

2023/2024 OVERVIEW

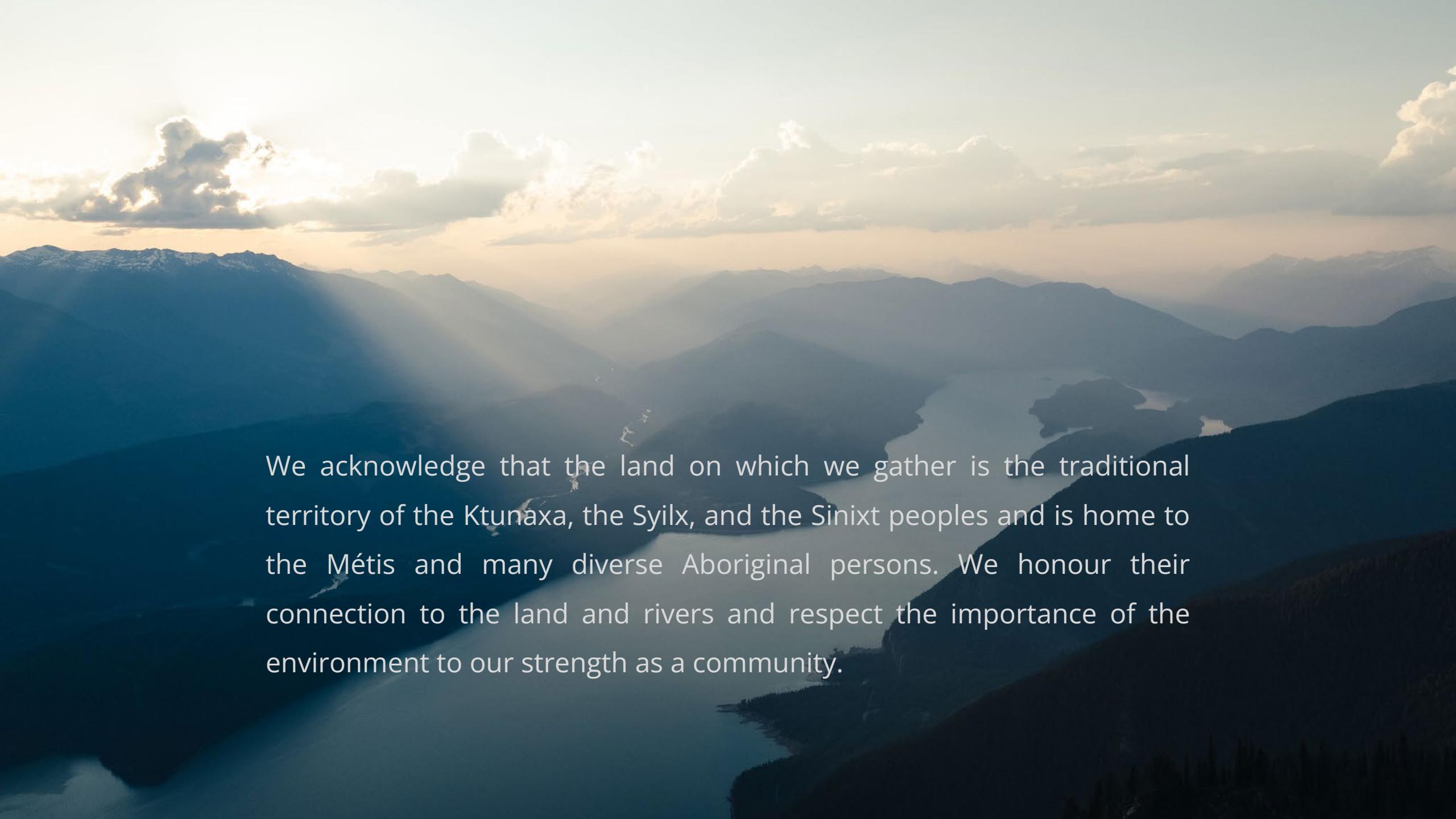


Accomplishments & Business Plan

City of
NELSON



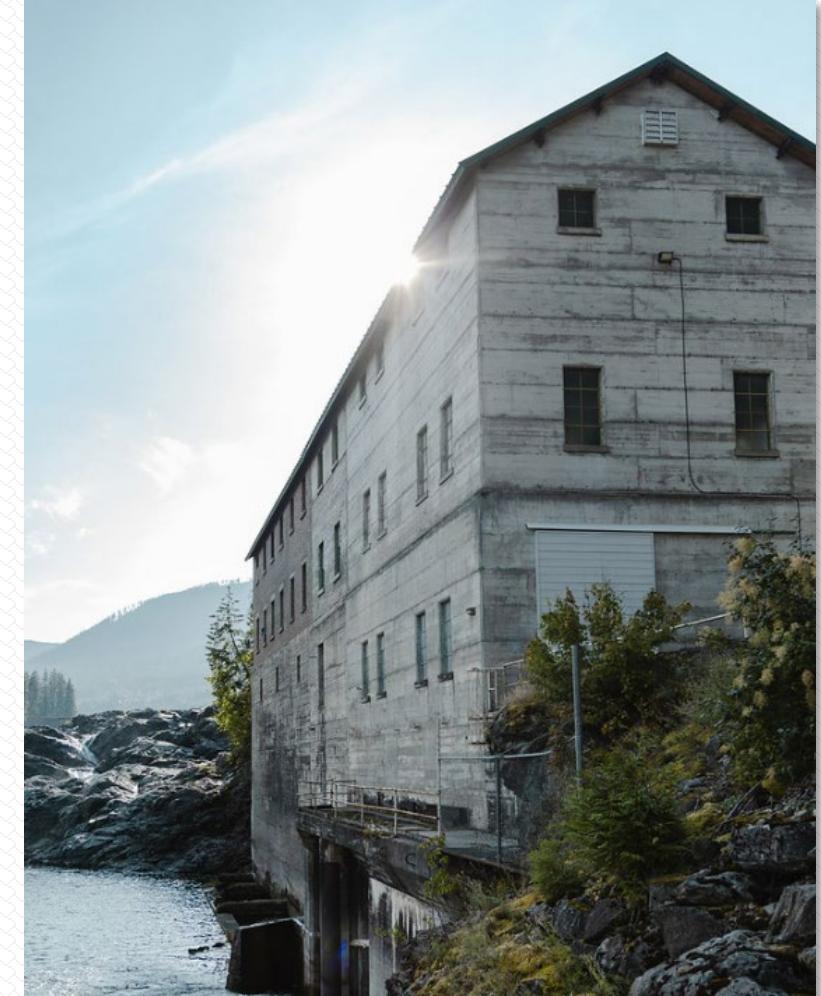
October 20, 2023

A wide-angle landscape photograph of a mountain range during sunset. The sky is filled with large, billowing clouds illuminated by the warm, golden light of the setting sun. In the foreground, a deep blue river or lake winds its way through the valley, reflecting the light. The mountains in the background are dark and silhouetted against the bright sky. The overall atmosphere is serene and majestic.

