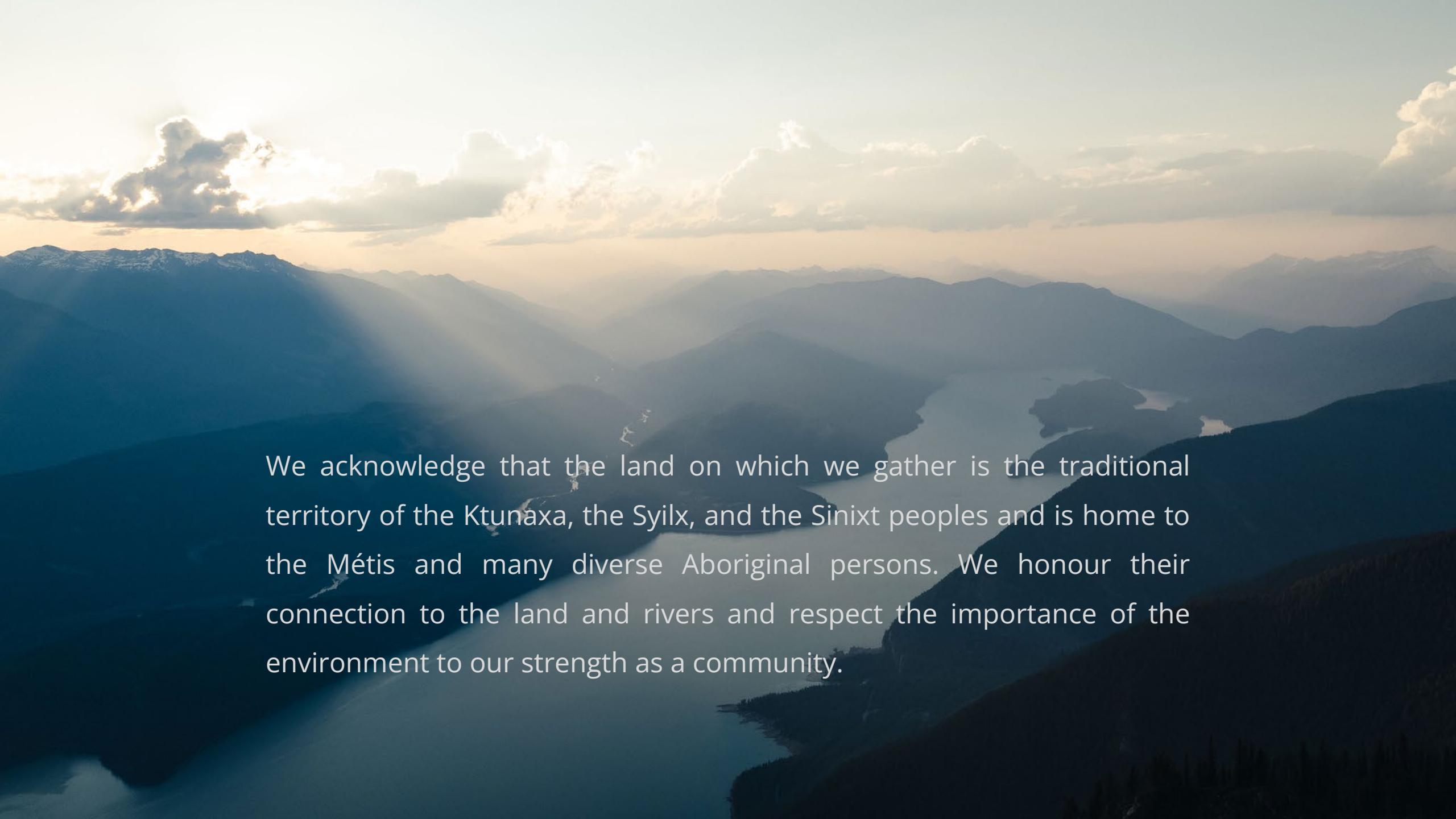
2023/2024 OVERVIEW



Accomplishments & Business Plan

City of
NELSON

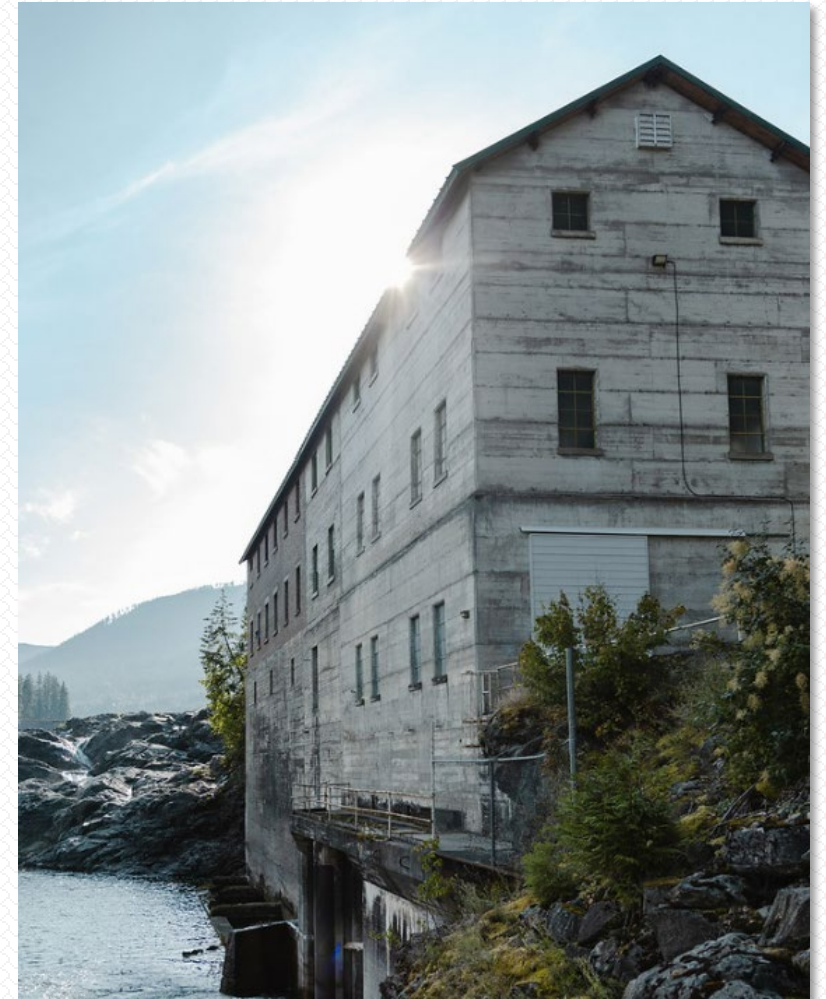
October 20, 2023



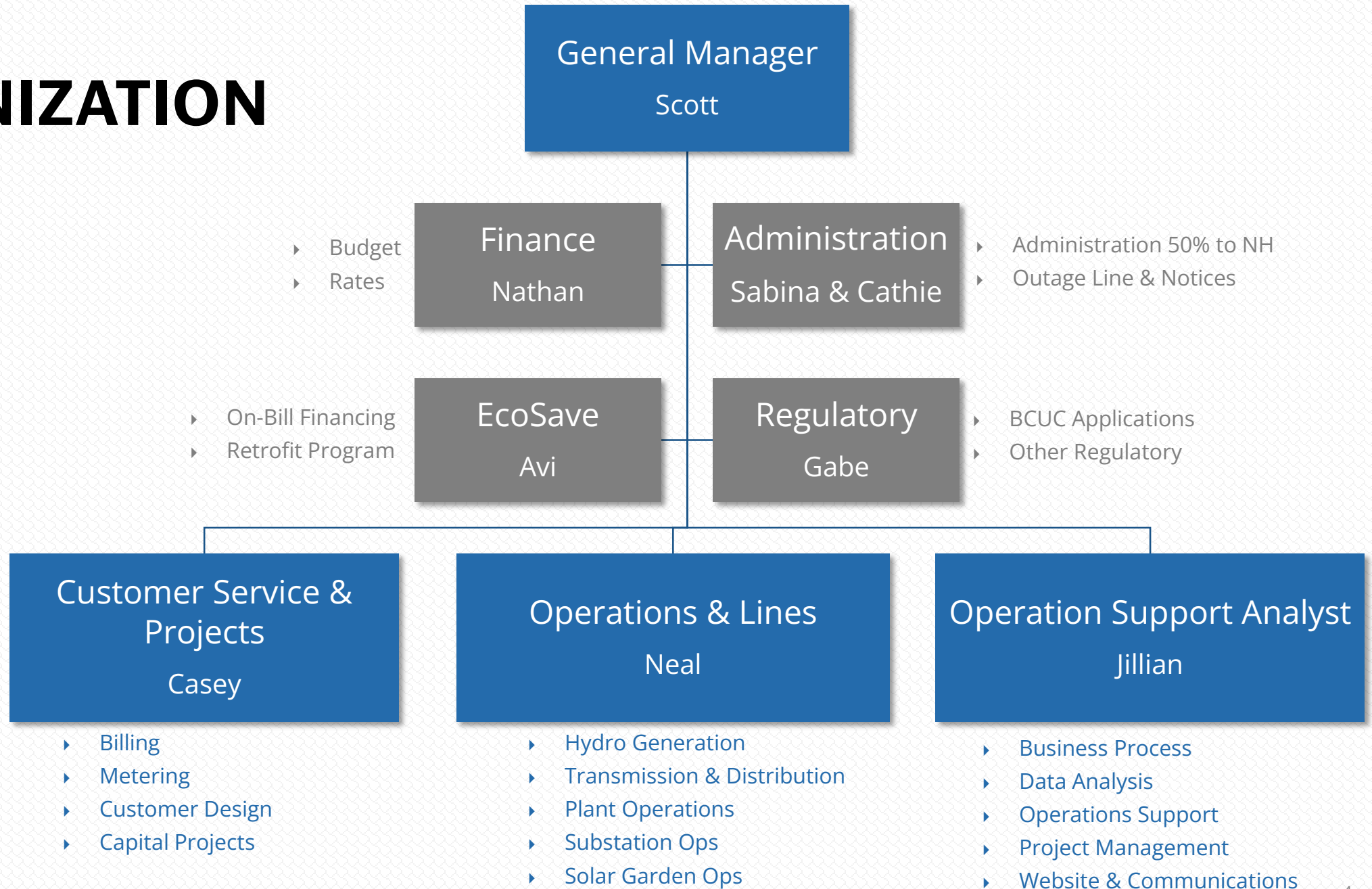
We acknowledge that the land on which we gather is the traditional territory of the Ktunaxa, the Syilx, and the Sinixt peoples and is home to the Métis and many diverse Aboriginal persons. We honour their connection to the land and rivers and respect the importance of the environment to our strength as a community.

AGENDA

- | | |
|---|---------|
| 1. Introduction | Scott |
| 2. Budget and Rates | Nathan |
| 3. Regulatory | Gabe |
| 4. Generation, Transmission, Distribution | Neal |
| 5. Projects and Customer Service | Casey |
| 6. Key Performance Indicators | Jillian |
| 7. EcoSave Program | Scott |
| 8. General Management | Scott |
| 9. Closing Remarks | Scott |



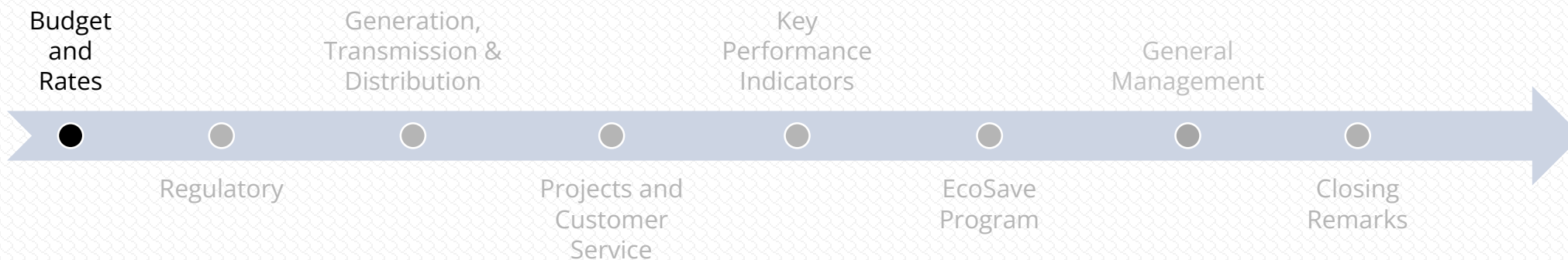
ORGANIZATION





Budget and Rates

Nathan Russ



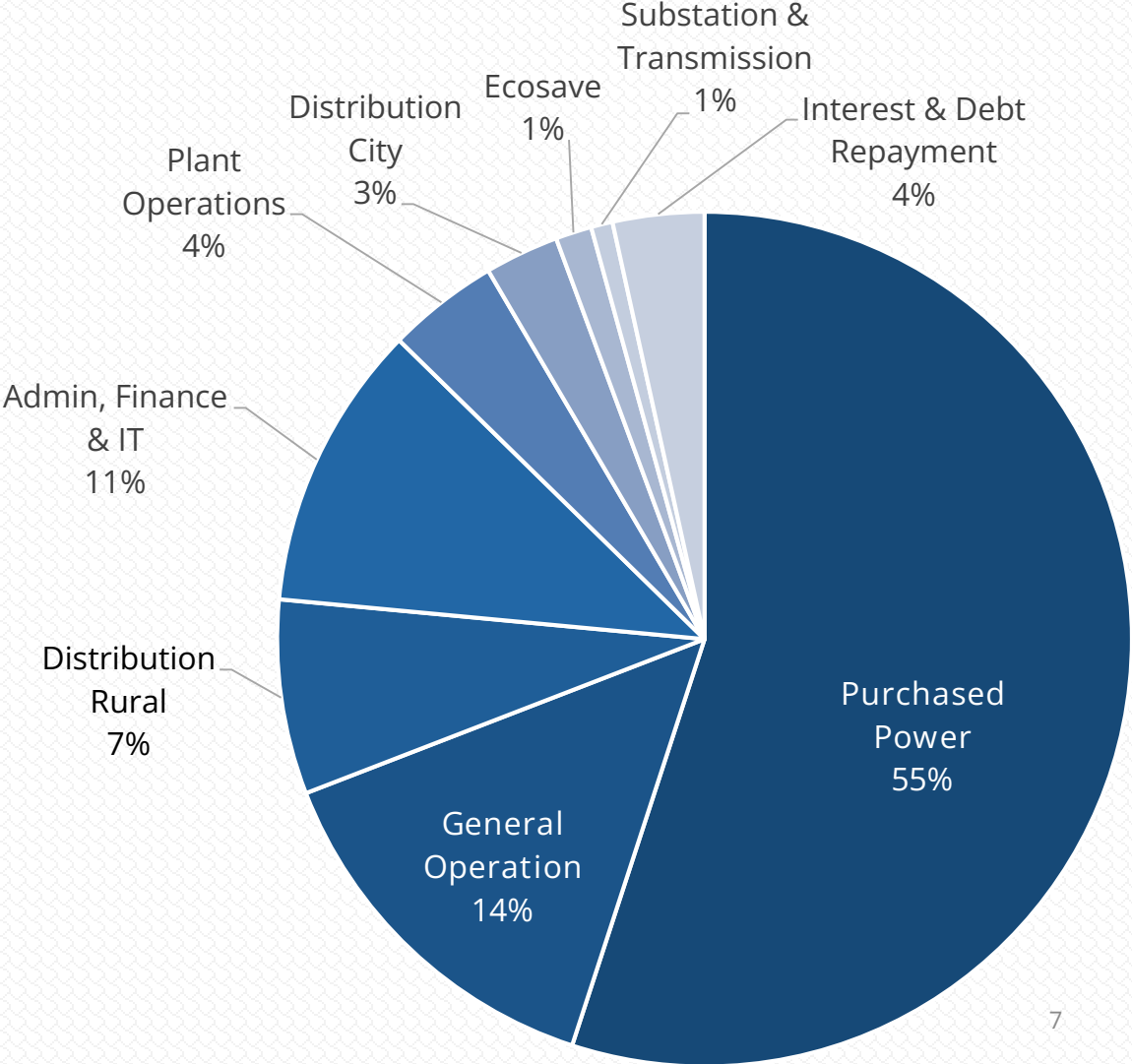
2023 OPERATING BUDGET HIGHLIGHTS

- Fortis BC Power Purchases: Greater than budgeted - Freshet
- Capital Expenditures: Less than budgeted – Mill Street Substation (timing)

	2023 Budget	2023 YE Forecast	Forecast / Budget
Revenue	\$22,579,775	\$22,452,112	99%
Power Purchases	\$8,437,072	\$8,790,052	104%
Operating Expenses	\$7,120,795	\$7,198,633	101%
Capital Expenditures	\$6,122,745	\$5,137,507	84%

O&M COMPARISON & COST DISTRIBUTION 2023/24

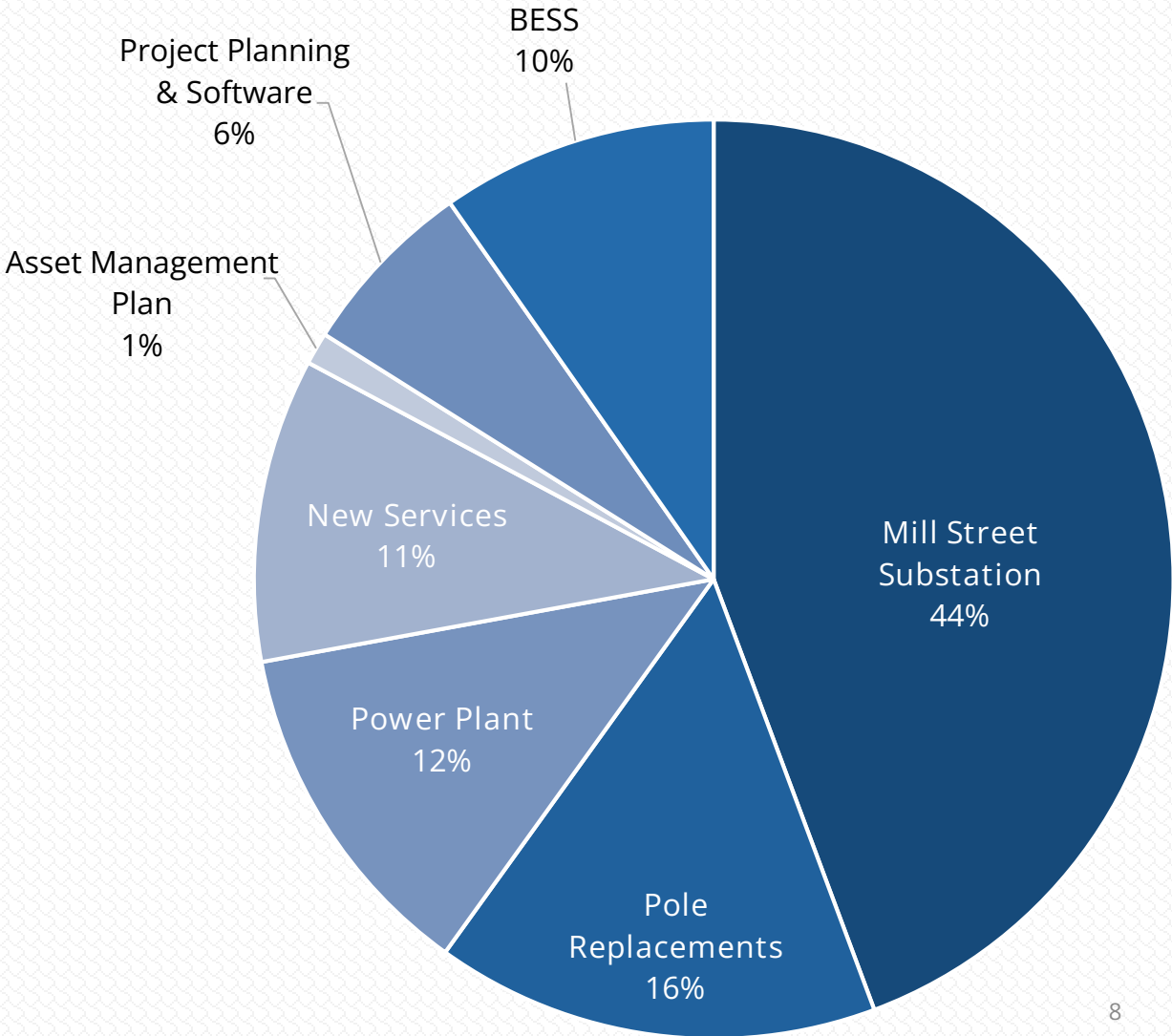
	2023 YE Fcst.	2024 Budget	2023 Fcst. vs 2024 Bdg.
Power Purchases	\$8,790,052	\$9,065,293	103%
Operating Expenses	\$7,198,633	\$7,269,456	101%
Capital Expenditures	\$5,137,507	\$4,759,239	93%



2024 PRELIMINARY CAPITAL BUDGET

	2024 Budget Expenses	Total Project Expenses
Mill St Substation*	\$1,959,363	\$5,994,766
Total 2024 Capital Budget	\$4,759,239	

*Net of Insurance Recoveries



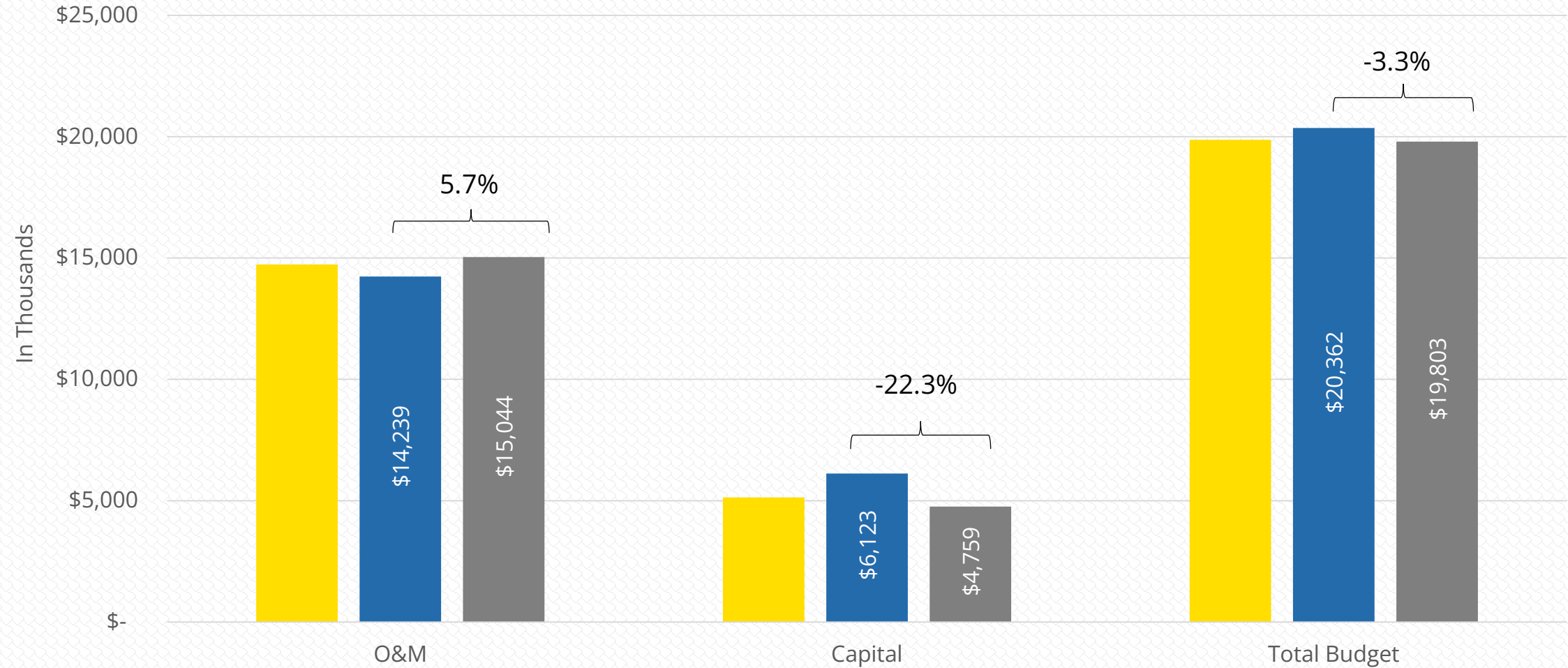
2024 OPERATING BUDGET HIGHLIGHTS

- Continued focus on safety and reliability
- 6.74% FortisBC Rate increase
- Adjusted Power Purchase Forecast model
- 4.21% increase in IBEW wages
- Inflationary increase of 5.62% for recurring expenses

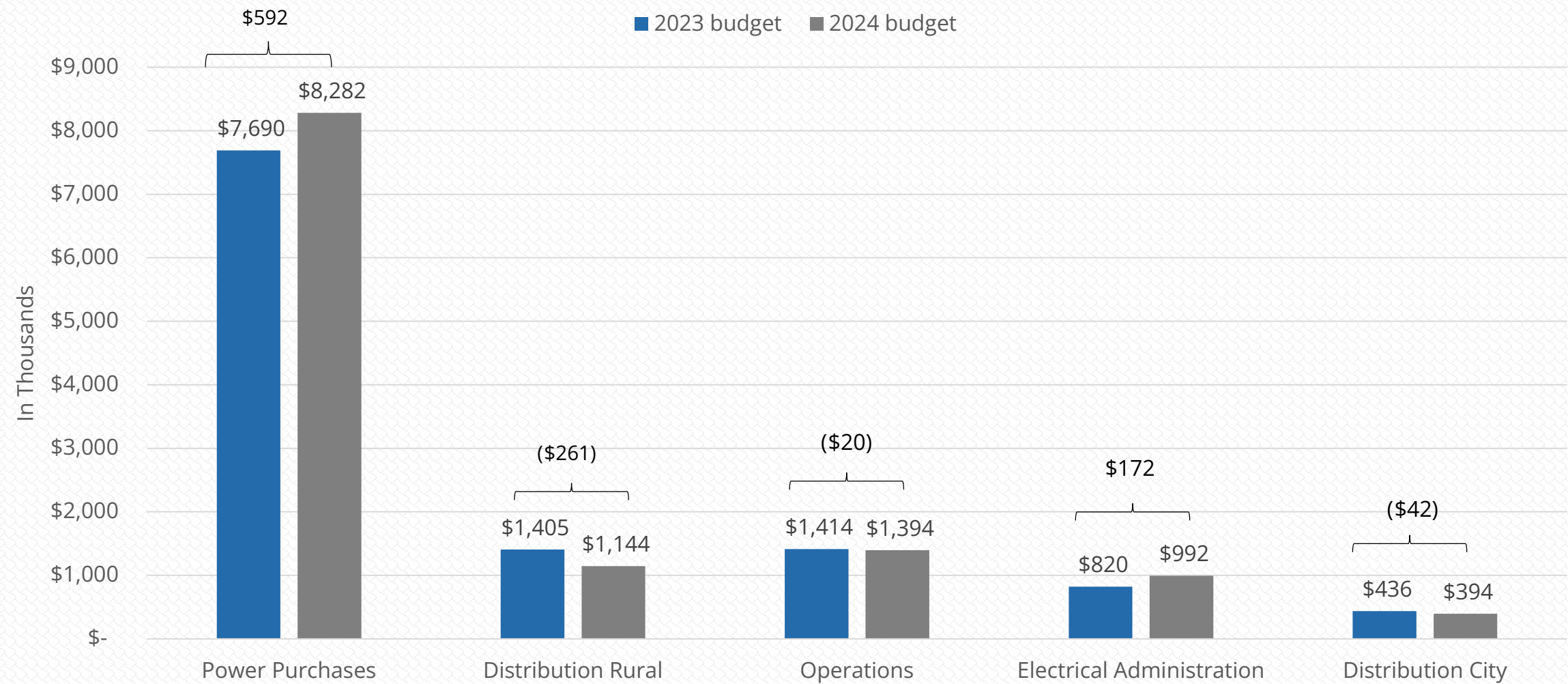


BUDGET COMPARISON

■ Projection 2023 ■ Budget 2023 ■ Budget 2024



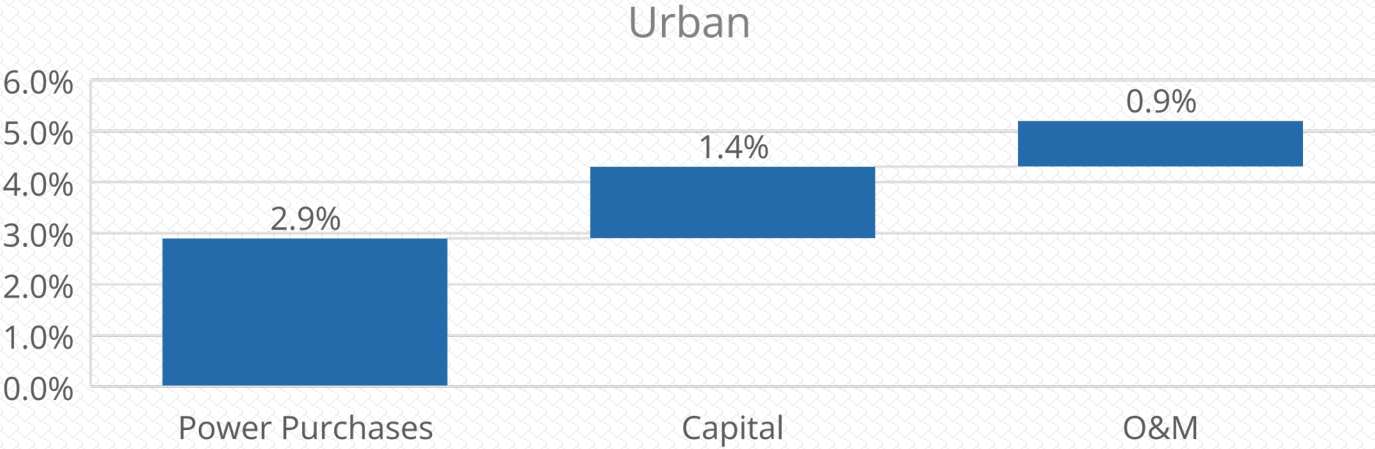
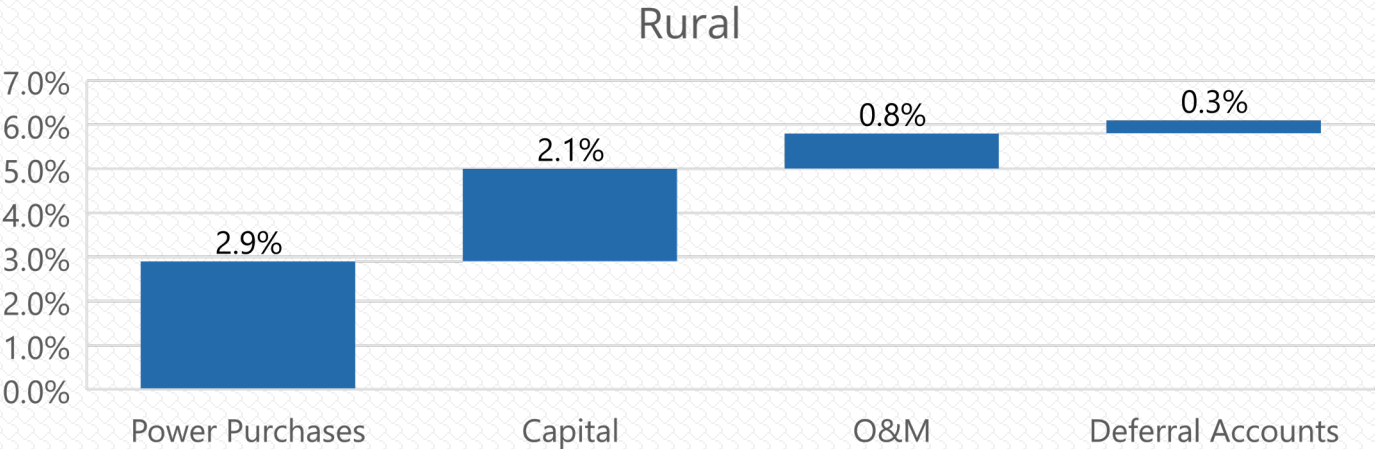
O&M COST-DRIVERS COMPARISON



2024 RATE INCREASE BREAKDOWN

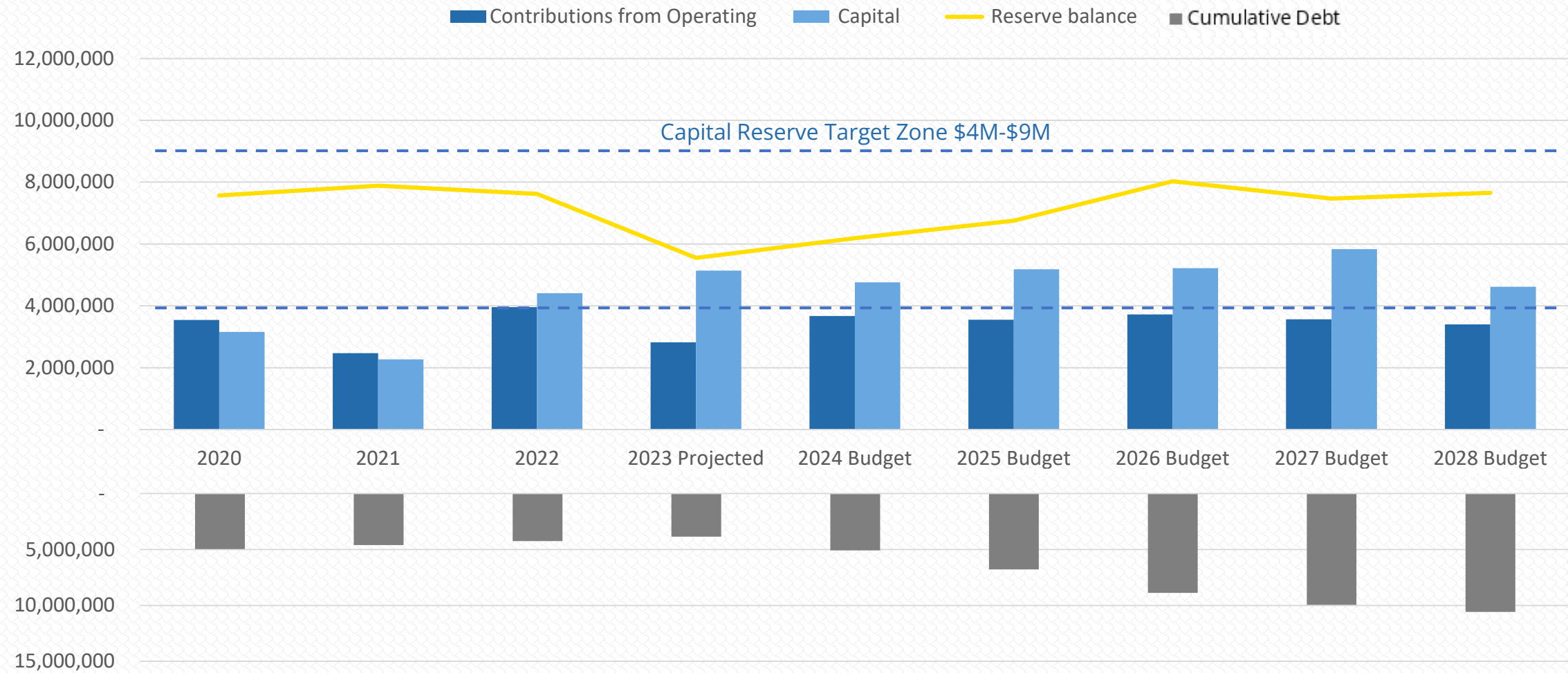
Rural Rate Increase: 6.20%
or
\$10.06/month (1250kWh)

Urban Rate Increase: 5.20%
or
\$7.99/month (1250kWh)



COSA MODEL UTILITY RATE INCREASE

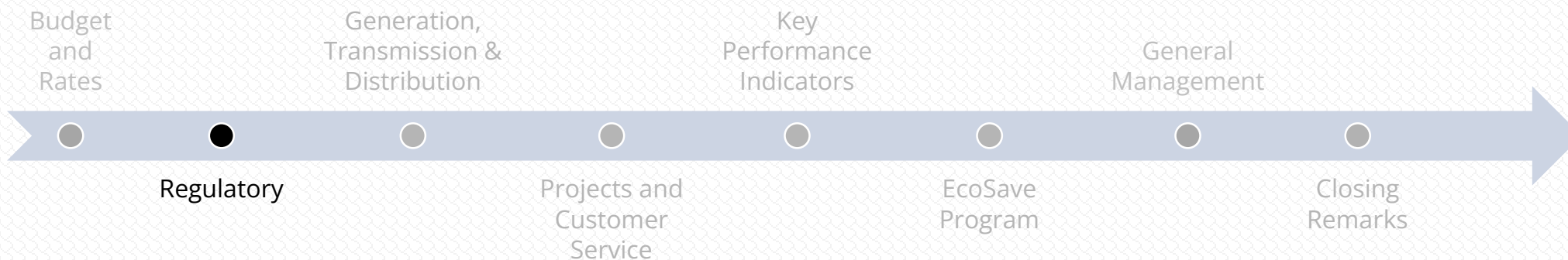
Rural Rate Increase: 6.2%
Urban Rate Increase: 5.2%
Dividend: Return on Equity (\$3.78M)





Regulatory

Gabe Bouvet-Boisclair



BCUC APPLICATIONS & PROCEEDINGS

- 2023 Revenue Requirements Application
- Reconsideration & Variance of G-196-22 (COSA)
- 2024 Revenue Requirements Application
- Generic Cost of Capital (GCOC)
- FortisBC 2024 Annual Review of Rates
- Regulatory Efficiency Initiative
- Cyber Security Framework – 2 Year Pilot