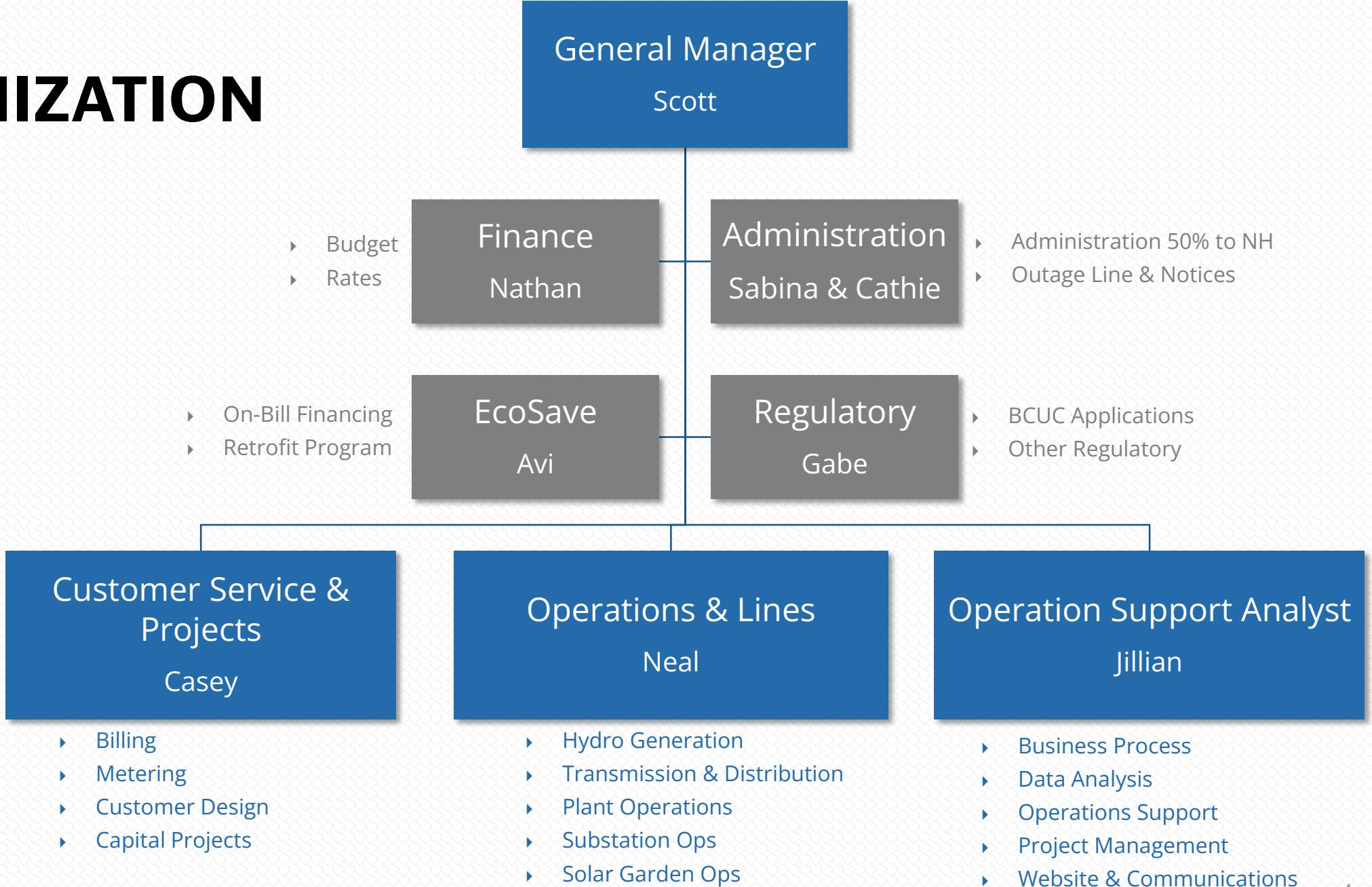
We acknowledge that the land on which we gather is the traditional territory of the Ktunaxa, the Syilx, and the Sinixt peoples and is home to the Métis and many diverse Aboriginal persons. We honour their connection to the land and rivers and respect the importance of the environment to our strength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

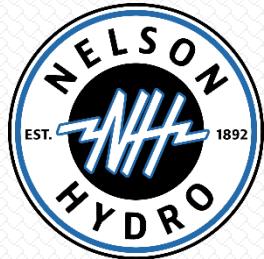
AGENDA

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



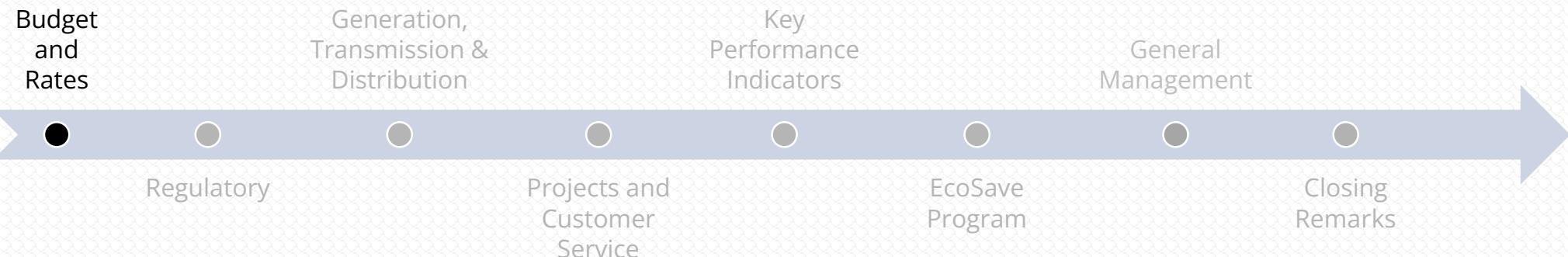
ORGANIZATION





Budget and Rates

Nathan Russ



2023 OPERATING BUDGET HIGHLIGHTS

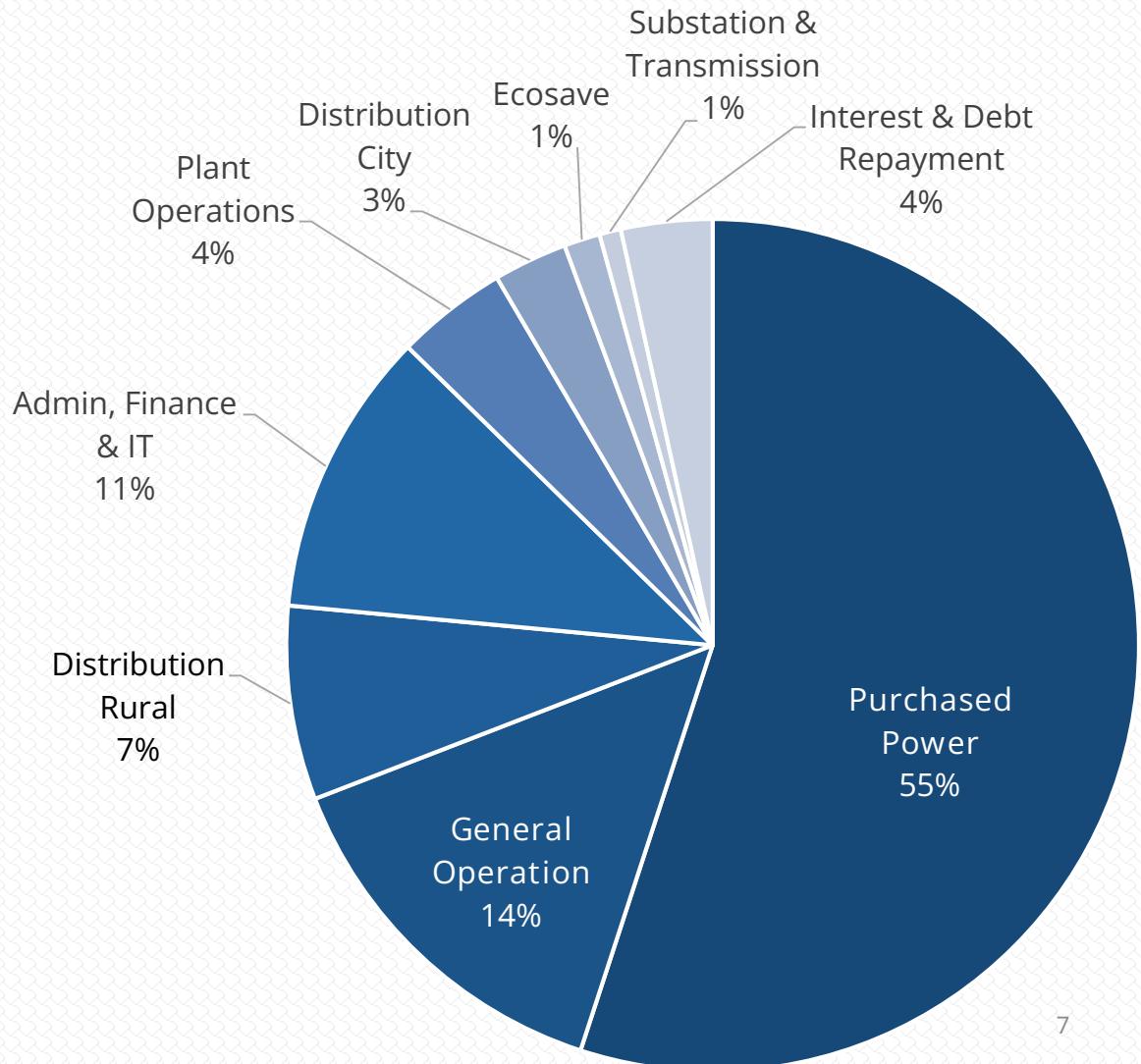
- Fortis BC Power Purchases: Greater than budgeted - Freshet
- Capital Expenditures: Less than budgeted – Mill Street Substation (timing)