OTHER REGULATORY BODIES

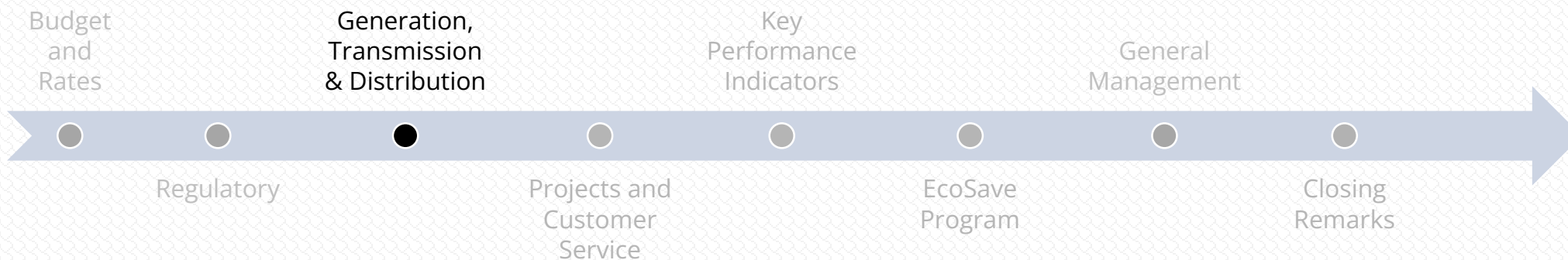
- Technical Safety BC – Utility Safety within City boundaries
- Dam Safety – Dam Safety Management Plan
- EGBC – Permit to Practice Management Plan Audit
- WorksafeBC – General Compliance



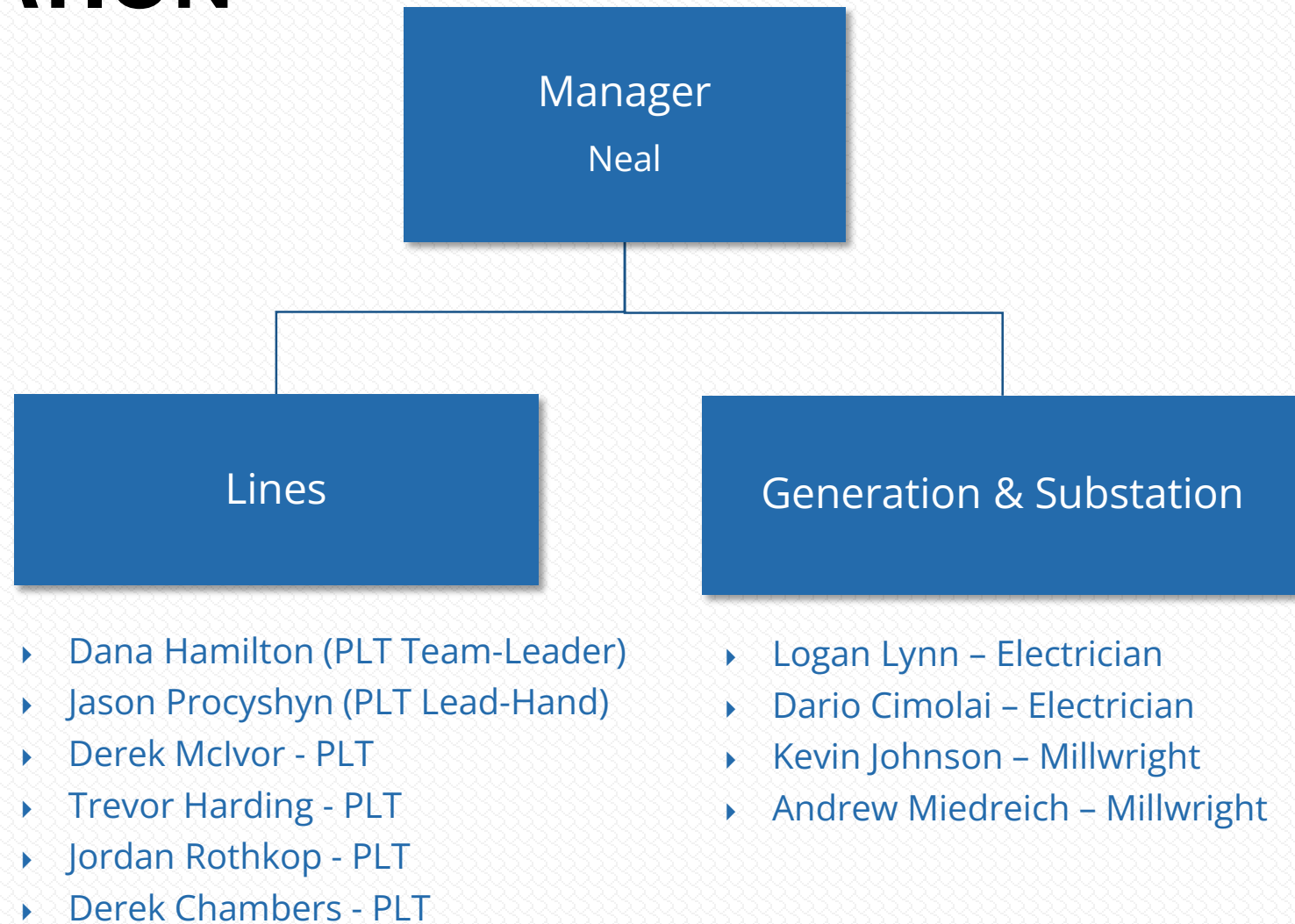


Generation, Transmission and Distribution

Neal Dermody



ORGANIZATION



SAFETY

- No Lost Time Incidents
- Dam Safety Review for Bonnington Generating Station completed
- Dam Safety Management Plan developed to address non-conformances.
- Operations crew addressing safety audit deficiencies (Machine Guards & Railings)
- City of Nelson Electrical Safety Committee was established and work is ongoing for the development of the City of Nelson Electrical Safety Program (ESP).
- System Safety and Lock-out (SSL) redesigned and initial training provided to NH. NH specific, dedicated training syllabus to be developed in early 2024. Computer based and instructor led programs will be available by April 28th, 2024.



STAFF TRAINING

Entry of all employee historic training into BISTrainer, review of required regulatory and trades training identified and vetted for WSBC requirements. BIS will be used to record, track, report and notify of upcoming training to better schedule and manage required employee & staff training.

City of NELSON

Home Profile Store Purchases Users Reporting Folders Admin

The Corporation of the City of Nelson > Nelson Hydro > Neal Dermody

Search Users ? Log Out >

Training Matrix Summary

Search User

Nelson Hydro

Nelson Hydro

Search Reset Export Data

Requirement Satisfied About to Expire Requirement Not Satisfied Grace Period

Optional requirements appear with the same coloured fonts instead of coloured cells.

Courses	Location	Completed	Expiry
Users			
Casey Smit	Nelson Hydro		
Neal Dermody	Nelson Hydro		
Scott Spencer	Nelson Hydro		

Load More

Full Screen

Completed Training by User

Add Course Code

Search User

Completion Report Reset Search

Nelson Hydro & below

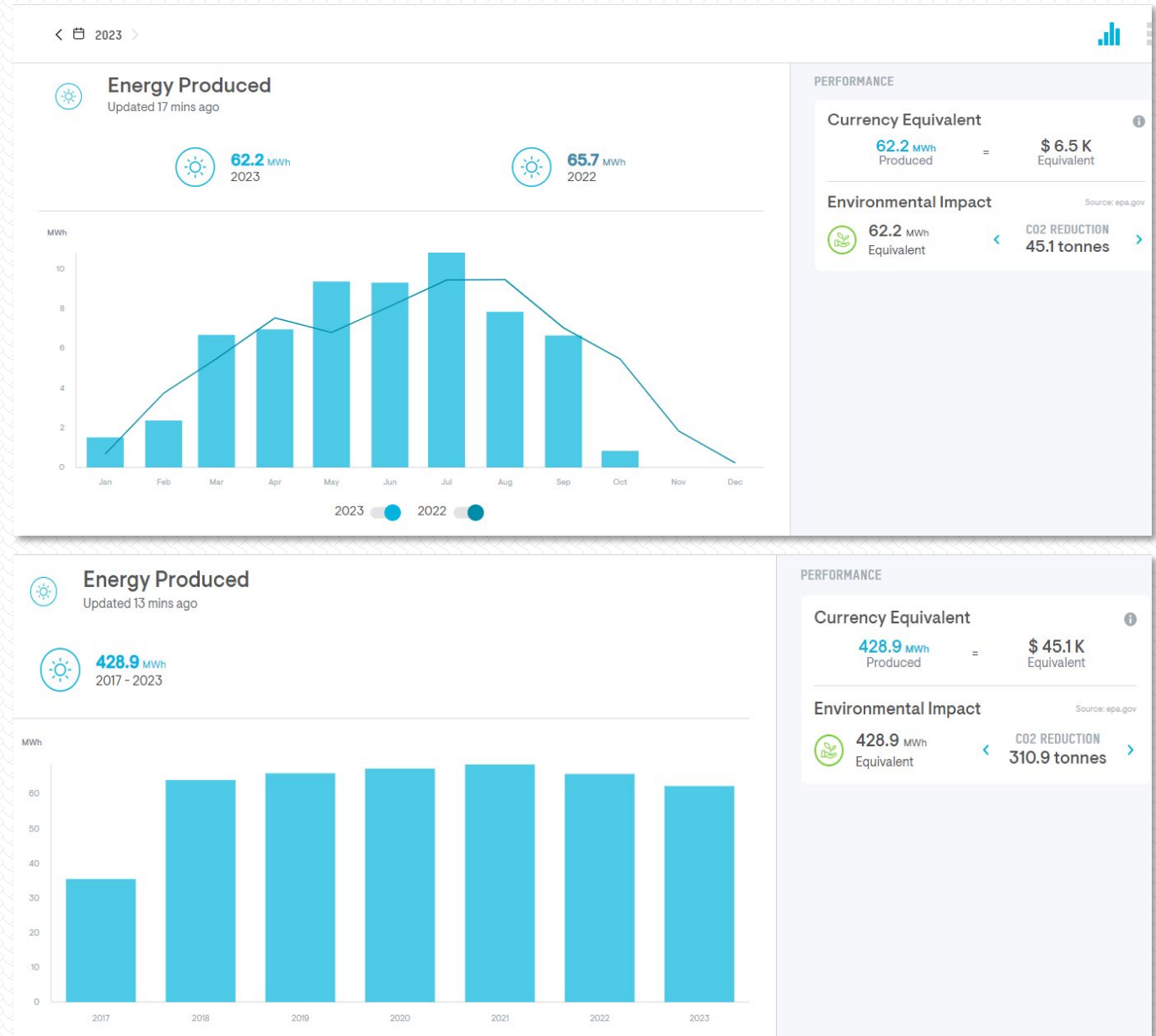
Users	Completed	Repeated	In Progress	Incomplete	Mark	Time
21	567	100%	0	3	4	0%
Nelson Hydro	#	%	#	#	%	Miss
Andrew Miedreich	5	100%	0	0	0	95
Bede Blomme	5	100%	0	0	0	89
Casey Smit	4	100%	0	0	0	100
Christian Desrosiers	11	100%	0	0	0	100
Dana Hamilton	102	100%	0	0	0	97
Dario Cimolai	4	80%	0	1	20%	0
Derek Chambers	3	100%	0	0	0	92
Derek McIvor	15	100%	0	0	0	100

Full Screen

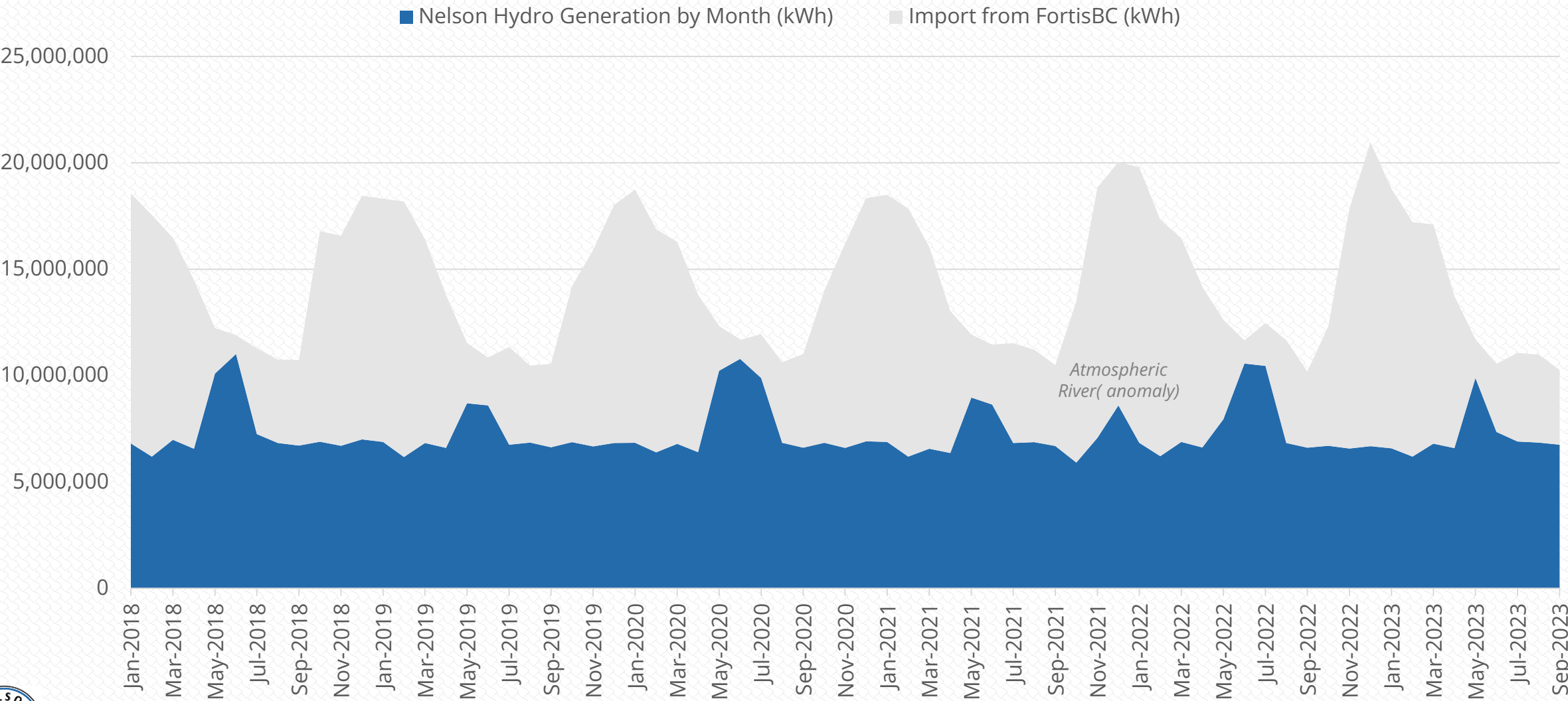


SOLAR GENERATION

- Solar Energy Production in May, June, July above 2022 production.
- Required maintenance is minimal.
- Structural frames holding panels will require attention due to wood deformation.

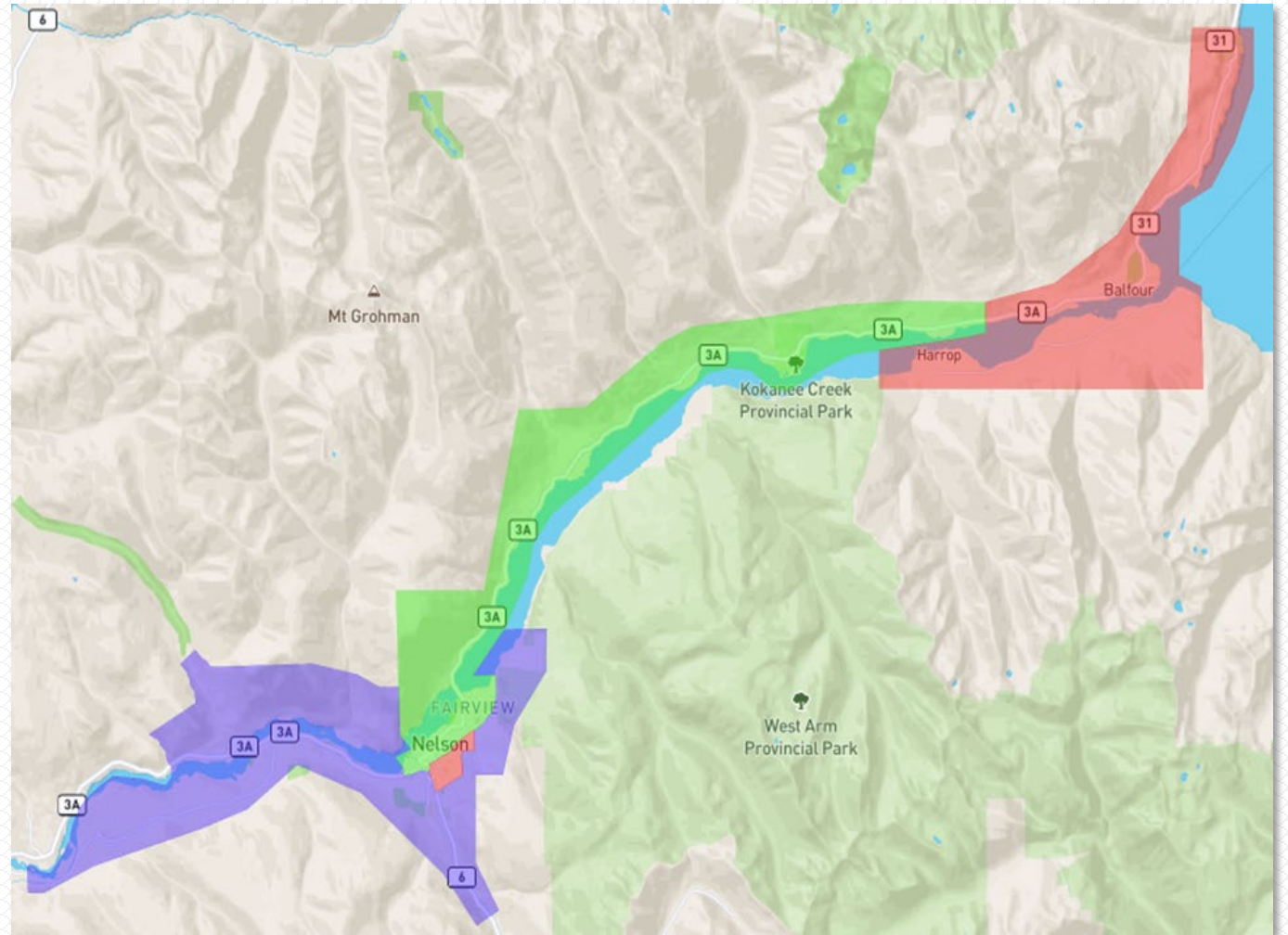


ENERGY CONSUMPTION



5 YEAR VEGETATION MANAGEMENT PLAN

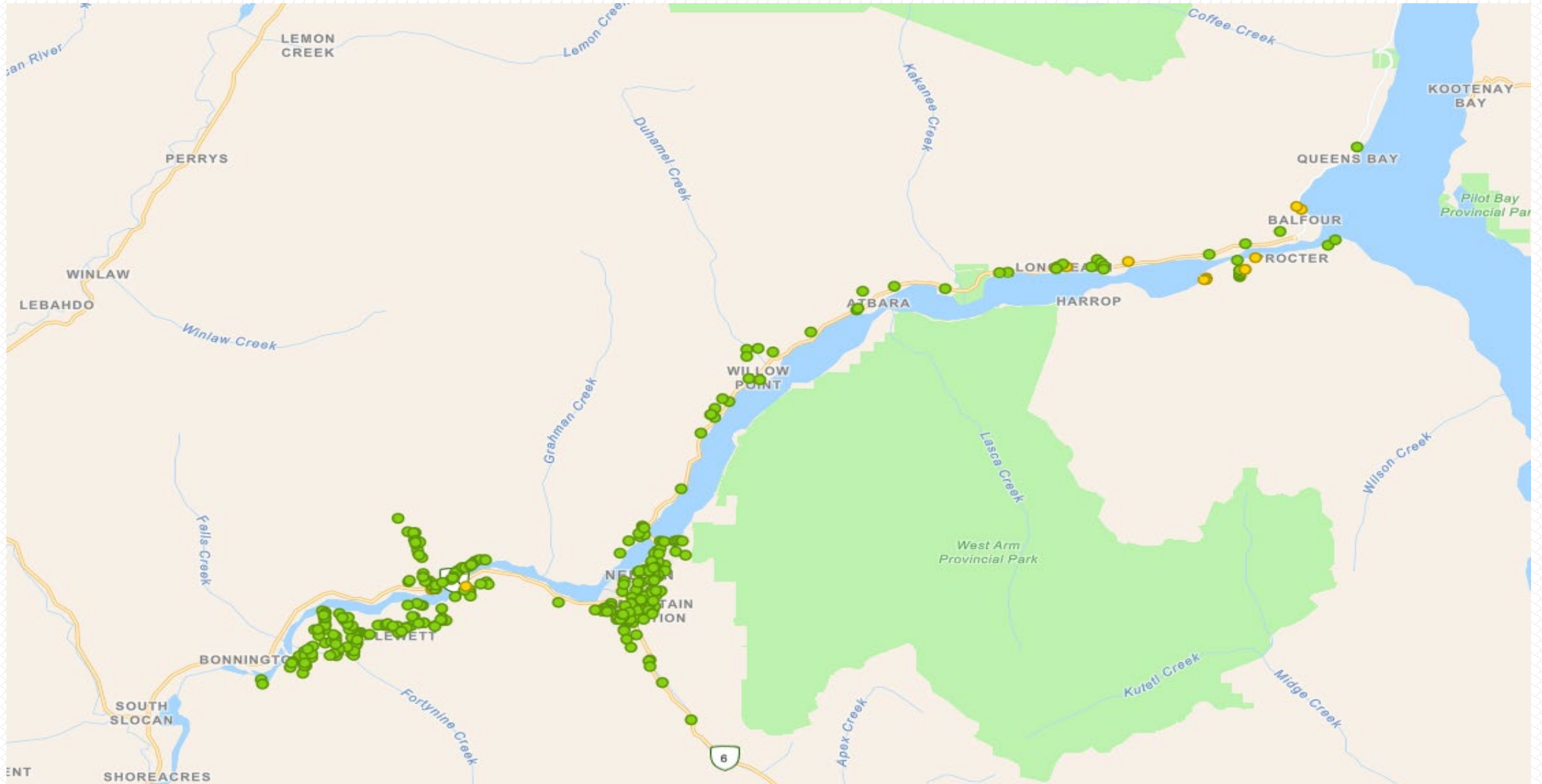
- This dynamic plan is reviewed and updated annually.
- 2024 budget is reduced from 2023 per the 5-year plan and positive reliability metrics.
- Reduced impact on ratepayers.



5 YEAR VEGETATION MANAGEMENT PLAN

Year and Budget	Focus Zone	Major Focus Zone	Priority Corridor Zone 1 & 3 (60kV Transmission Lines)	Brushing Non-Focus Zones	Hazard Tree Felling Non-Focus Zones	Emergent Spots Non-Focus Zones	Herbicide Application by Licensed Vendor
2024 \$678,000	3 - Red (Redfish to COF Ck., Harrop / Procter, Uphill City)	60% \$406,800	5% \$33,900	5% \$33,900	15% \$101,700	10% \$67,800	5% \$33,900
2025 \$695,200	2 - Green (West end of Johnston Rd. to Redfish Creek. Fairview and Downtown)	60% \$417,120	5% \$34,760	5% \$34,760	15% \$104,280	10% \$69,520	5% \$34,760
2026 \$709,200	1 - Purple (South Shore and Rosemont, Grohman Creek, Taghum)	60% \$425,520	5% \$35,460	5% \$35,460	15% \$106,380	10% \$70,920	5% \$35,460
2027 \$723,600	3 - Red (Redfish to COF Ck., Harrop / Procter, Uphill City)	50% \$361,800	10% \$72,360	5% \$36,180	20% \$144,720	10% \$72,360	5% 36,180
2028 \$738,300	2 - Green (West end of Johnston Rd. to Redfish Creek. Fairview and Downtown)	50% \$369,150	10% \$73,830	5% \$36,915	20% \$147,660	10% \$73,830	5% \$36,915

VEGETATION PRESCRIPTION – COMPLETED IN 2023



POWER PLANT

- Wooden Ramp condemned. Remove or replace decision in 2024.
- Forebay Debris Removal.
- Fabricating machine guards and railings to meet WSBC requirements.
- Power plant vegetation management for rock face



LINES & SUBSTATION

- 2023 Test & Treat completed, 660 poles tested.
- 103 poles scheduled for replacement before December 31, 2023.
- 6th PLT position allows participation in capital program, retention of construction skillset on the team & great opportunity for work-life balance.
- Received bulk distribution transformers and poles to mitigate supply chain issues.
- New hybrid electric boom bucket truck.

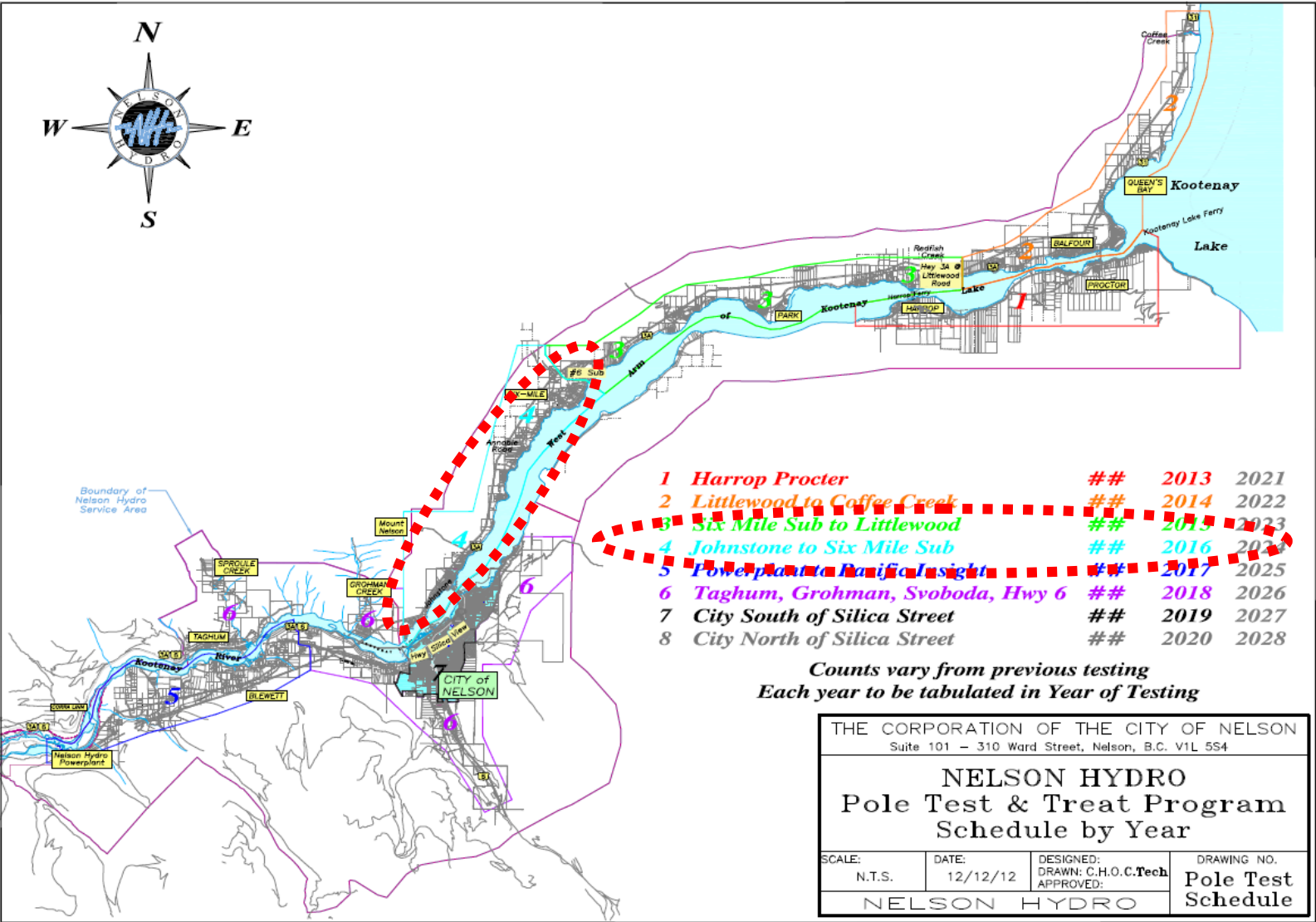


TEST & TREAT ⇒ POLE REPLACEMENT



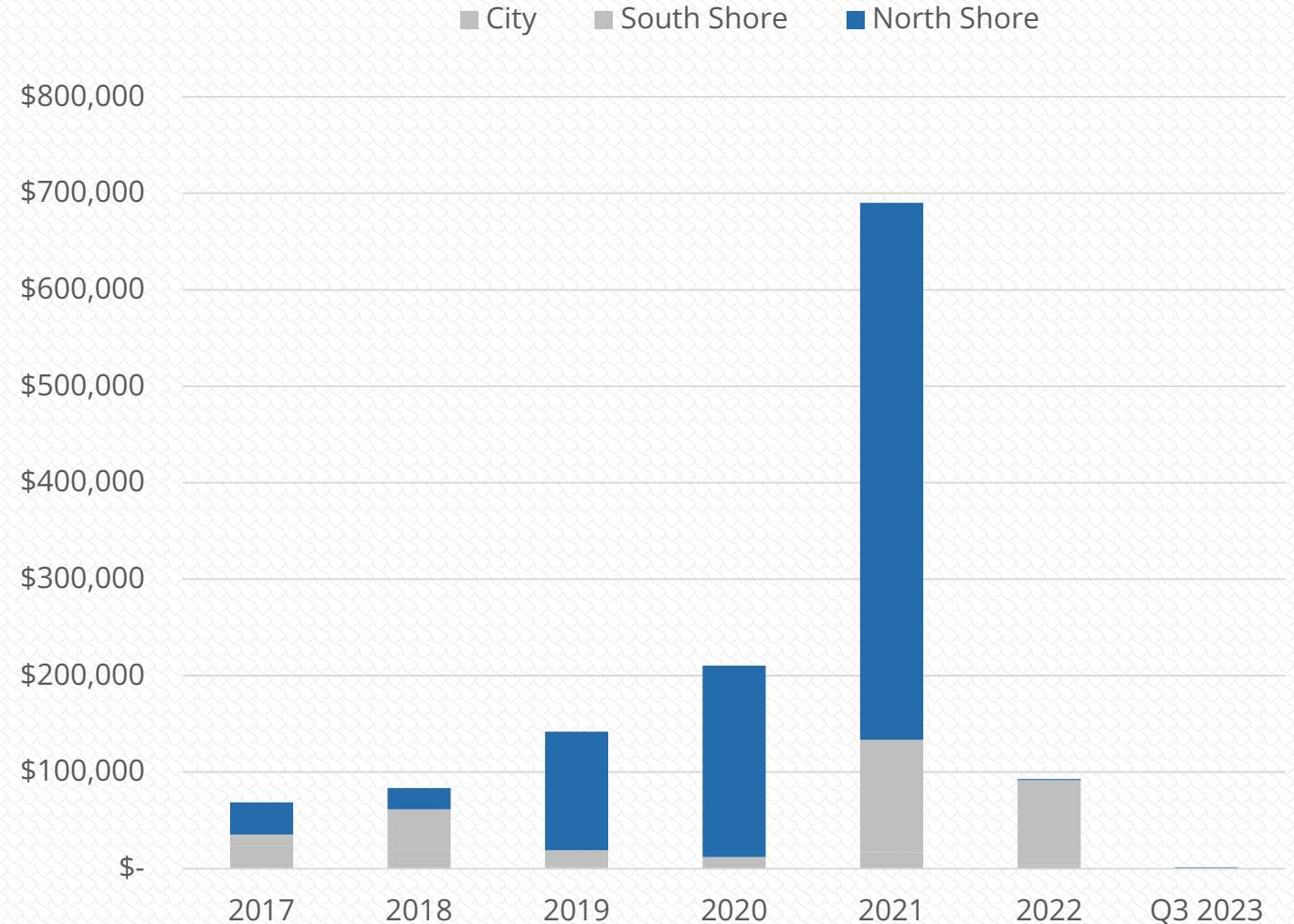
Test & Treat Pole Count by Zone (as of 2022)

Nelson Hydro Pole Count - Feb. 8 2023			
Region	Test Area	Poles by Area	Poles by Region
NS	Area 1	709	
NS	Area 2	883	
NS	Area 3	852	
NS	Area 4	873	3317
SS	Area 5	941	
SS	Area 6	1012	1953
CITY	Area 7	999	
CITY	Area 8	969	1968
		TOTAL	7238

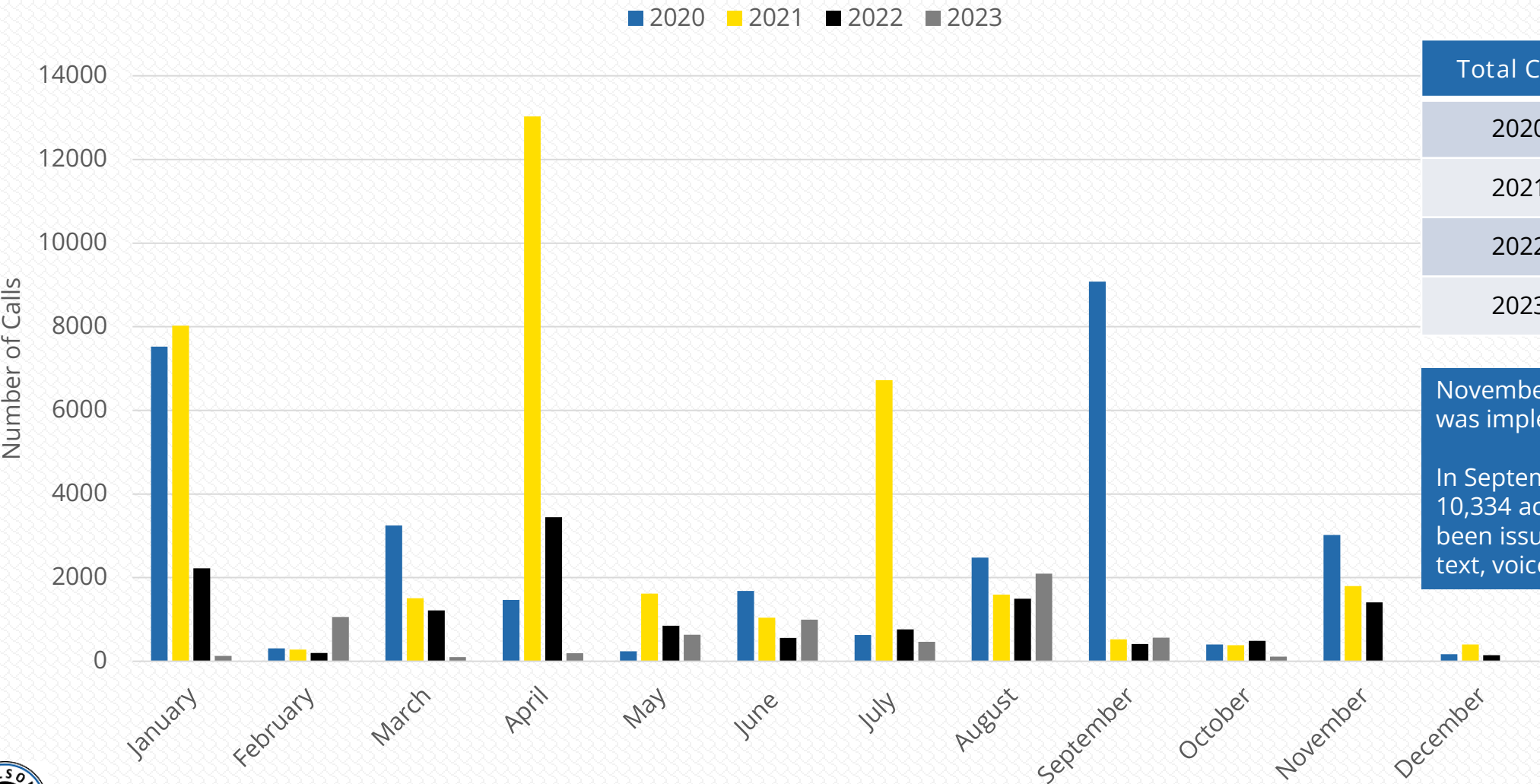


MAJOR STORM EXPENSE

- 2023 significantly dropped as no major storms *yet*.
- 2016-2021 was trending significantly upward.
- As the Vegetation Management Program becomes more mature, it should maintain the current CEA metrics which are trending positively.



CALLS TO OUTAGE INFORMATION LINE



Total Calls	Year
2020	30,241
2021	34,716
2022	11,233
2023	6,344

November 2022, Voyent Alert was implemented.

In September 2023 there were 10,334 accounts. 82 Alerts have been issued since to subscriber text, voice and email accounts.