	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

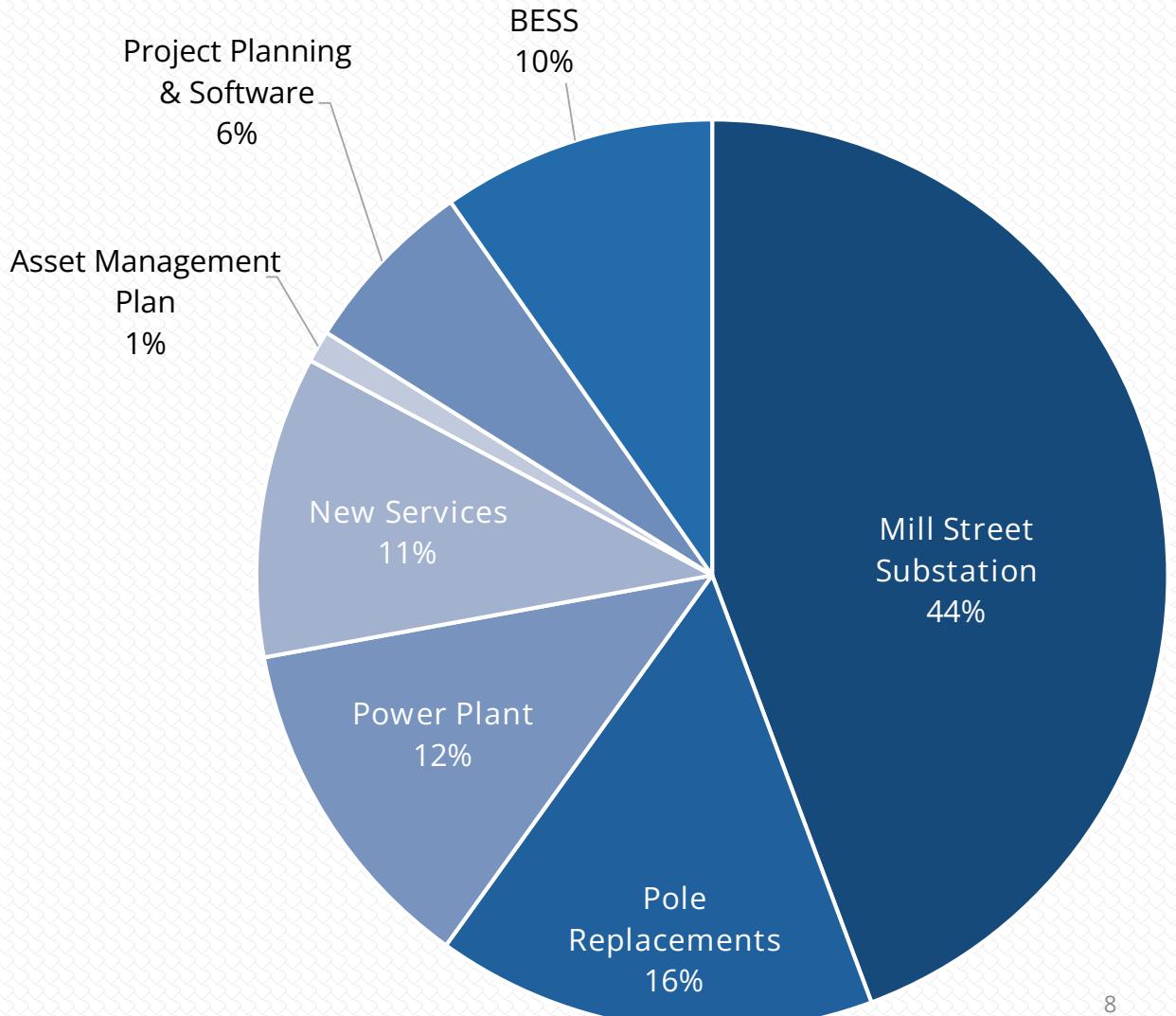
	2023 YE Fcst.	2024 Budget	2023 Fcst. vs 2024 Bdg.
Power Purchases	\$8,790,052	\$9,065,293	103%
Operating Expenses	\$7,198,633	\$7,269,456	101%
Capital Expenditures	\$5,137,507	\$4,759,239	93%