2024 OPERATIONS & LINE

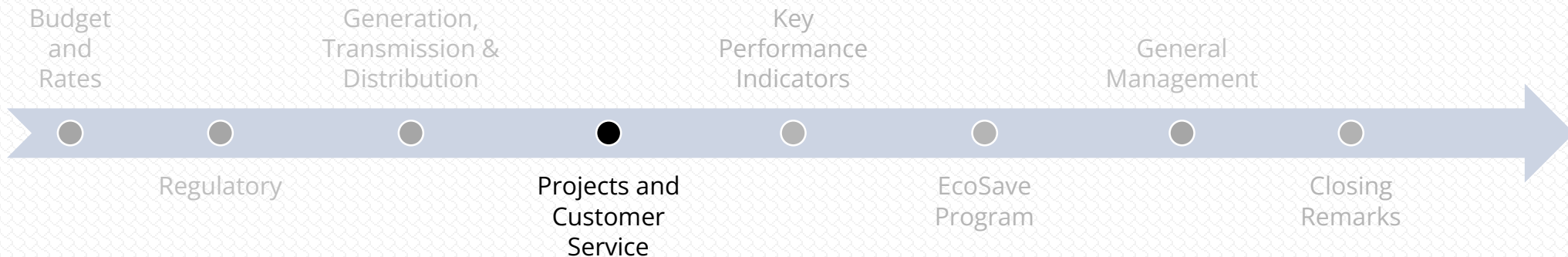
- Asset Management Framework aligns:
 - Dam Emergency Plan (DEP), Operations, Maintenance and Surveillance Plan (OMS), and Dam Safety Management Plan, (DSMP)
 - Preventative Maintenance (PM), Computerized Maintenance Management System (CMMS), Equipment Health Rating, and Reliability Centered Maintenance.
- Rollout Training for the CoN Electrical Safety Program Policy and Tools, System Safety & Lockout Program
 - Computer Based for Categories 2 & 3
 - Instructor Led for Categories 4 & 5



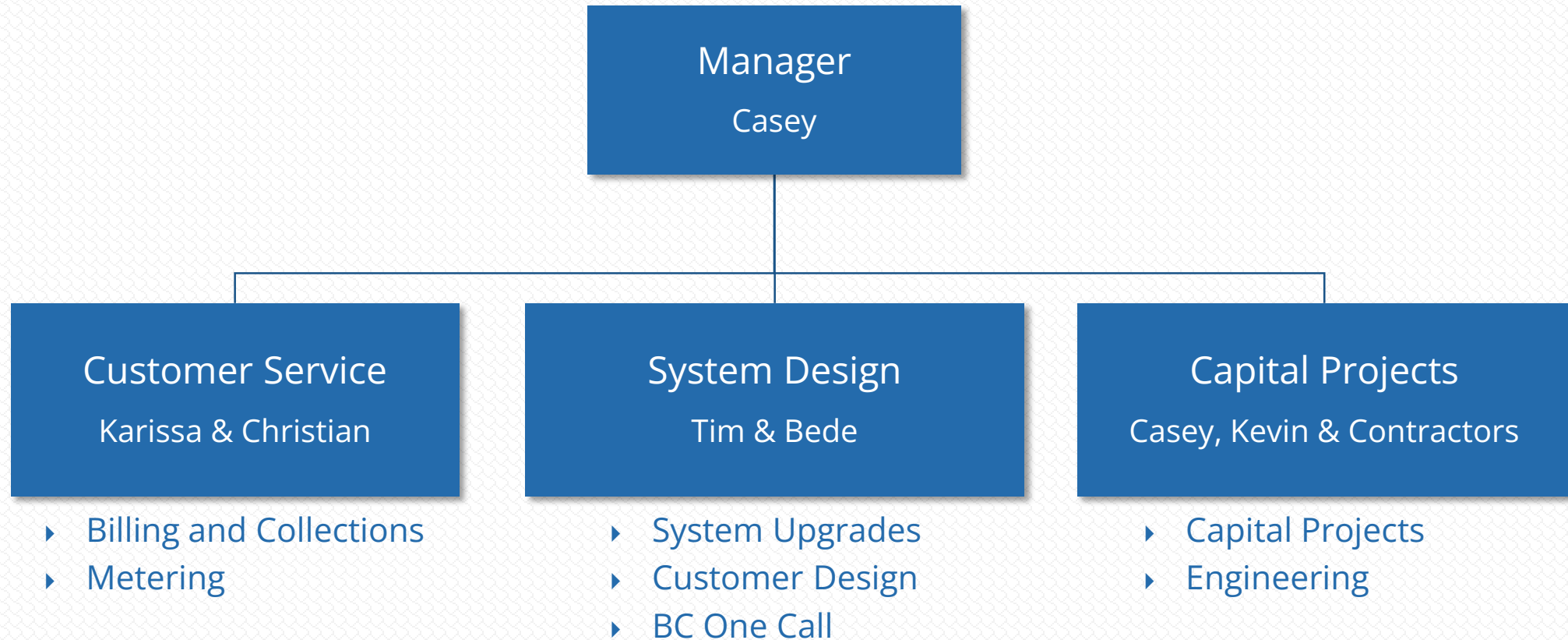


Projects and Customer Service

Casey Smit, P.Eng., PMP, MBA



ORGANIZATION

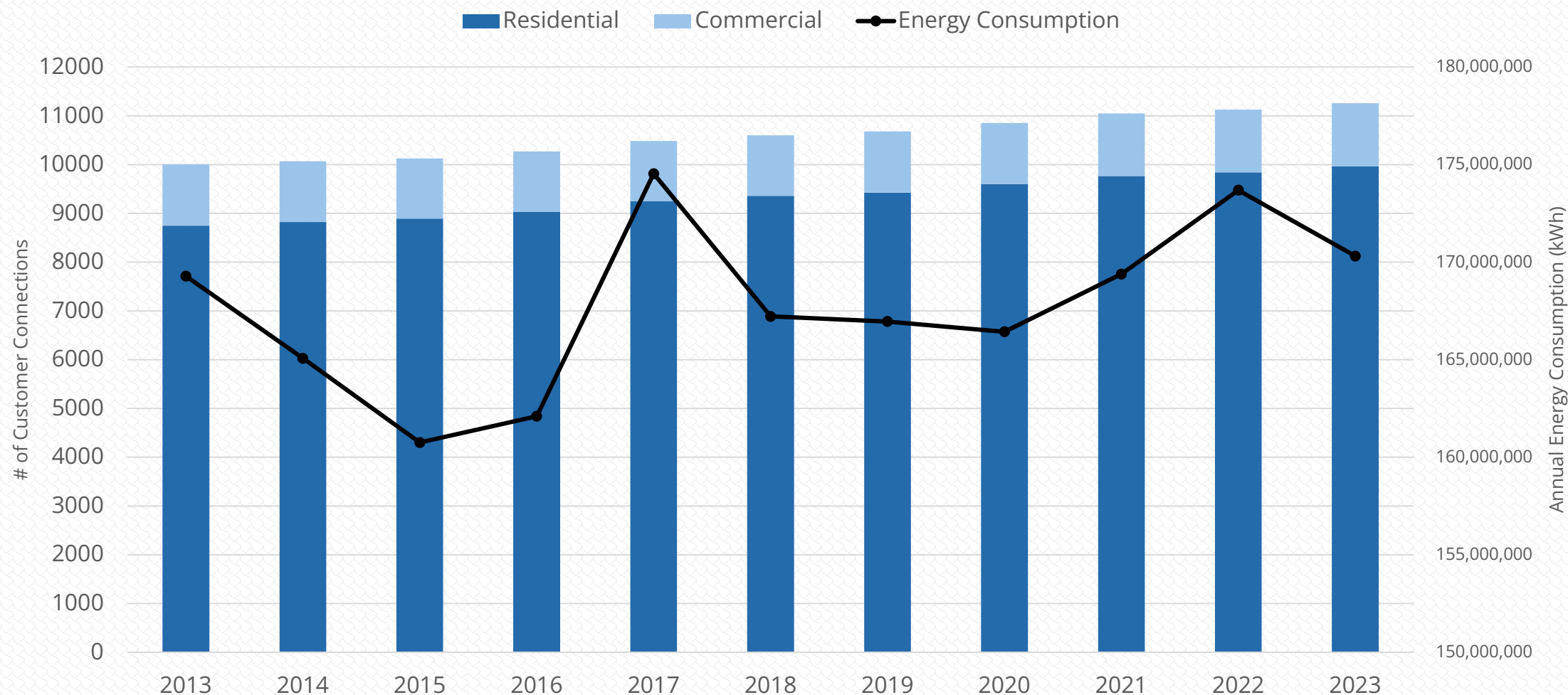


SAFETY

- No Lost Time Injury (LTI)
- No First Aid Injuries

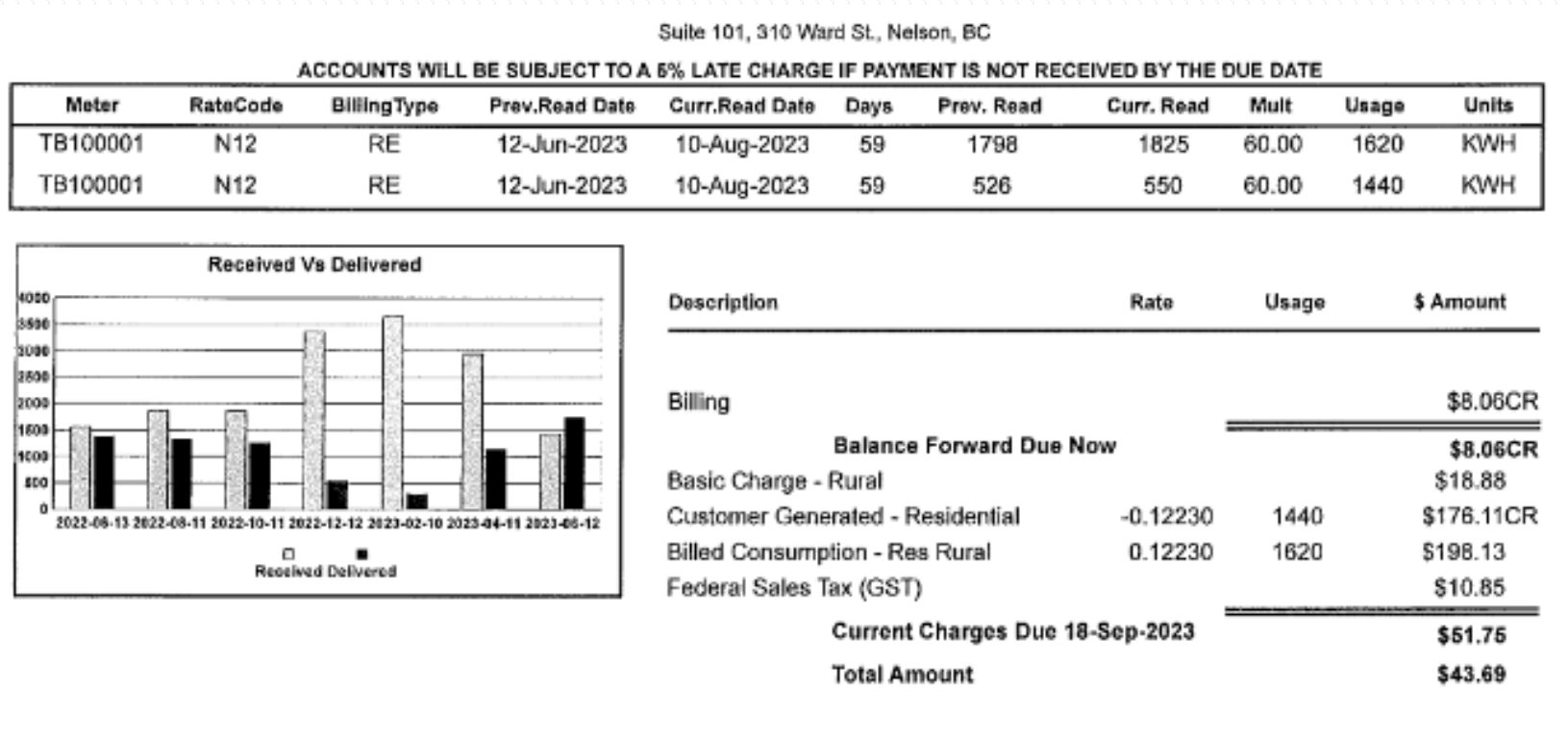


CUSTOMER GROWTH

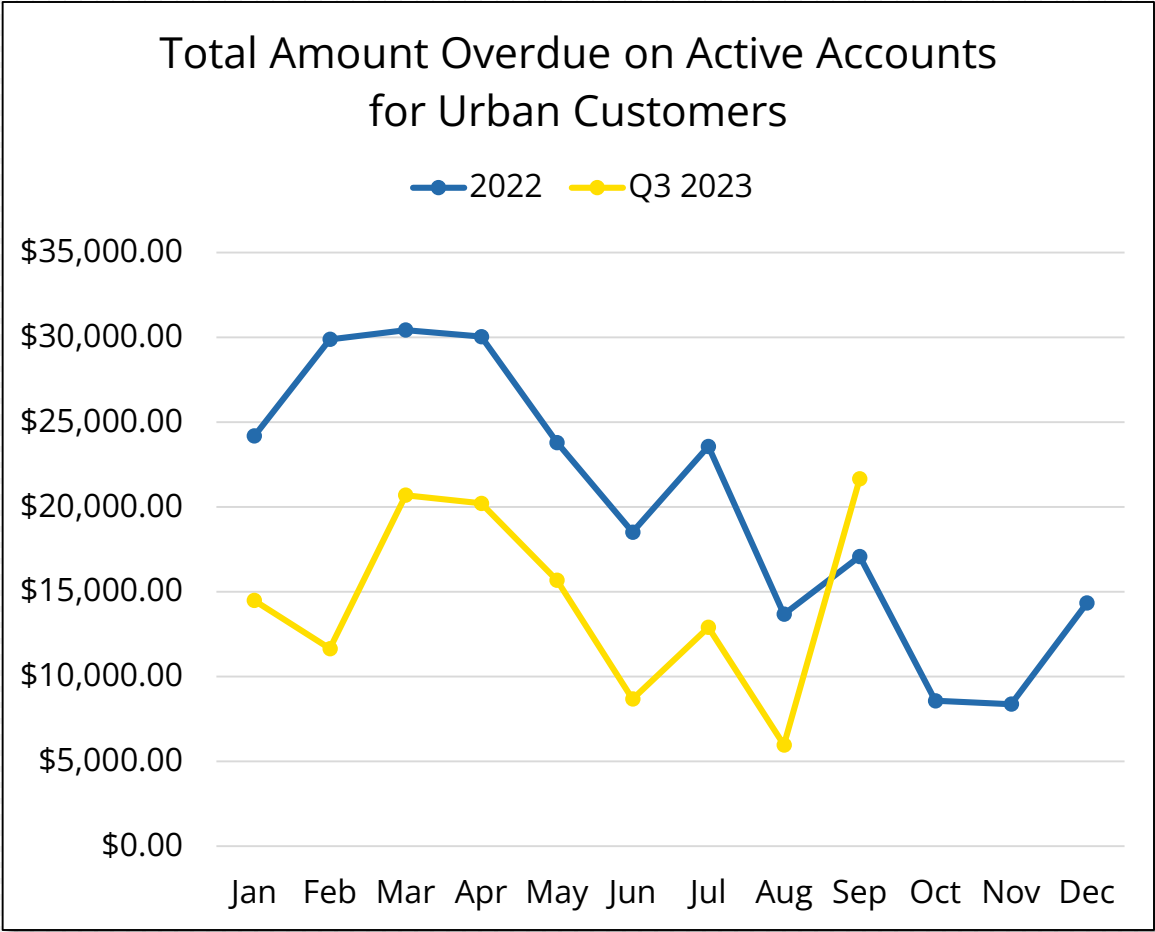
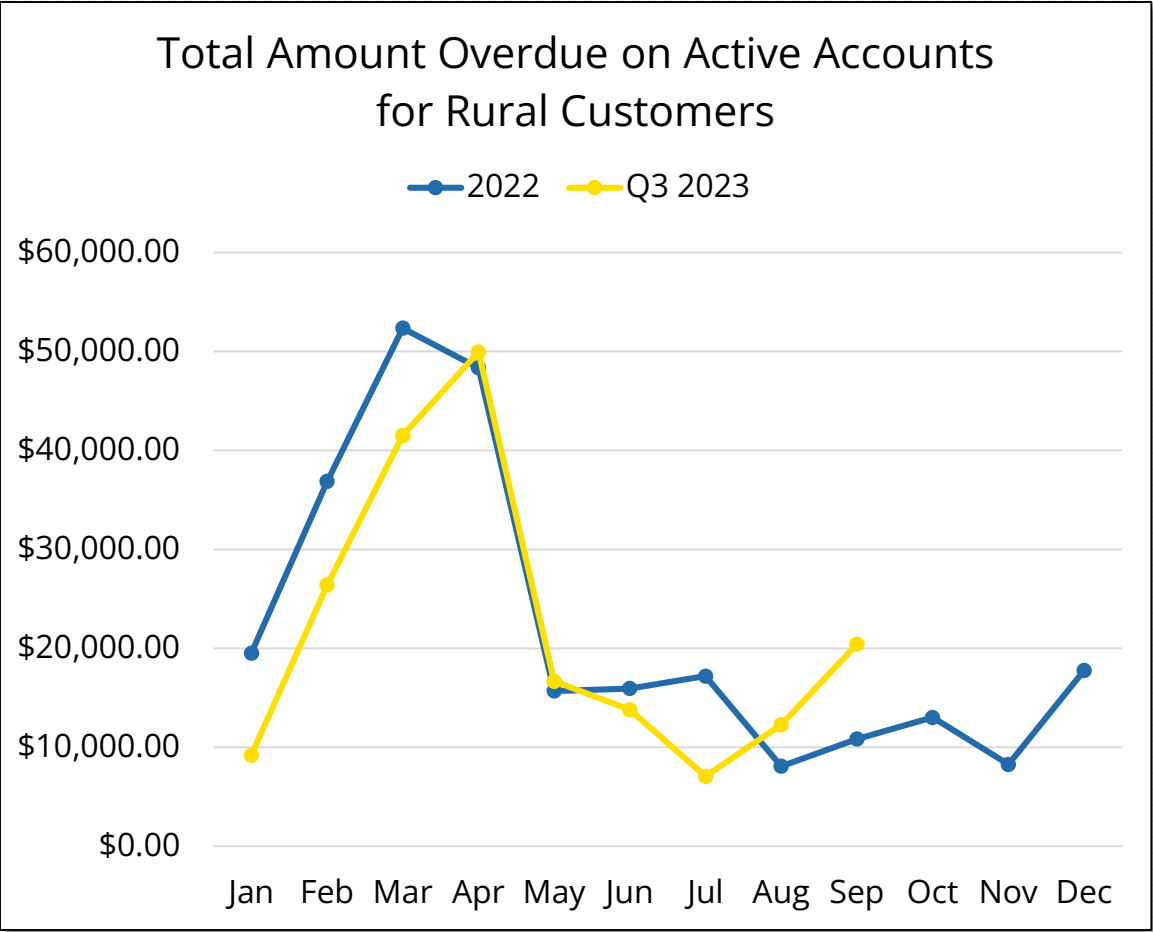


CUSTOMER SERVICE

- Cost-of-living credit disbursement
- 28% E-billing enrollment
- By-law update
- Service and metering guide
- Residential demand monitoring



CUSTOMER SERVICE



CUSTOMER PROJECTS

- 440 standard inquiries and projects
- 1,050 BC One Call requests
- 514 Victoria St. (46 residential)
- 611 Vernon St. (125 residential)
- 266 Baker St. (11 residential, 11 commercial)
- 902 11th Street (Institutional)
- 900 Lakeside Dr. (Multi phase, 125 units)
- Kootenay Lake Ferry electrification



CAPITAL PROJECT – ONGOING

- Generating station battery bank replacement
- North Shore capacity review
- Mill St. Substation upgrade
- G3 and G4 exciter replacement
- Geographic Information System (GIS)
- Design Standardization
- CYME software
- SCADA
- GIS



CAPITAL PROJECTS - NEW

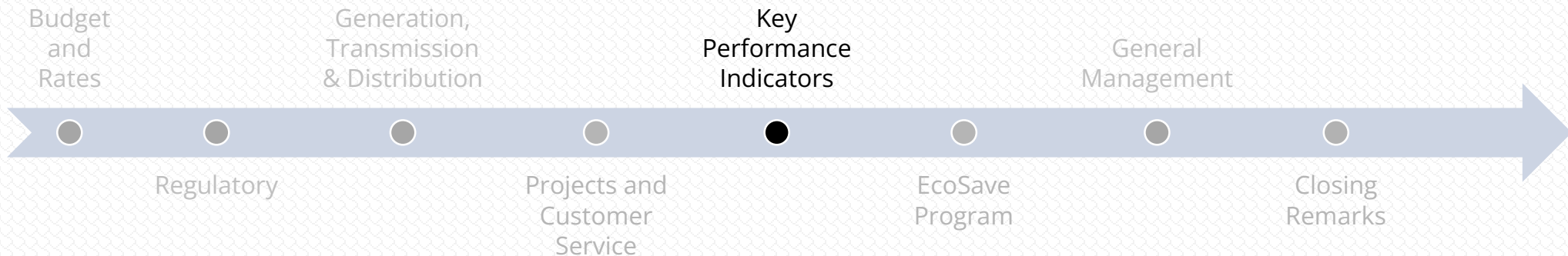
- Dam safety projects
- Mt. Nelson line replacement
- Pressure vessel replacements
- 10 year equipment replacement planning
- System improvement scoping
- BESS - pending grant funding





Key Performance Indicators

Jillian MacKay



BALANCED SCORECARD

Key Performance Indicators (KPIs) measure business performance. All data is to the end of Q3 2023.

FINANCIAL

Measures our financial performance comparing actual spend to budget.

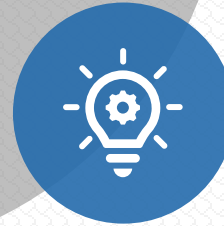


CUSTOMERS

Measures new job inquiries and our response time as well our progress on capital projects.



Measures our outage duration and frequencies and availability factor for each of the generating units.



OPERATIONS



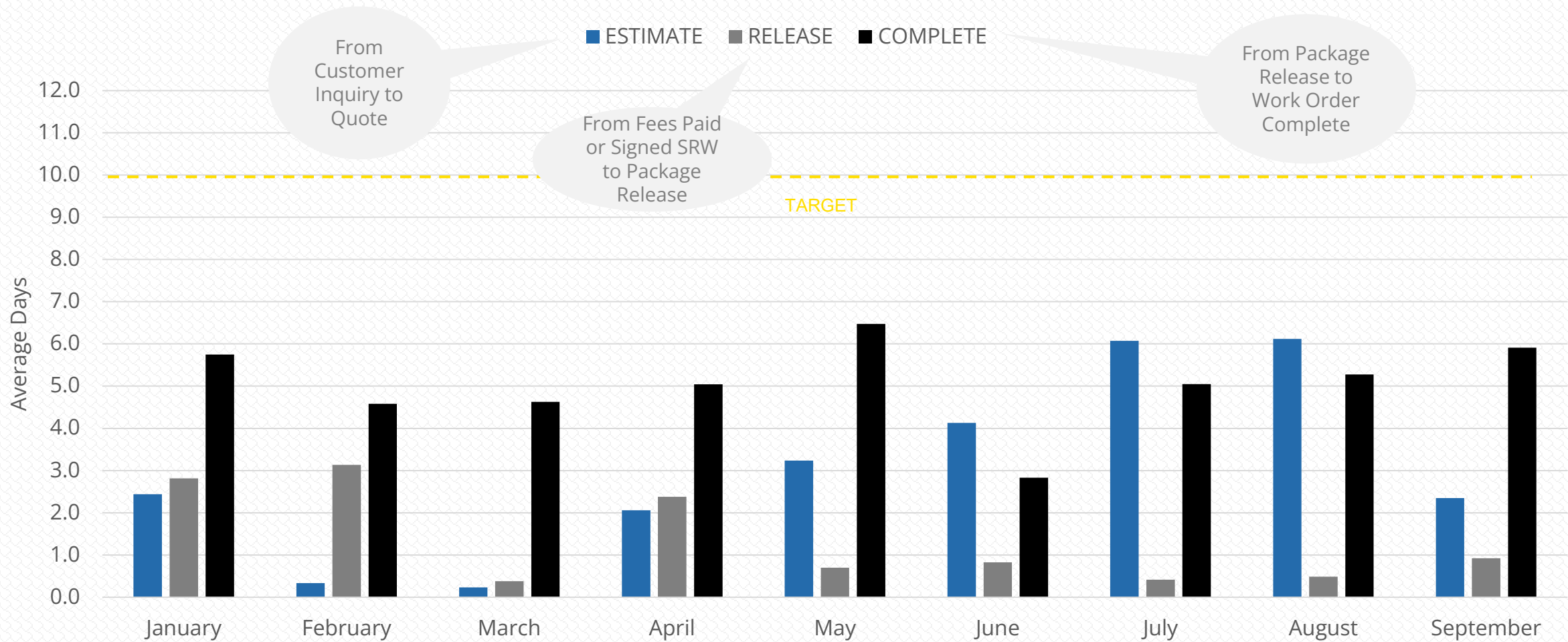
Measures our number of incidents, near misses, and compliance to regulations.

SAFETY & COMPLIANCE



CUSTOMER PERSPECTIVE

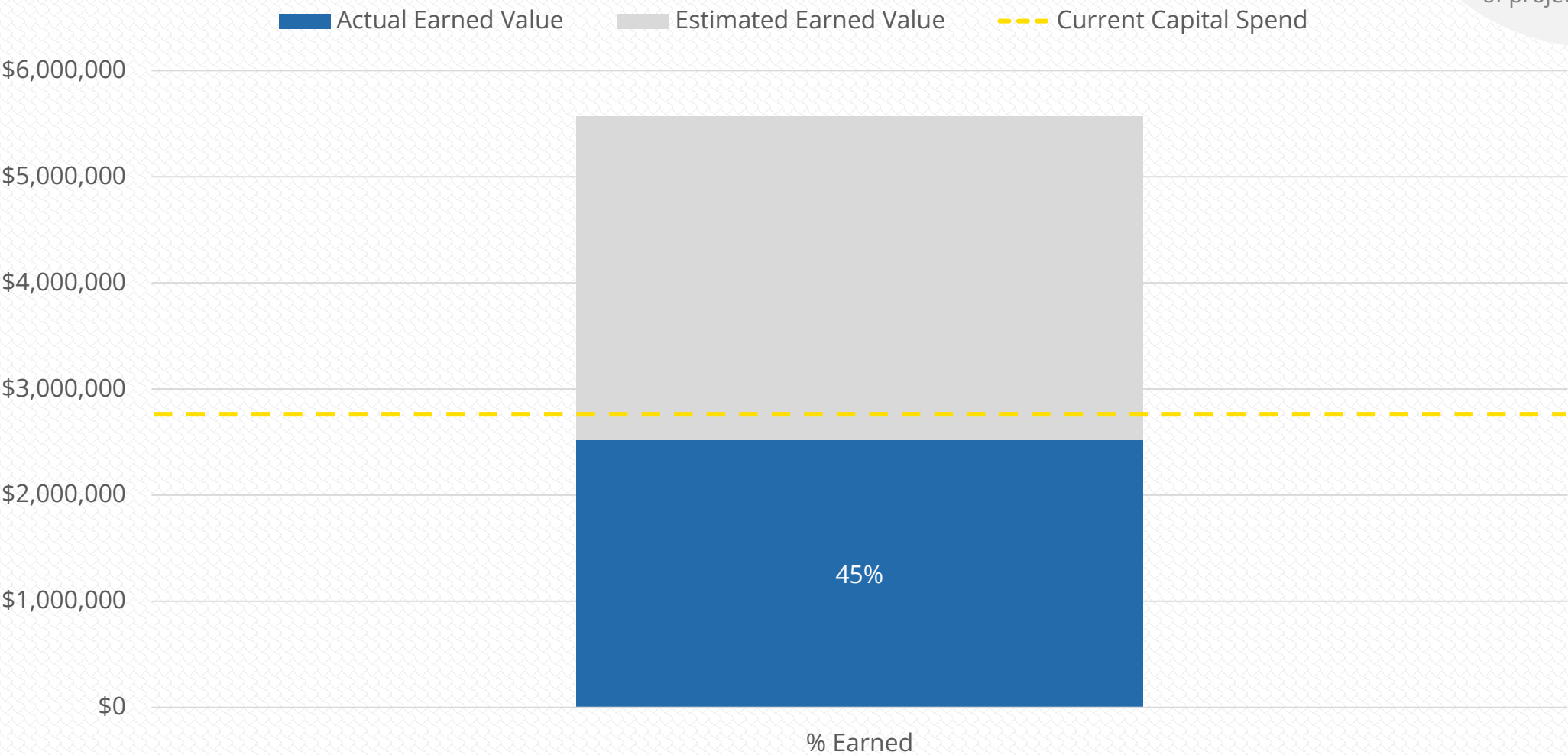
Nelson Hydro assists customers with new or changes to existing electrical services within its service territory.



CUSTOMER PERSPECTIVE

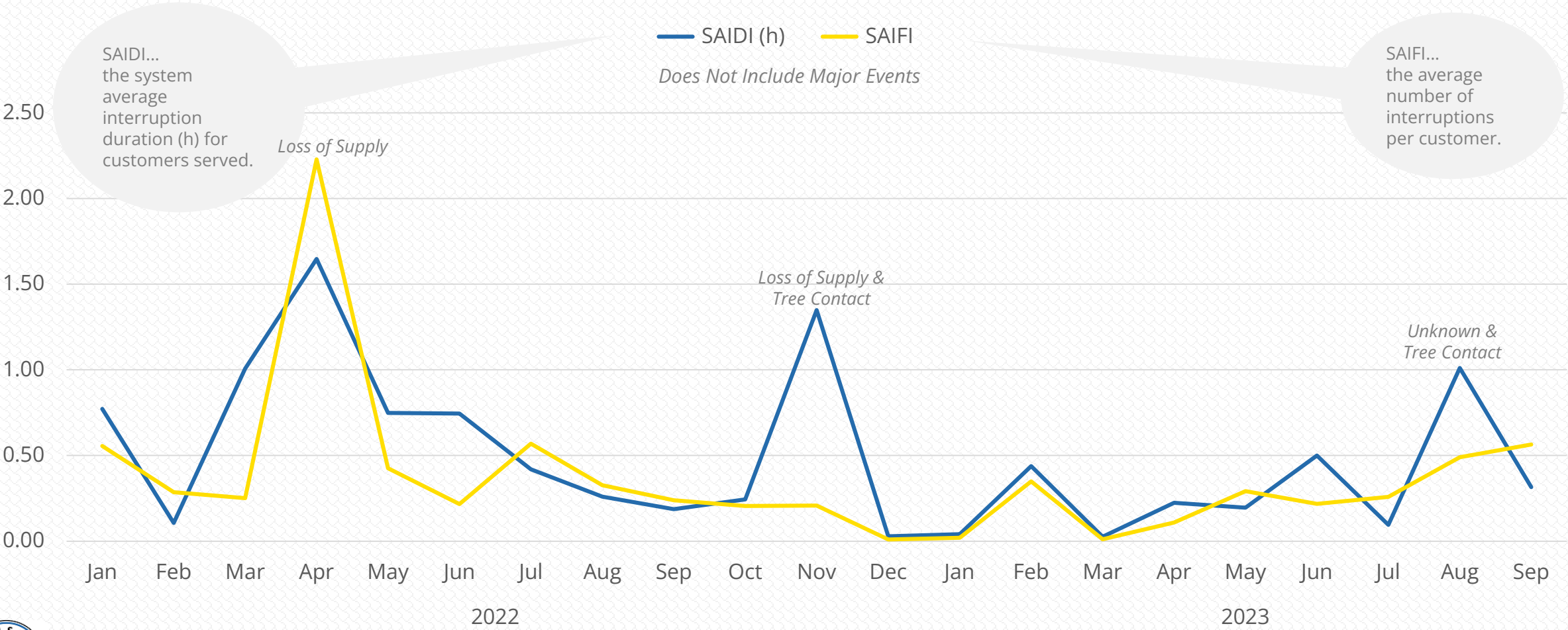
Capital Projects Earned Value quantifies the value of our capital project progress.

Earned Value:
Is calculated by multiplying the budget and the percentage complete. It is only one of the many measures of project success.



OPERATIONS PERSPECTIVE

SAIDI and SAIFI are Reliability Indicators used by Electric Power Utilities across North America.

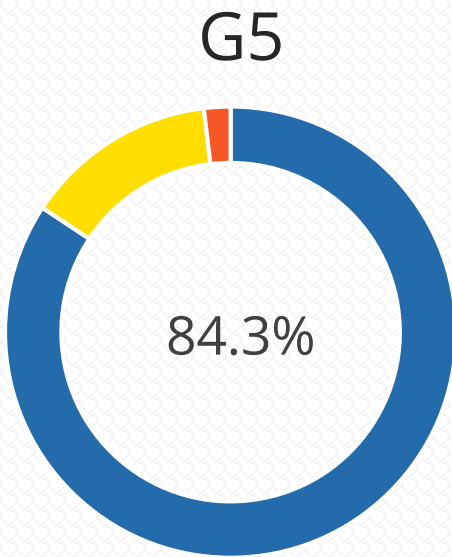
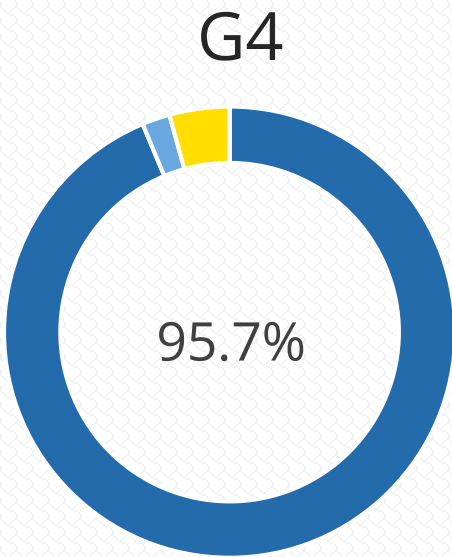
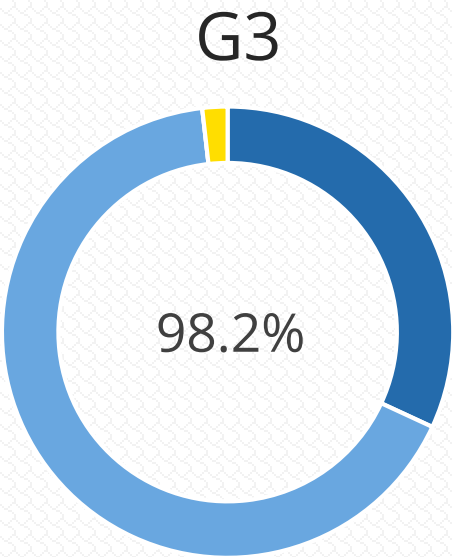
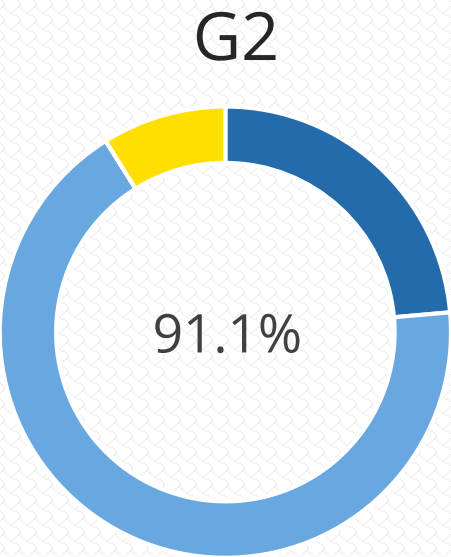


OPERATIONS PERSPECTIVE

Generating Station Availability Factor helps us monitor the health of our generating assets.

Availability Factor (%) =
Total Available Hours /
Total Number of Hours
in Period

Available (Running) Available (Not Running) Scheduled Out Forced Out



All data is to the end of Sep 2023



SAFETY AND COMPLIANCE PERSPECTIVE

All spills greater than a specific quantity or less than 10m from water must be reported.

City of NELSON SPILL RESPONSE PLAN	
 1. SAFETY	<ul style="list-style-type: none">• Verify limits of approach• Follow safe work procedures, safety standards and Safety Data Sheets• Use appropriate PPE• Ensure substance risks are known
 2. STOP	<ul style="list-style-type: none">• Contact Nelson Fire Dept at 352-3103• Close valves, leaks, upright containers• Shut off pumps• Perform any emergency repairs
 3. SECURE	<ul style="list-style-type: none">• Limit spill area access to essential personnel• Secure area with flagging or rope• Ensure closure of area to public or other staff
 4. CONTAIN	<ul style="list-style-type: none">• Protect any potential paths to water• Identify extent of spilled material• Contain and stabilize the spilled product• Take pictures of spill and containment
 5. REPORT	<ul style="list-style-type: none">• Notify your Supervisor immediately• Supervisor reports spill 1-800-663-3456 if required• Supervisor completes Spill Report Form in Biztrainer
 6. CLEAN	<ul style="list-style-type: none">• Create the Cleaning Plan with your Supervisor. This could involve hiring a contractor or performing the clean-up internally depending on the nature of the spill



0 Spills Reported
as of Q3 2023

EXTERNALLY REPORTABLE QUANTITIES FOR SUBSTANCES

All spills that occur less than 10 metres from water must be reported.

SUBSTANCE	QUANTITY
Class 2.1 Flammable Gas (e.g., propane, acetylene, hydrogen)	10 kg
Class 2.2 Non-Flammable or Non-Toxic Gas (e.g., SF6, CO2, halon, refrigerants)	10 kg
Class 2.3 Toxic Gas (e.g., ammonia, chlorine)	5 kg
Class 3 Flammable Liquids (e.g., diesel, solvent, gasoline)	100 L
Class 8 Corrosive Liquids (e.g., acids, caustics, mercury)	5 kg or 5 L
Pesticides and Herbicides	5 kg or 5 L
Oil and Waste Oil	100 L
Leachable Toxic Waste (e.g., antifreeze)	25 kg or 25 L
PCBs Please Contact Supervisor	Any amount
Asbestos	50 kg
Chlorinated water (>0.3 ppm residual chlorine)	Any amount to water
Other Substances Please Contact Supervisor	Any amount

QUICK STEPS
1. Notify your Supervisor
2. Call Fire Dept at 352-3103.
3. Supervisor calls Emergency Management BC if necessary to report the spill.
4. Supervisor completes the Spill Report Form in Biztrainer.