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

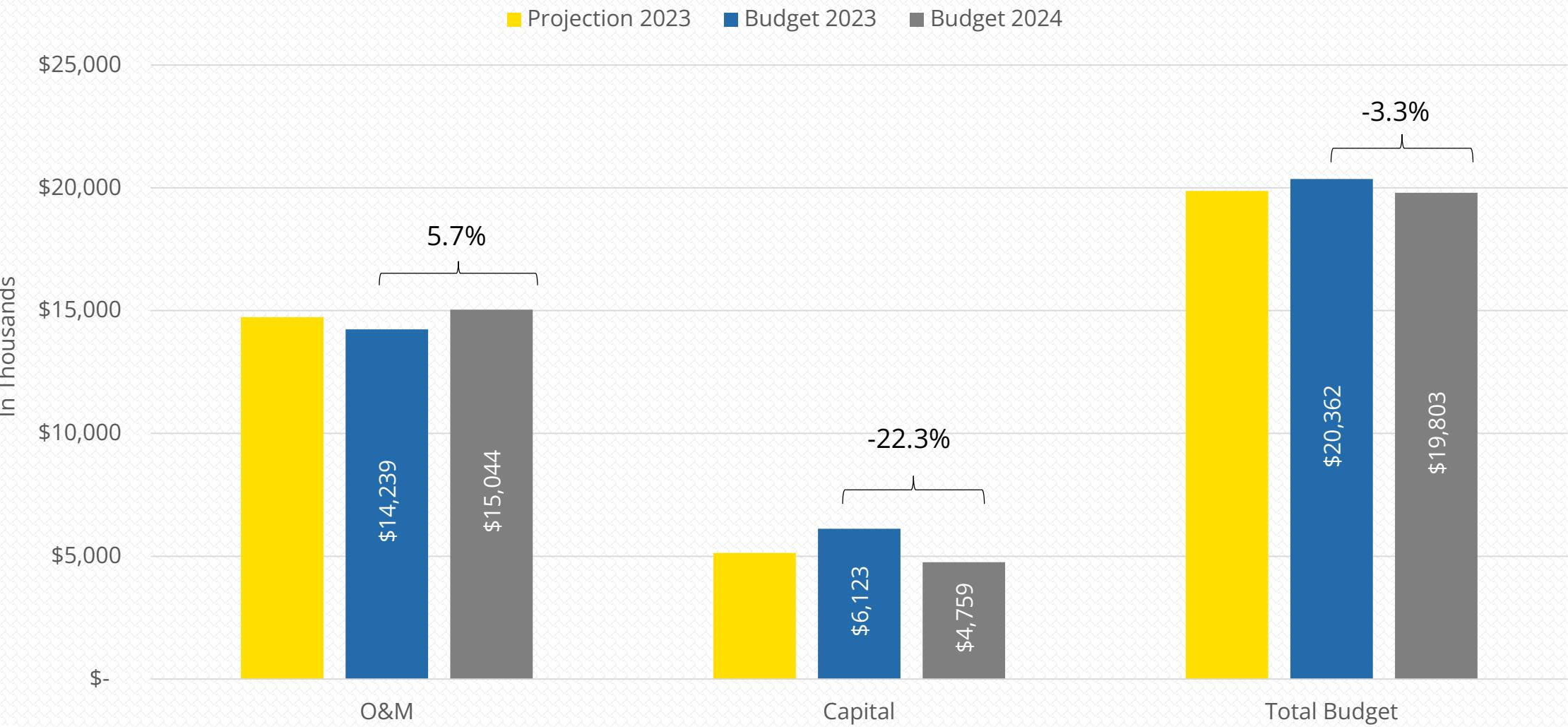


2024 OPERATING BUDGET HIGHLIGHTS

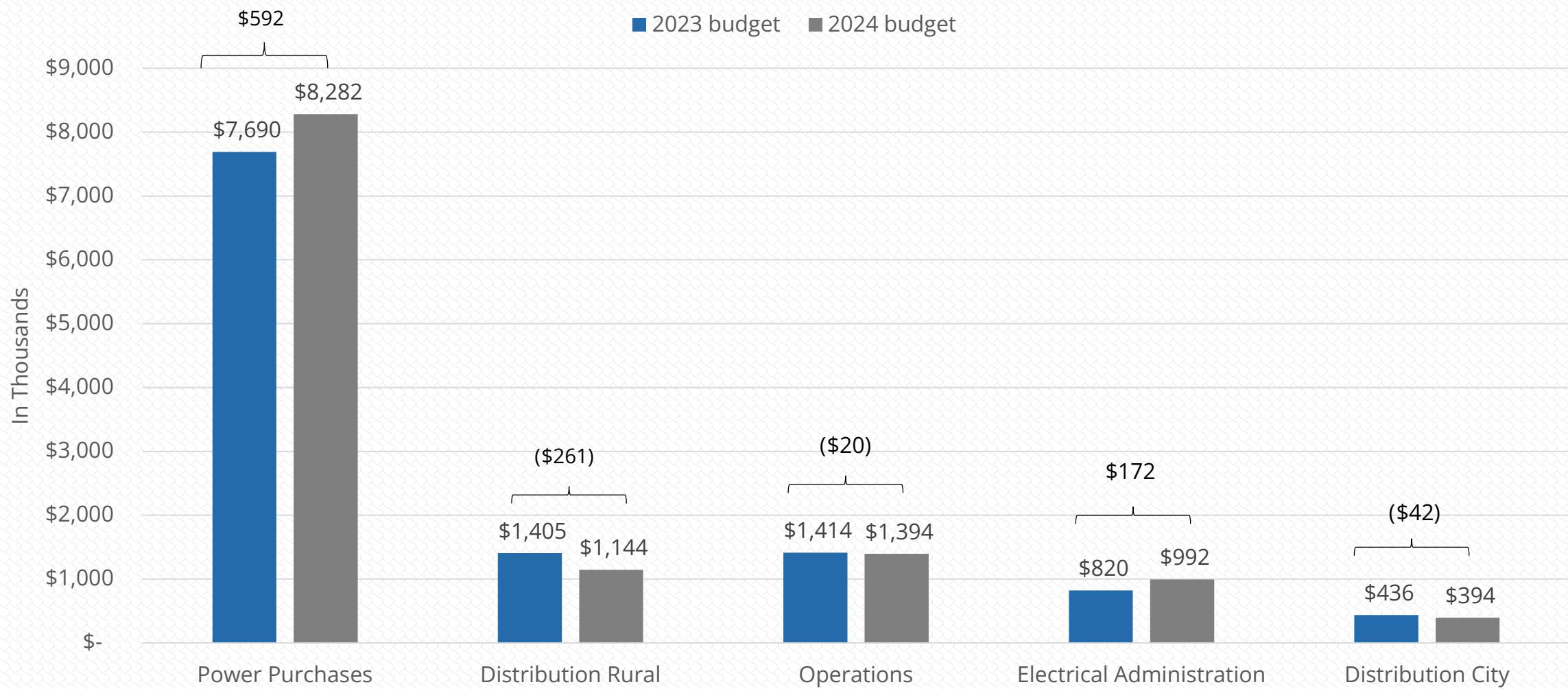
- Continued focus on safety and reliability
- 6.74% FortisBC Rate increase
- Adjusted Power Purchase Forecast model
- 4.21% increase in IBEW wages
- Inflationary increase of 5.62% for recurring expenses