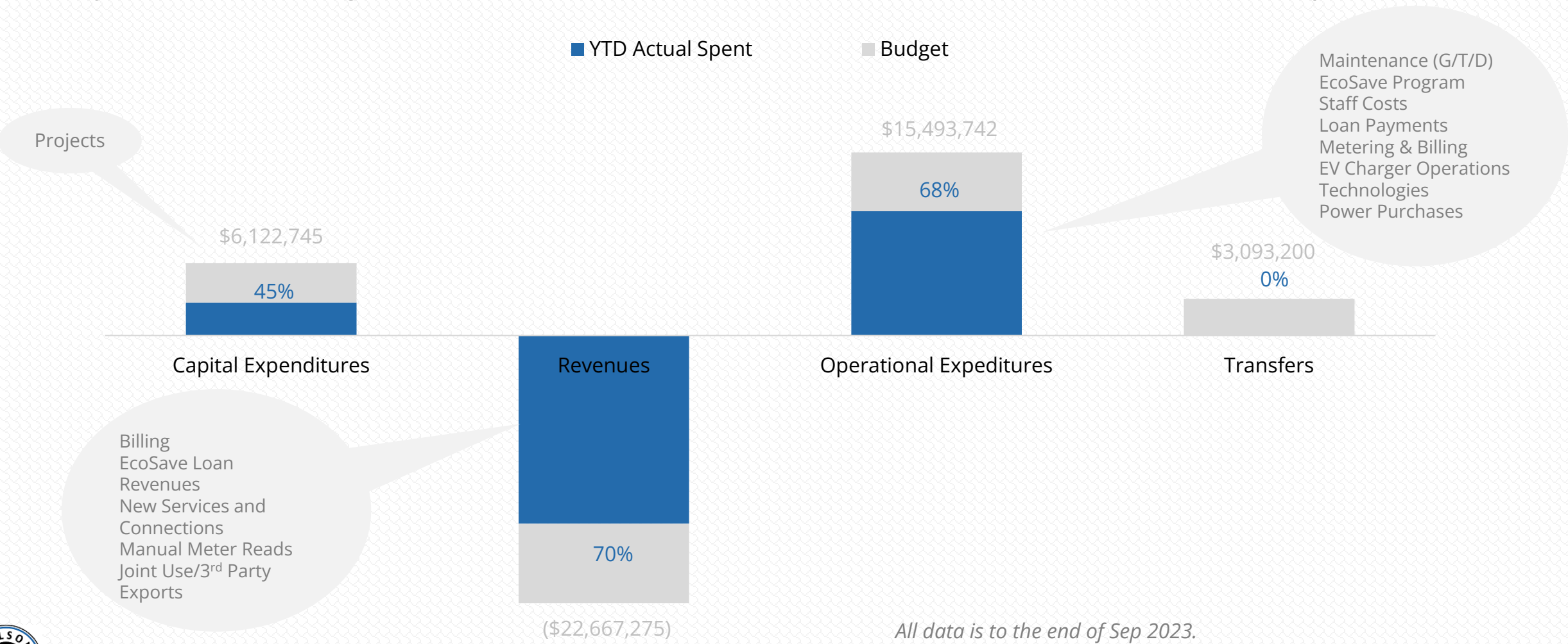
DID YOU KNOW?
Spills of any quantity less than 10m from water OR larger than quantities listed in the table (left) **MUST** be reported to Emergency Management BC at 1-800-663-3456.

Spills to sewers must be reported to Public Works at 250-352-8238.

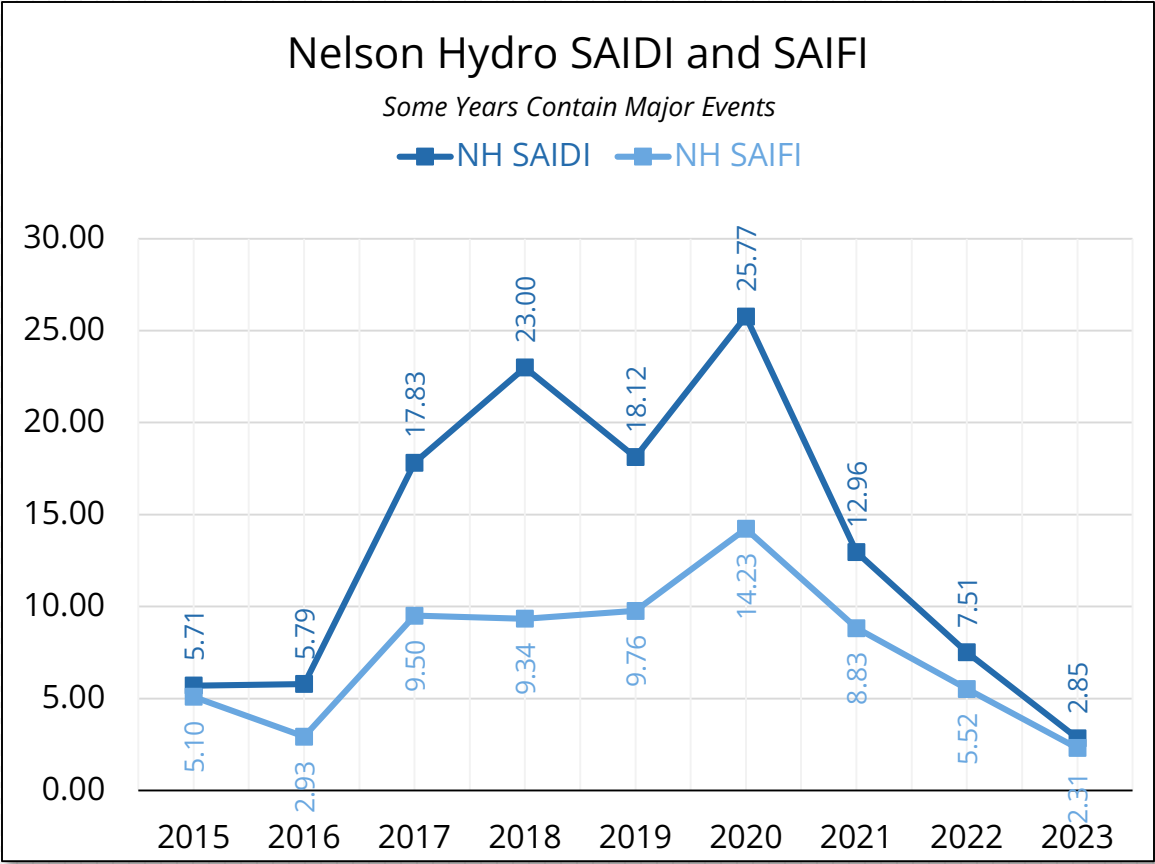
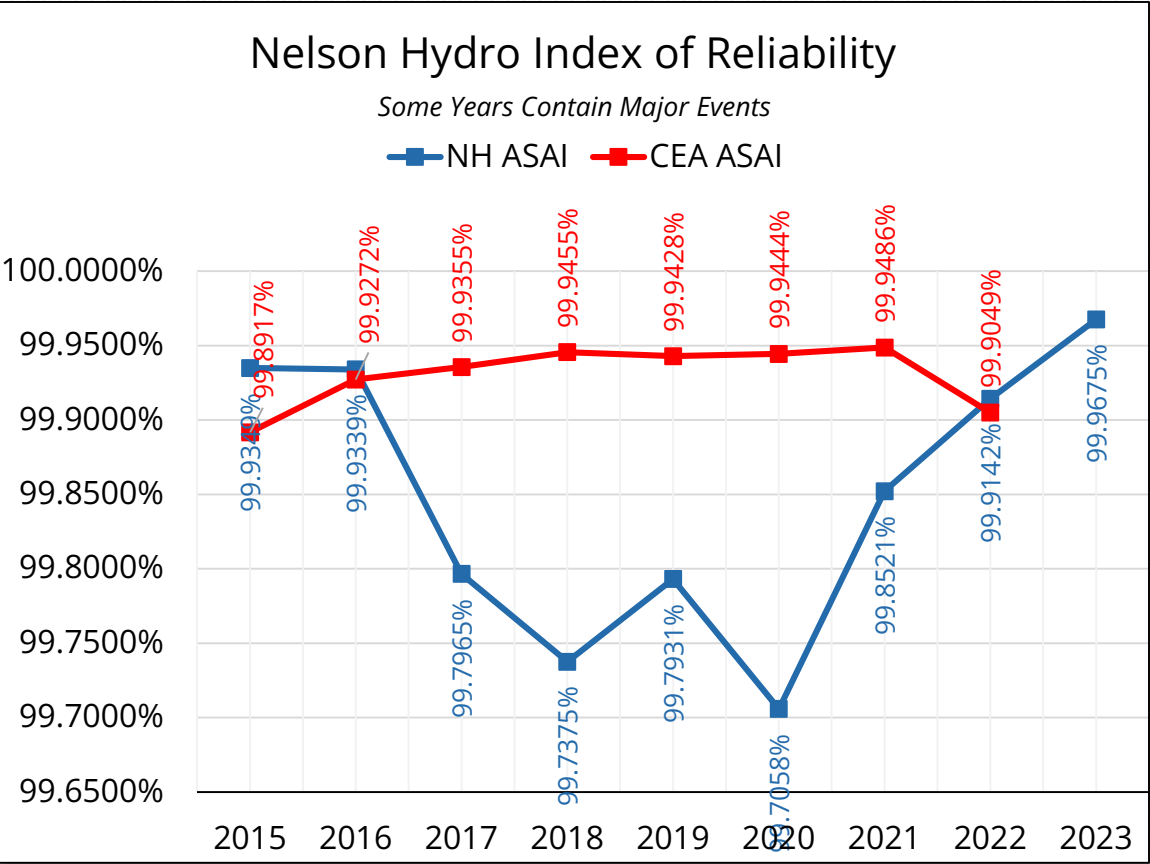
City of
NELSON

FINANCIAL PERSPECTIVE

The objective of the budget is to achieve \$0; revenues offset contributions, transfers, and expenditures.



INDEX OF RELIABILITY & SAIDI/SAIFI



All data is to the end of Sep 2023.



CANADIAN ELECTRICAL ASSOCIATION DEFINITIONS

Adverse Environment

Customer interruptions due to equipment being subjected to abnormal environment such as salt spray, industrial contamination, humidity, corrosion, vibration, fire or flooding.

Adverse Weather

Customer interruptions resulting from rain, ice storms, snow, winds, extreme ambient temperatures, freezing fog, or frost and other extreme conditions.

Equipment Failure

Customer interruptions resulting from equipment failures due to deterioration from age, incorrect maintenance, or imminent failures detected by maintenance.

Foreign Interference

Customer interruptions beyond the control of the utility such as birds, animals, vehicles, dig-ins, vandalism, sabotage and foreign objects.

Human Element

Customer interruptions due to the interface of the utility staff with the system such as incorrect records, incorrect use of equipment, incorrect construction or installation, incorrect protection settings, switching errors, commissioning errors, deliberate damage, or sabotage.

Lightning

Customer interruptions due to lightning striking the Distribution System, resulting in an insulation breakdown and/or flash-overs.

Loss of Supply

Customer interruptions due to problems in the bulk electricity supply system such as under frequency, load shedding, transmission system transients, or system frequency excursions.

Scheduled Outage

Customer interruptions due to the disconnection at a selected time for the purpose of construction or preventive maintenance.

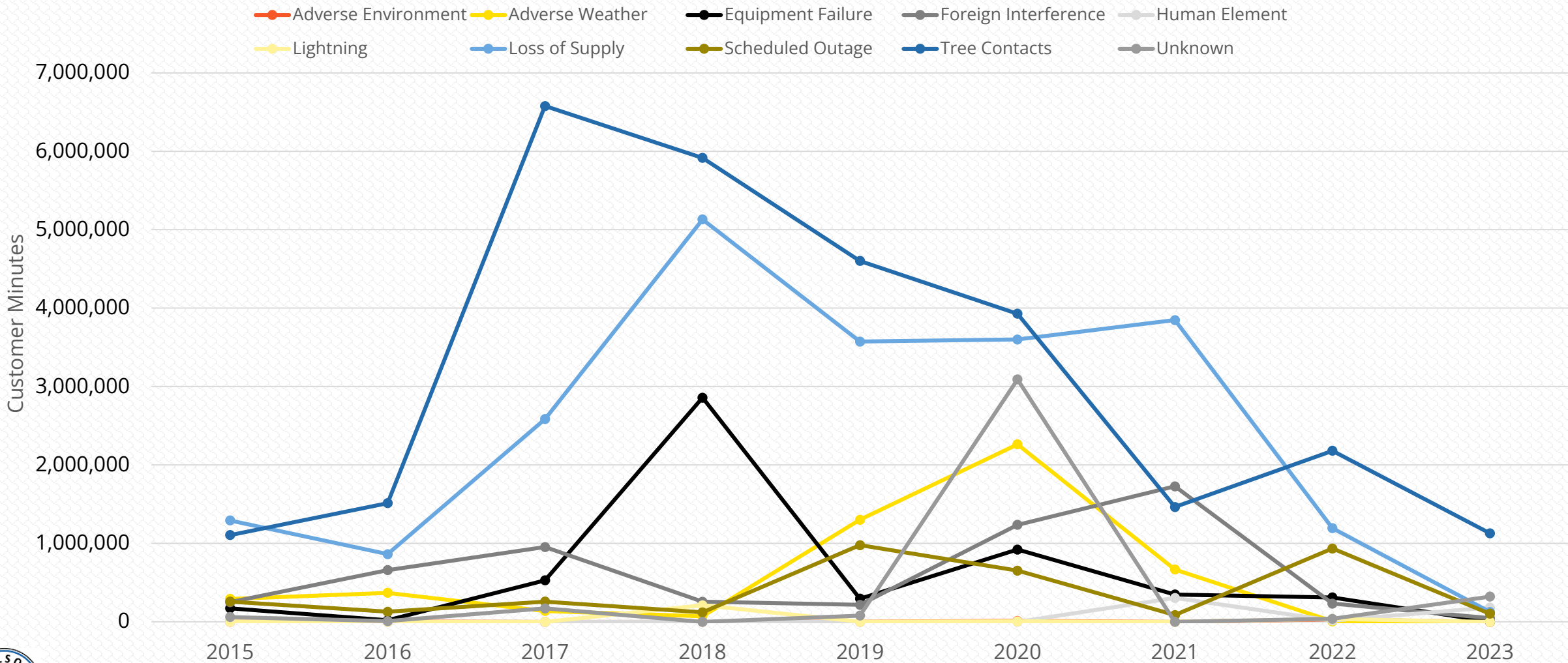
Tree Contacts

Customer interruptions caused by faults due to trees or tree limbs contacting energized circuits.

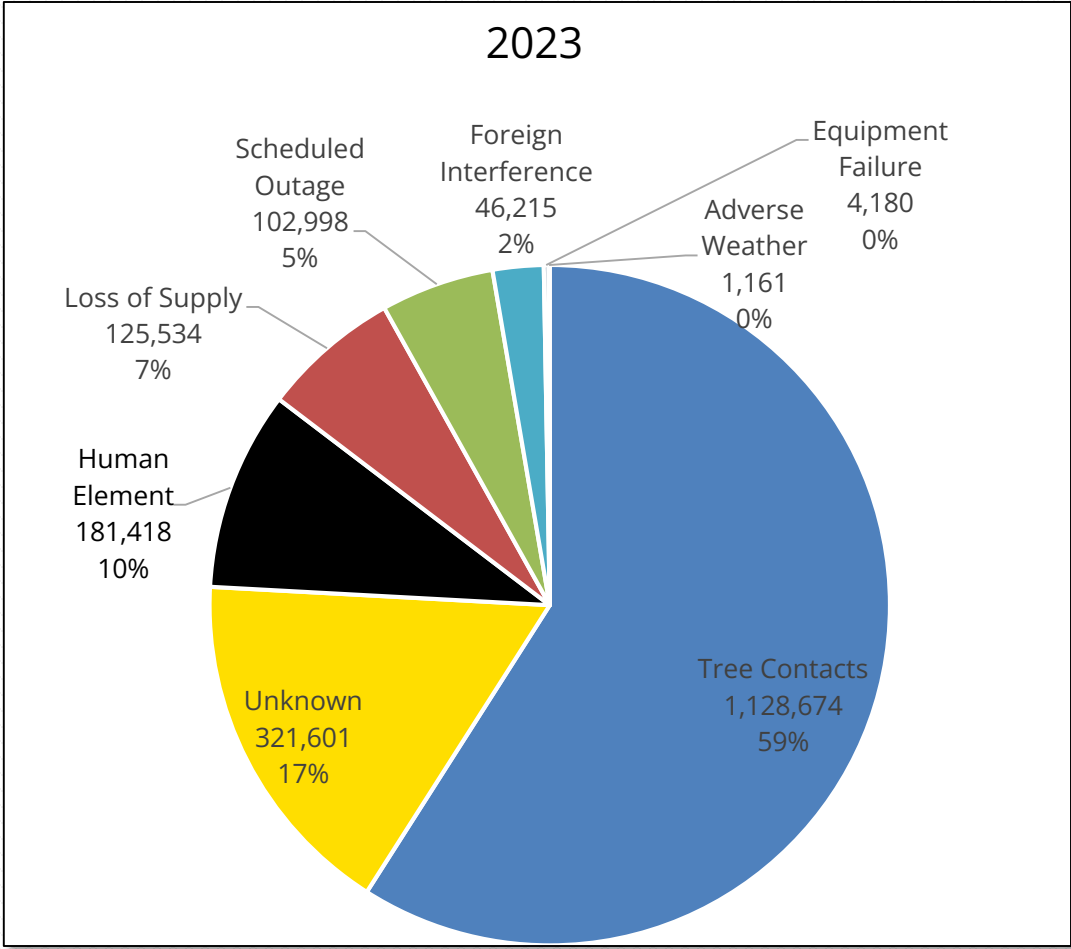
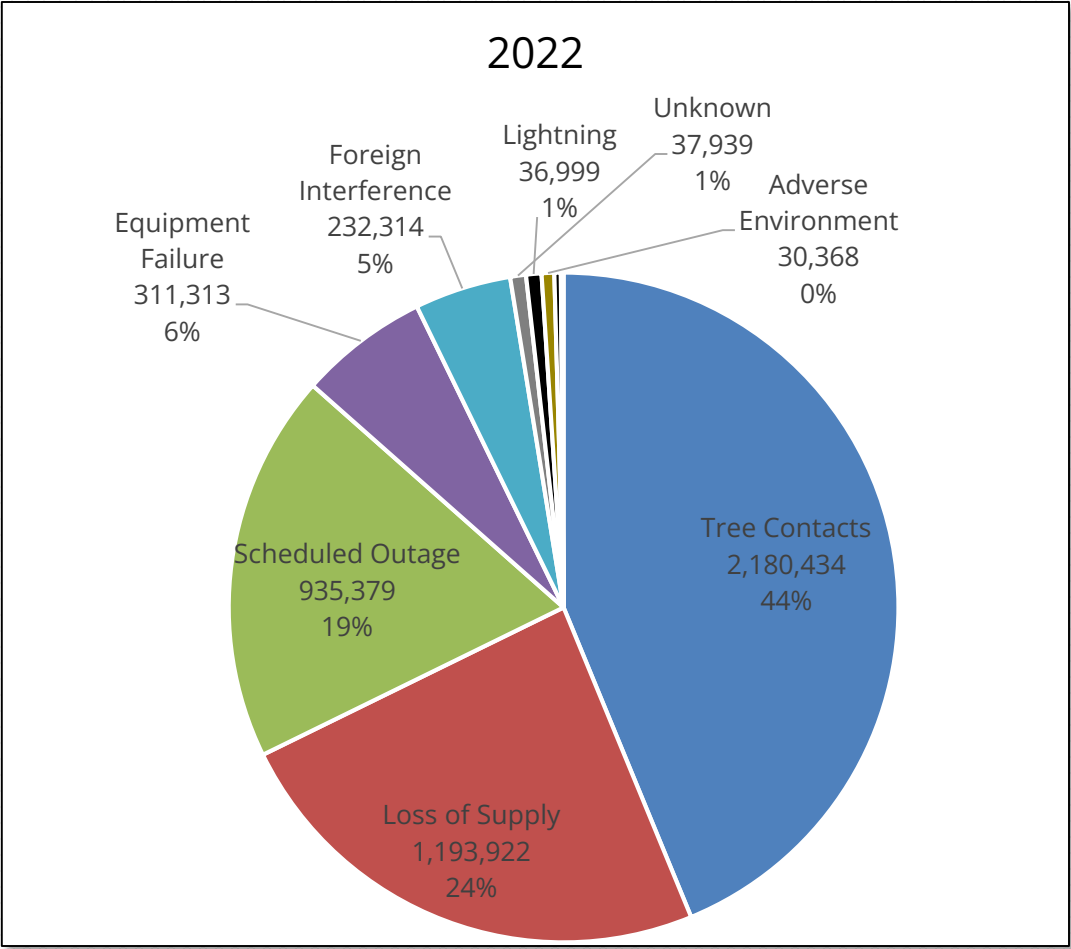
Unknown

Customer interruptions with no apparent cause or reason could have contributed to the outage. Only to be used when all other reasons do not apply or the cause is legitimately unknown.

OUTAGES BY CAUSE WITH CUSTOMER MINUTES



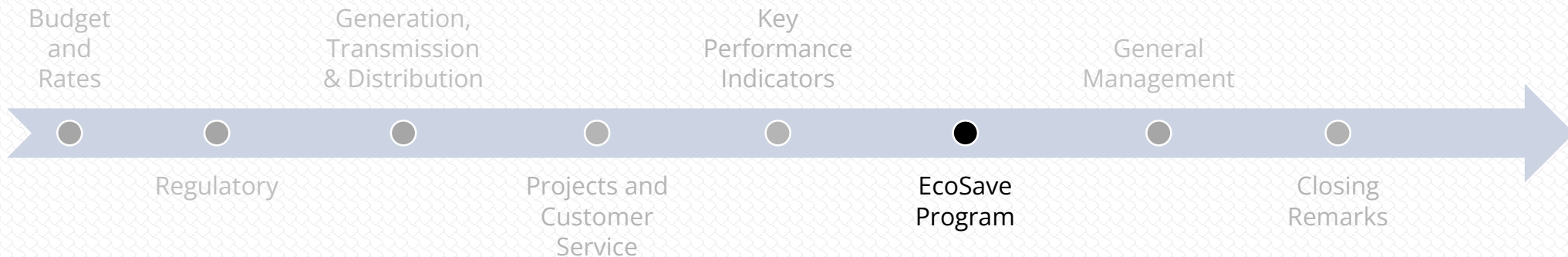
OUTAGES BY CAUSE WITH CUSTOMER MINUTES





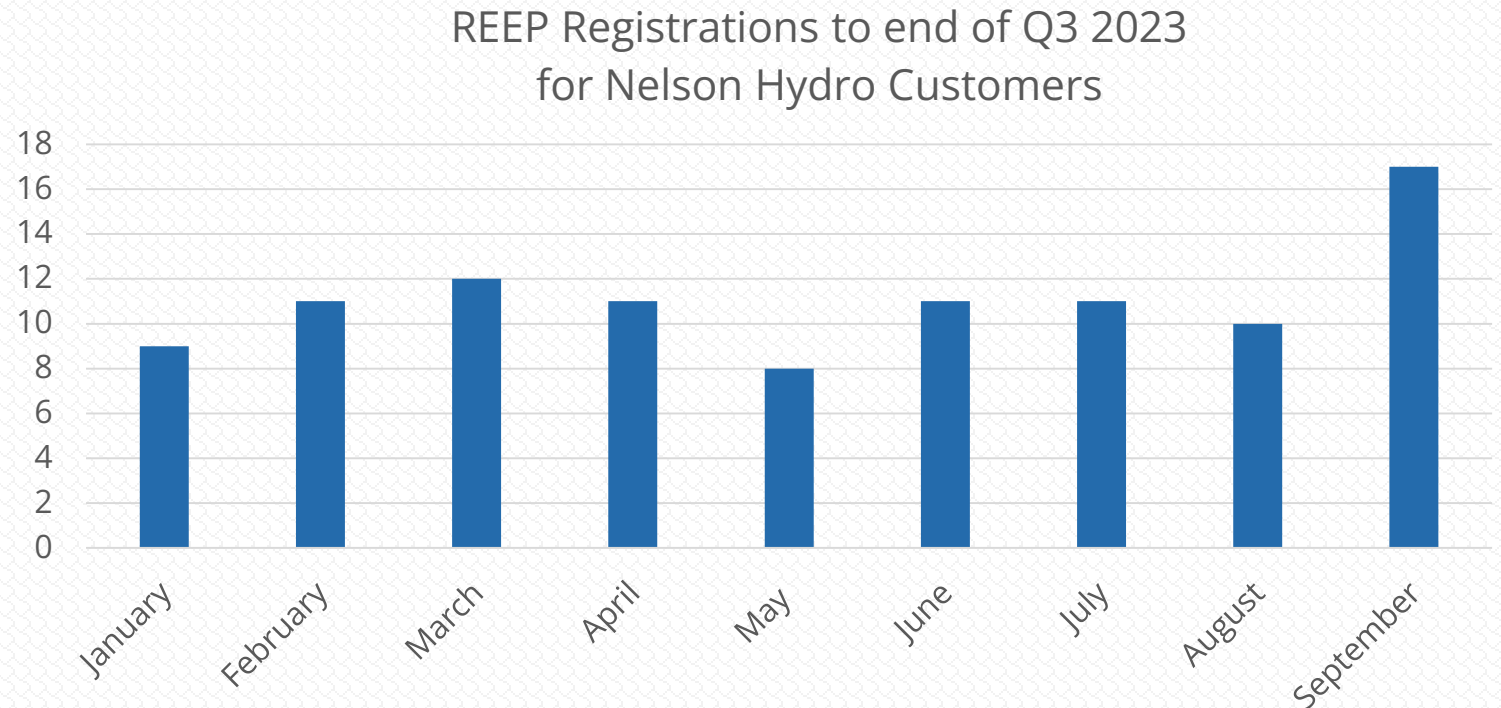
EcoSave Program

Scott Spencer



REGIONAL ENERGY EFFICIENCY PROGRAM

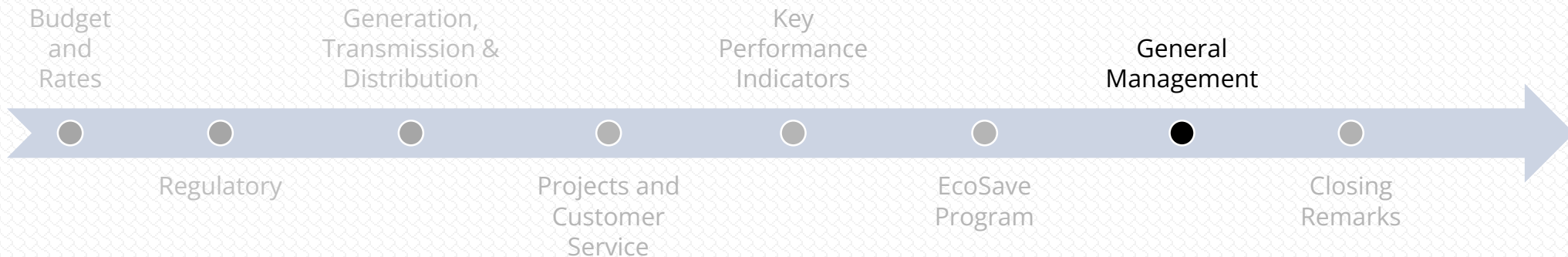
- 2023 increase in registrations (see chart)
- Community Efficiency Financing (CEF) grant application in final stages
- Progress in contractor advocacy
- More highlights will be presented by the Climate & Energy team





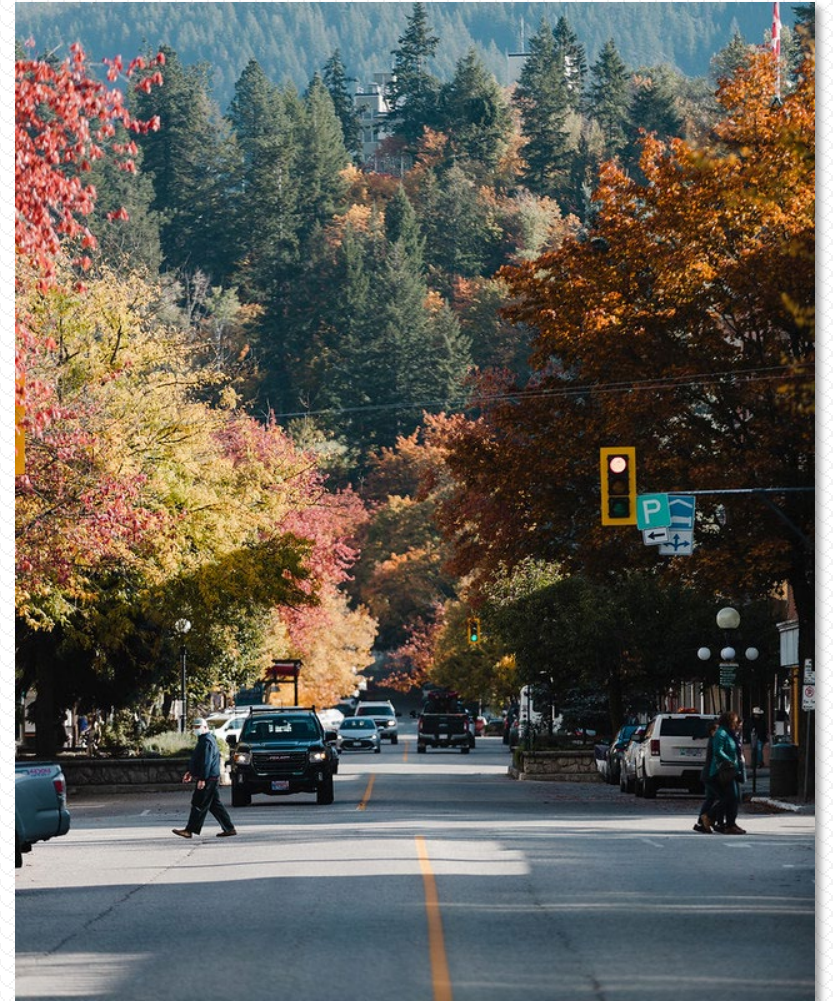
General Management

Scott Spencer



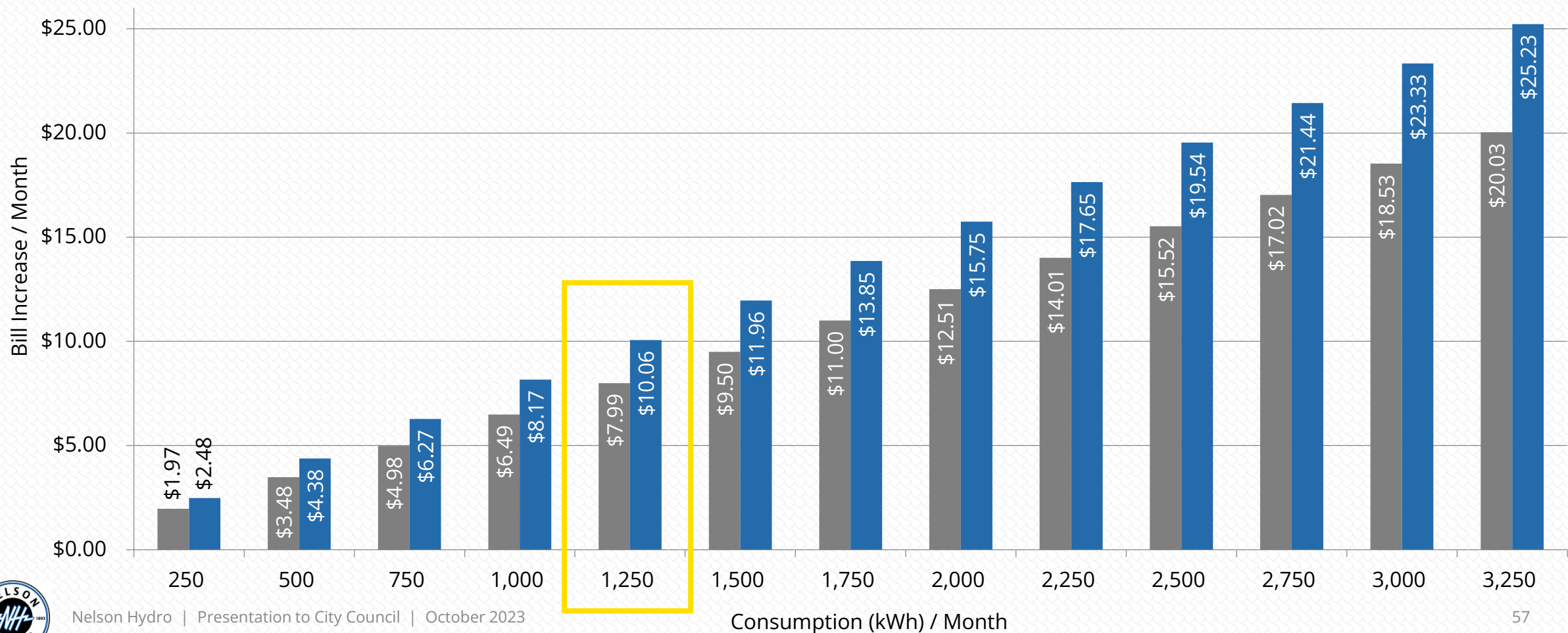
GENERAL MANAGEMENT HIGHLIGHTS

- Regulatory proceedings have consumed time and money
- Nelson Hydro strategic plan updated
- Communications plan implementation going well
- BC Hydro Water Rights Agreement arbitration in progress
- Telus Joint Use Agreement still not signed but implemented
- Continue to work with FortisBC on reliability
- Communicating with other BC Municipal Electric Utilities

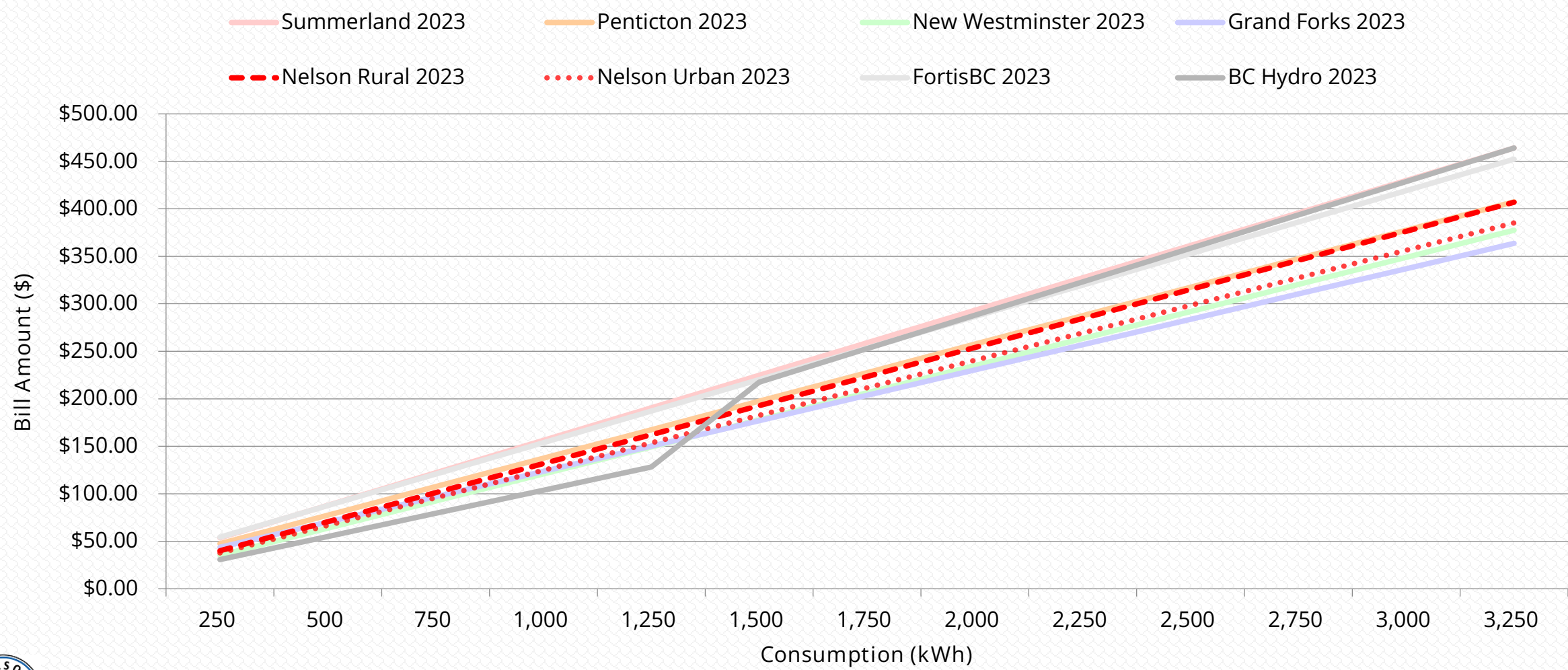


RATE INCREASE COMPARISON

■ Nelson Urban 5.20% ■ Nelson Rural 6.20%



2023 RESIDENTIAL RATE COMPARISON



RECOMMENDATIONS

- Approve the 2024 Operations and Capital Budgets as presented
- Support the application of Flow Through Budget Variance deferral accounts for Rural Operations and Capital
- Support the BCUC Revenue Requirements Application for a 6.20% Rural General Rate Increase
- Support a 5.20% Urban General Rate Increase



CLOSING REMARKS

- Great Team
- Customer Service Focus
- Improved Communications
- Better Reliability
- Process Efficiency



QUESTIONS?

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