BUDGET COMPARISON

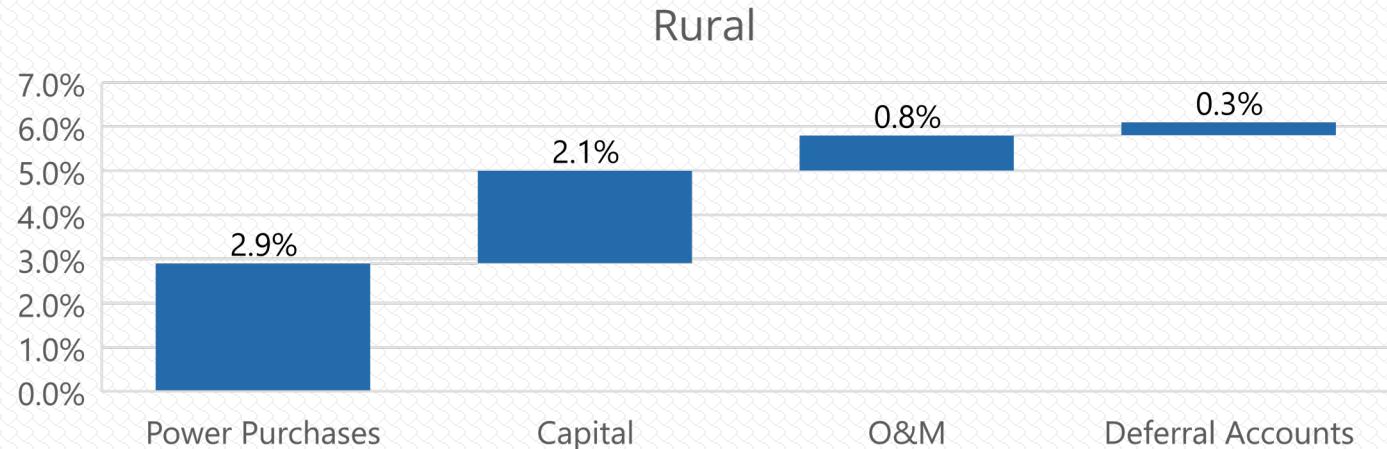


O&M COST-DRIVERS COMPARISON

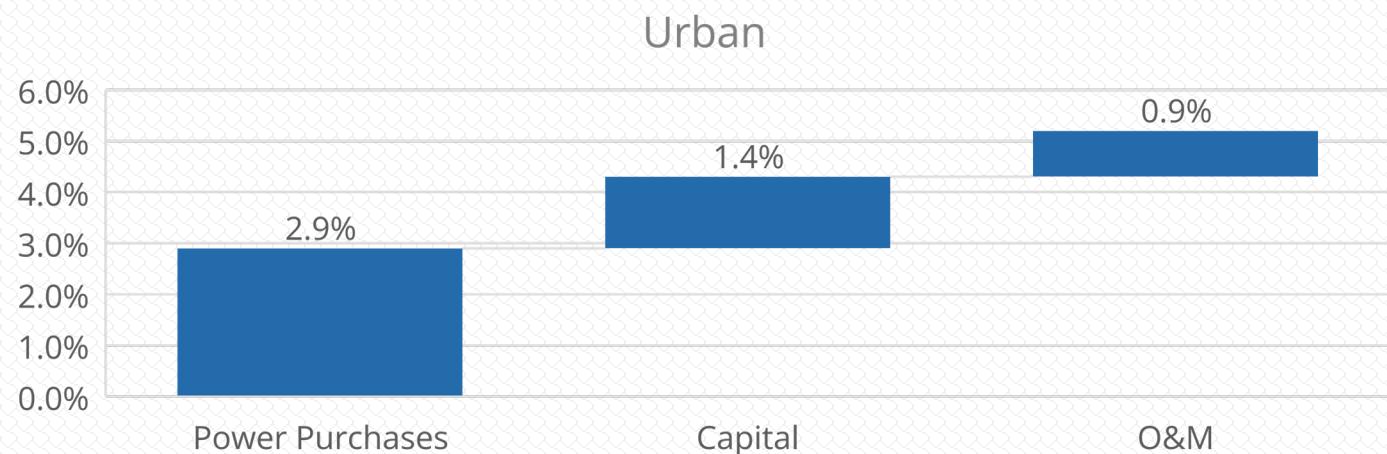


2024 RATE INCREASE BREAKDOWN

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

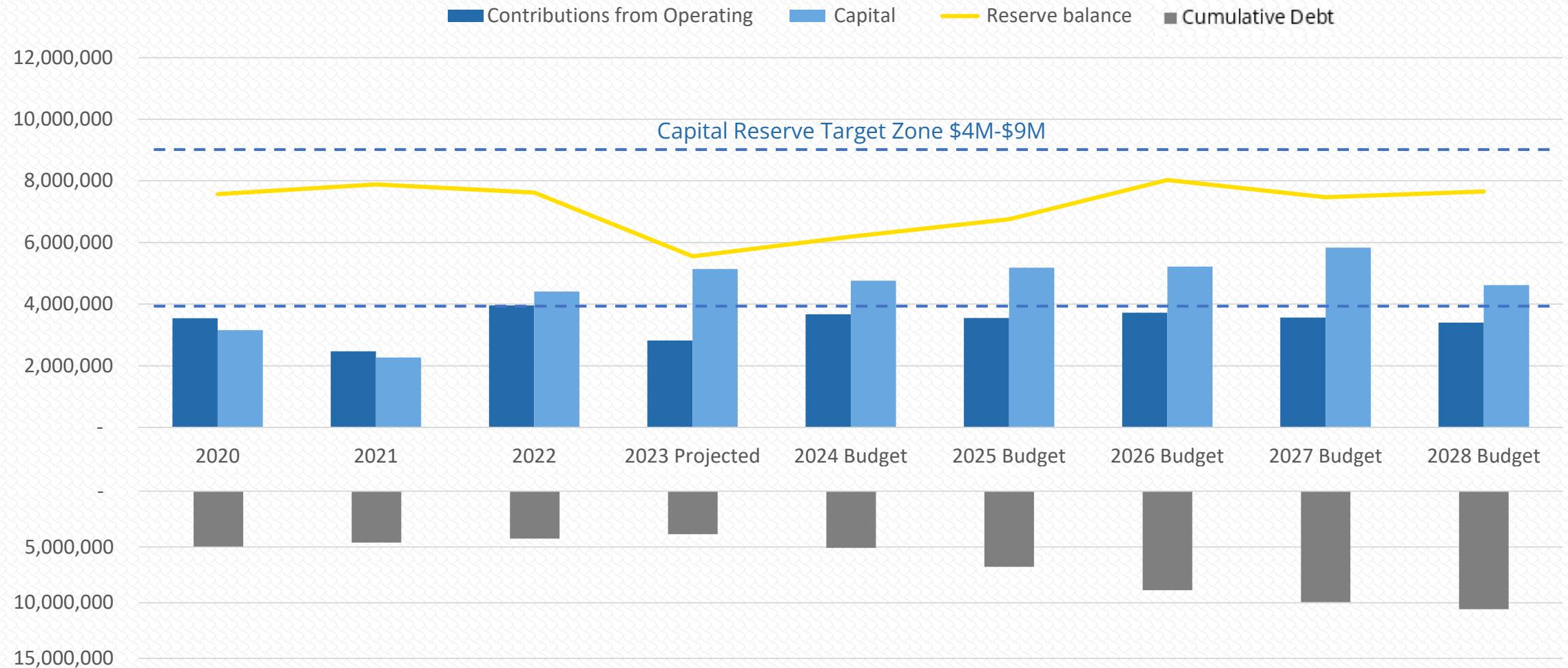


Urban Rate Increase: 5.20%
or
\$7.99/month (1250kWh)



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

Budget
and
Rates

Generation,
Transmission &
Distribution

Key
Performance
Indicators

General
Management



Regulatory

Projects and
Customer
Service

EcoSave
Program

Closing
Remarks



BCUC APPLICATIONS & PROCEEDINGS

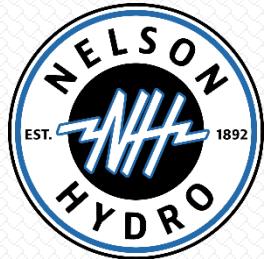
- 2023 Revenue Requirements Application
- Reconsideration & Variance of G-196-22 (COSA)
- 2024 Revenue Requirements Application
- Generic Cost of Capital (GCOC)
- FortisBC 2024 Annual Review of Rates
- Regulatory Efficiency Initiative
- Cyber Security Framework – 2 Year Pilot



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

Budget
and
Rates

Generation,
Transmission
& Distribution

Key
Performance
Indicators

General
Management



Regulatory

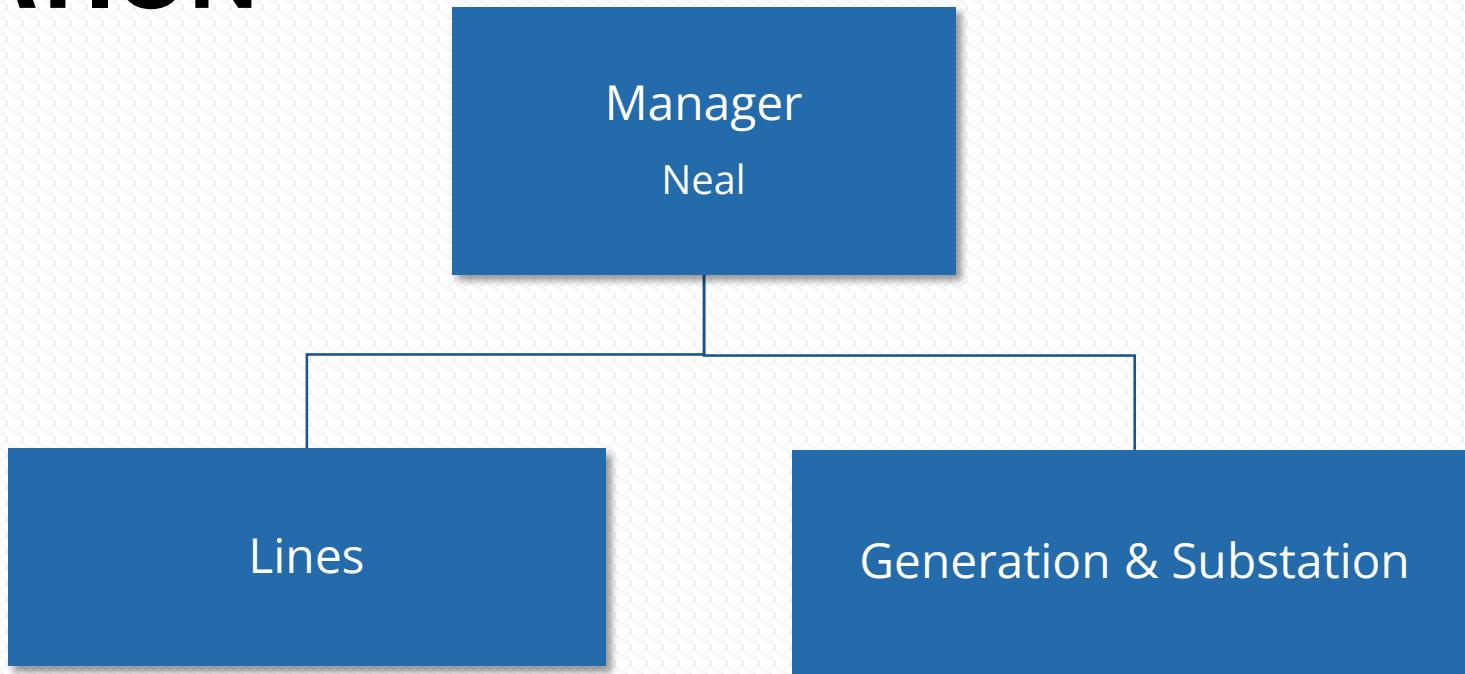
Projects and
Customer
Service

EcoSave
Program

Closing
Remarks



ORGANIZATION



- ▶ Dana Hamilton (PLT Team-Leader)
- ▶ Jason Procyshyn (PLT Lead-Hand)
- ▶ Derek McIvor - PLT
- ▶ Trevor Harding - PLT
- ▶ Jordan Rothkop - PLT
- ▶ Derek Chambers - PLT
- ▶ Logan Lynn – Electrician
- ▶ Dario Cimolai – Electrician
- ▶ Kevin Johnson – Millwright
- ▶ Andrew Miedreich – Millwright



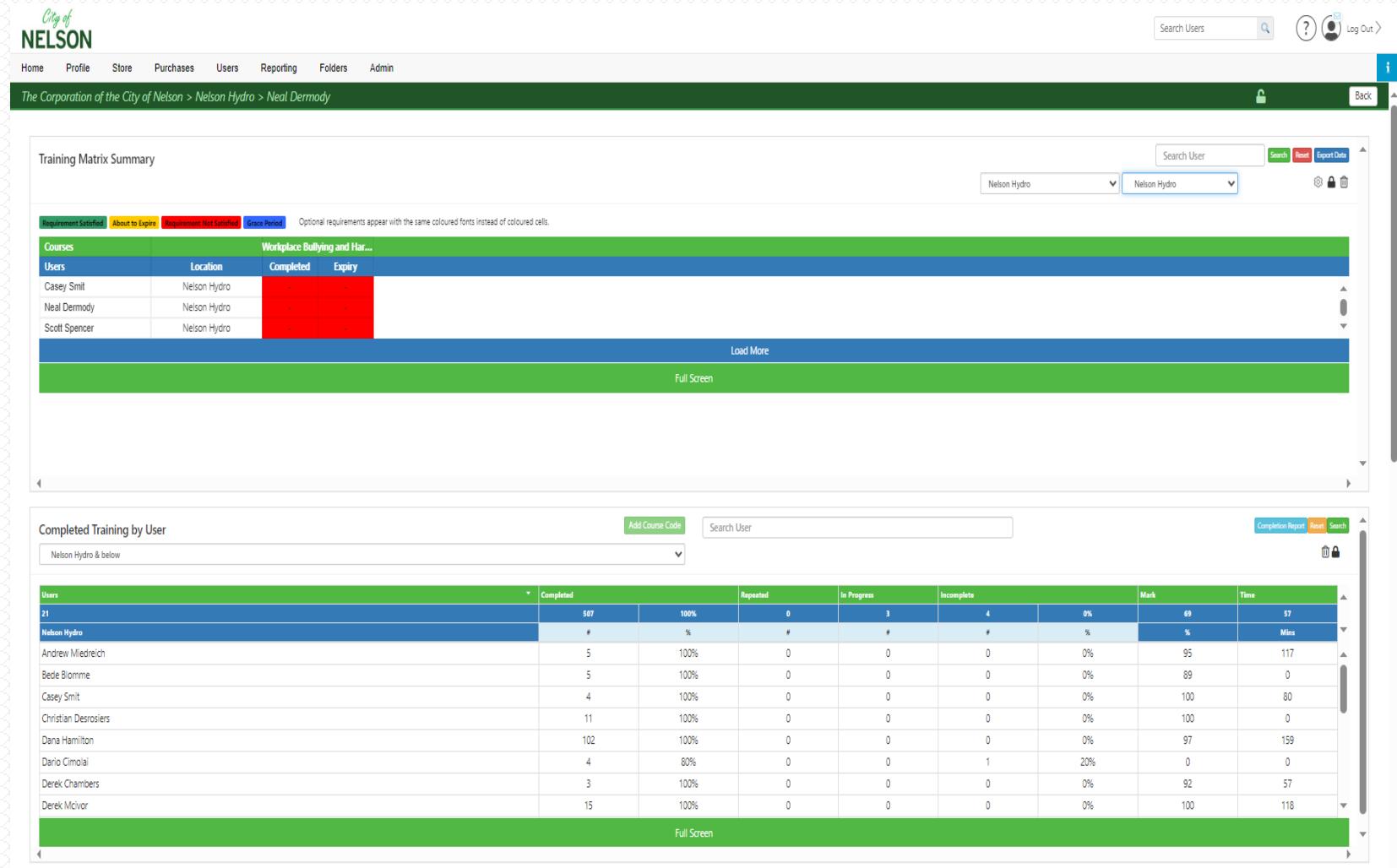
SAFETY

- 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.



The screenshot displays two main sections of the BISTrainer software for the City of Nelson.

Training Matrix Summary: This section shows a grid of training requirements for users across different locations. The grid includes columns for 'Courses', 'Users', 'Location', 'Completed', and 'Expiry'. The 'Completed' and 'Expiry' columns for most users show red backgrounds, indicating incomplete or expired training. The 'Courses' column header is 'Workplace Bullying and Har...'. A note at the top of the grid states: "Optional requirements appear with the same coloured fonts instead of coloured cells."

Courses	Workplace Bullying and Har...		
Users	Location	Completed	Expiry
Casey Smit	Nelson Hydro		
Neal Dermody	Nelson Hydro		
Scott Spencer	Nelson Hydro		

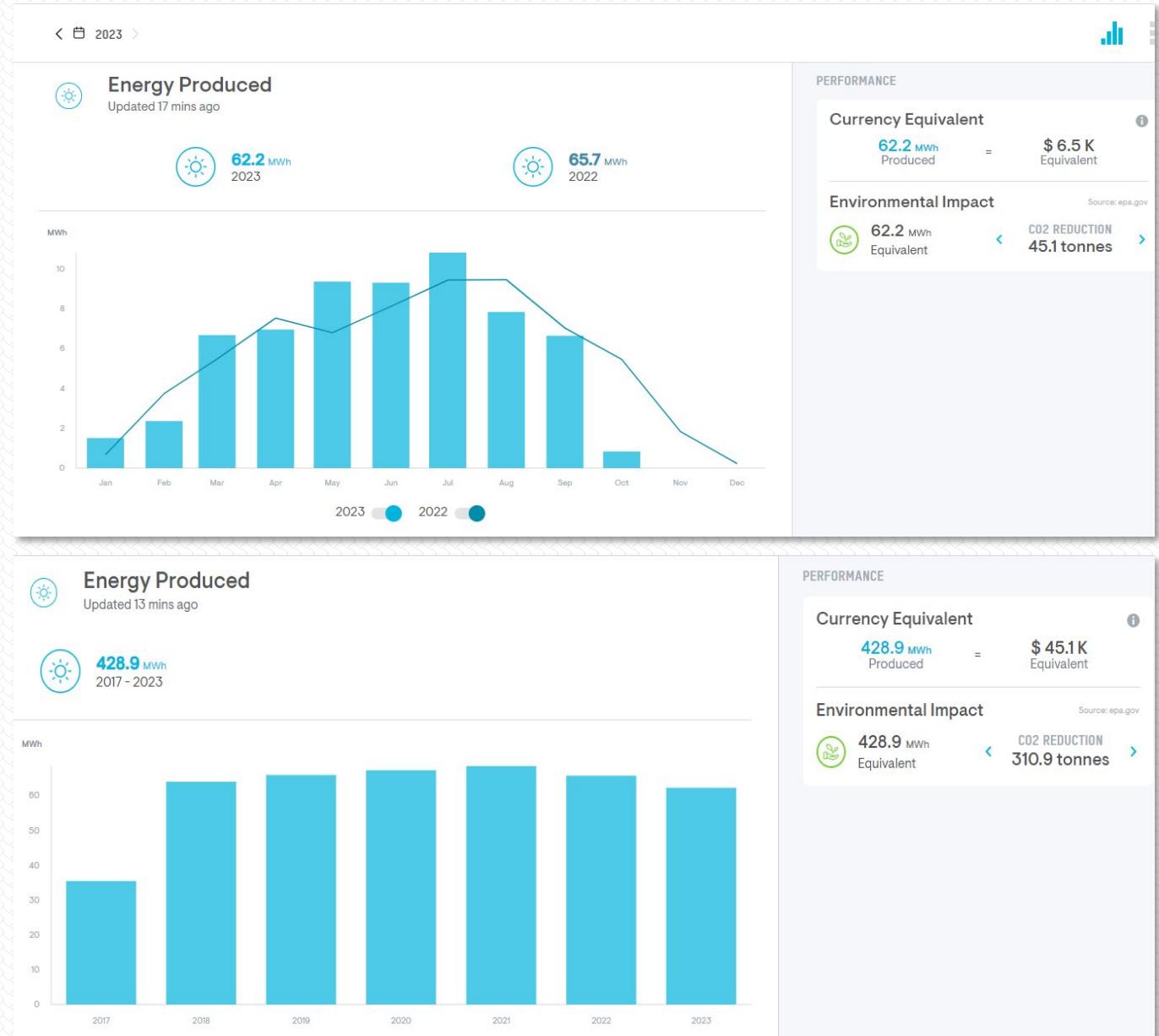
Completed Training by User: This section provides a detailed breakdown of completed training for individual users. It includes columns for 'Users', 'Completed', 'Repeated', 'In Progress', 'Incomplete', 'Mark', and 'Time'. The data shows that most users have 100% completion, with some users having 0% completion.

Users	Completed	Repeated	In Progress	Incomplete	Mark	Time
21	507	100%	0	3	4	0%
Nelson Hydro	#	%	#	#	#	%
Andrew Miedrich	5	100%	0	0	0	0%
Bede Blomme	5	100%	0	0	0	0%
Casey Smit	4	100%	0	0	0	0%
Christian Desrosiers	11	100%	0	0	0	0%
Dana Hamilton	102	100%	0	0	0	0%
Dario Cimolai	4	80%	0	0	1	20%
Derek Chambers	3	100%	0	0	0	0%
Derek McIvor	15	100%	0	0	0	0%

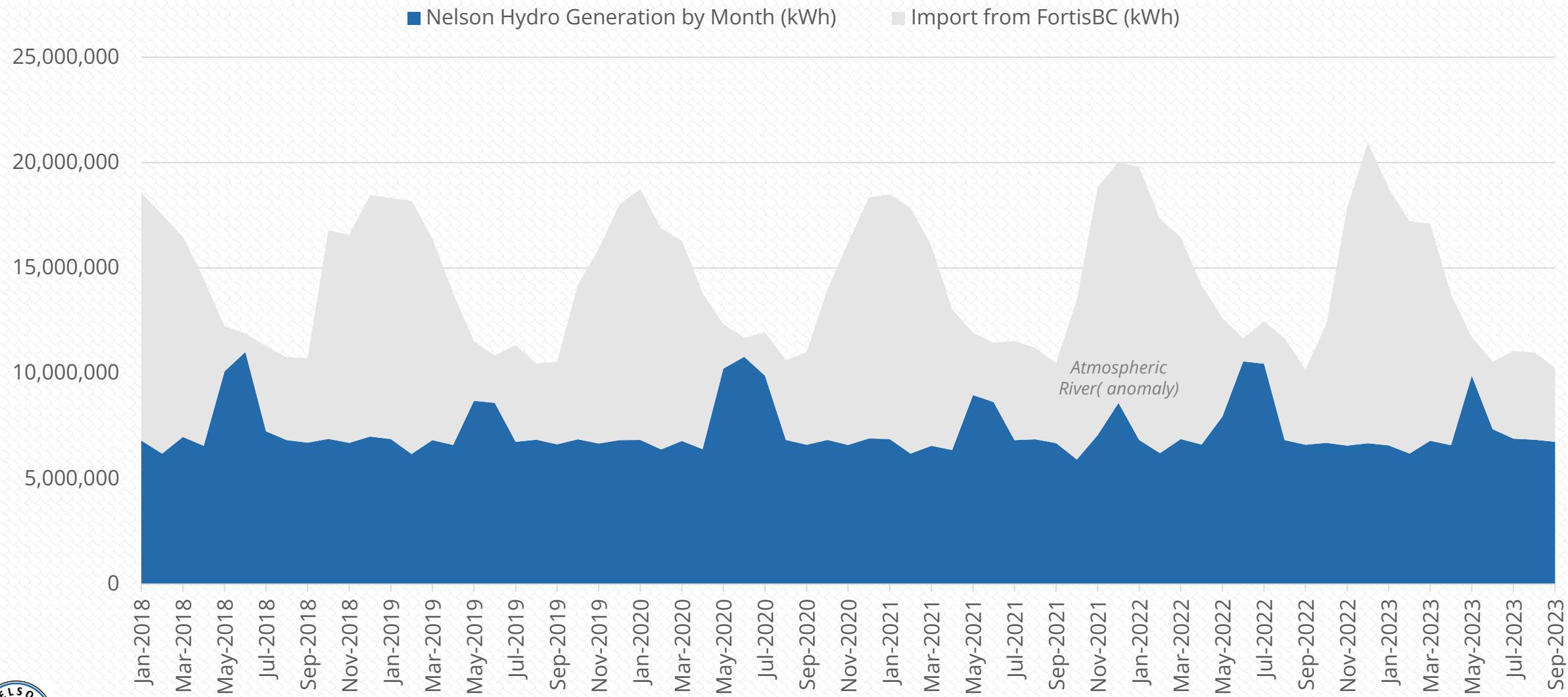


SOLAR GENERATION

- 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.

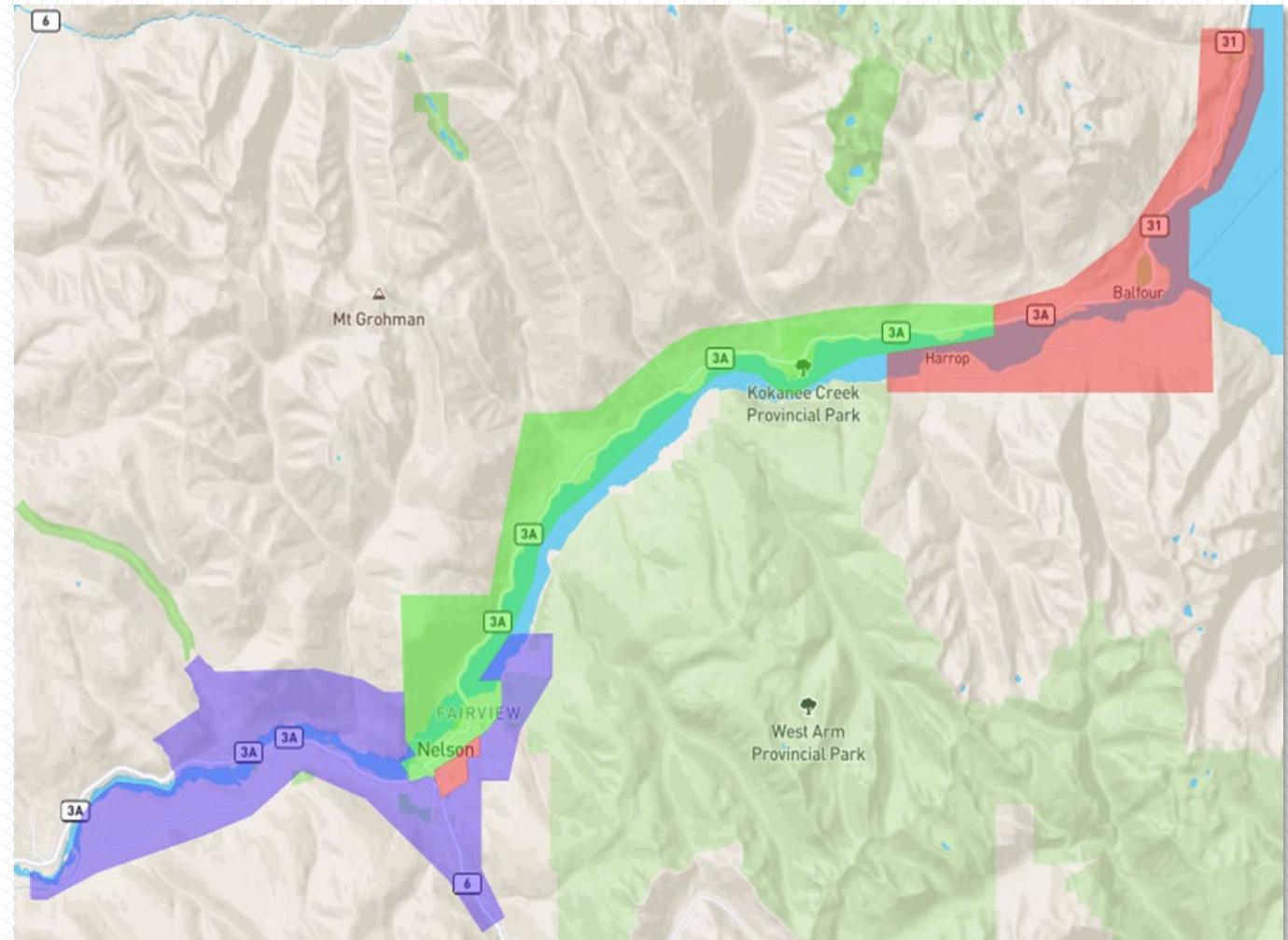


ENERGY CONSUMPTION



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.

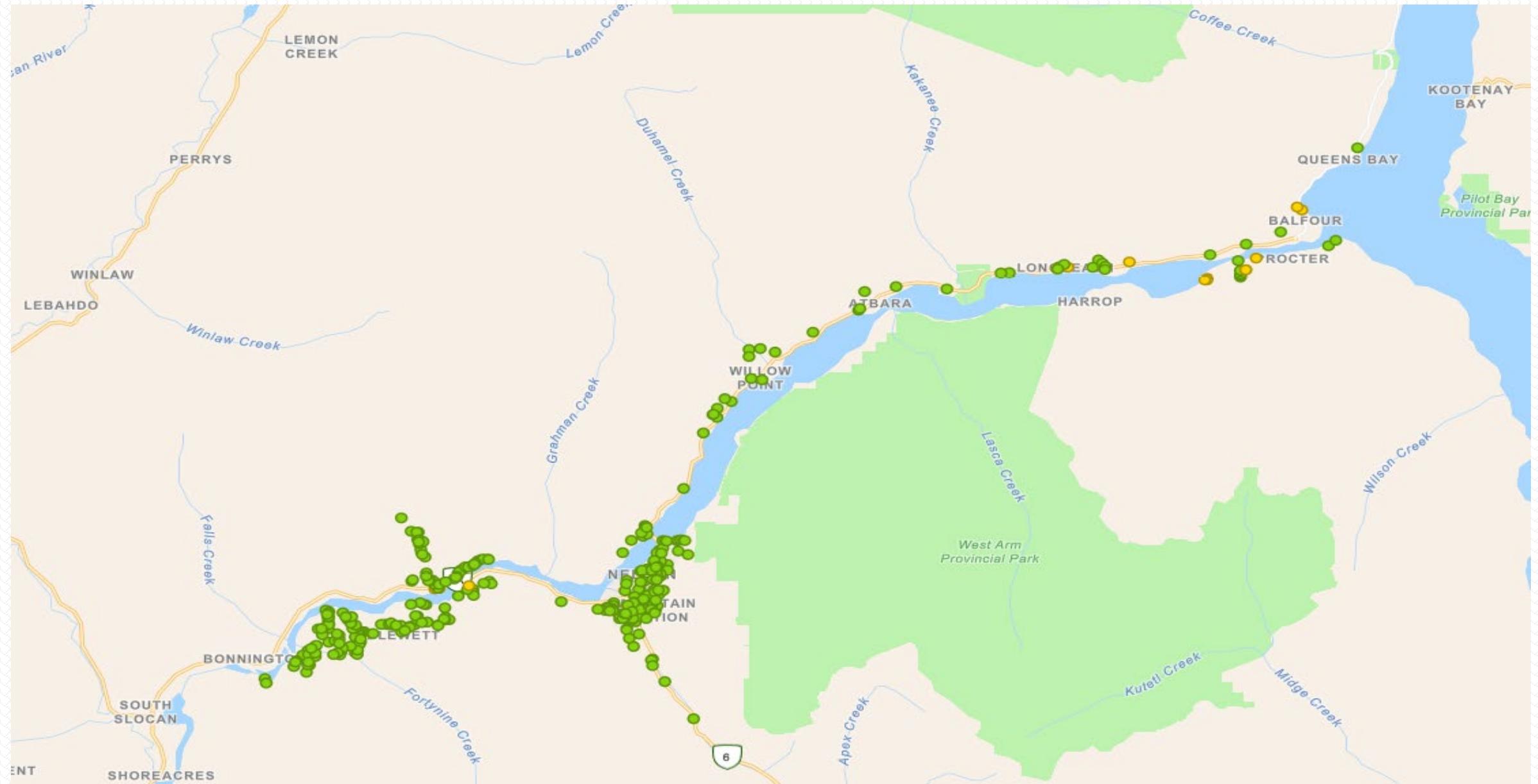


Three Year Cycle Map: Zone 1 - Purple, Zone 2 - Green, Zone 3 - Red

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.

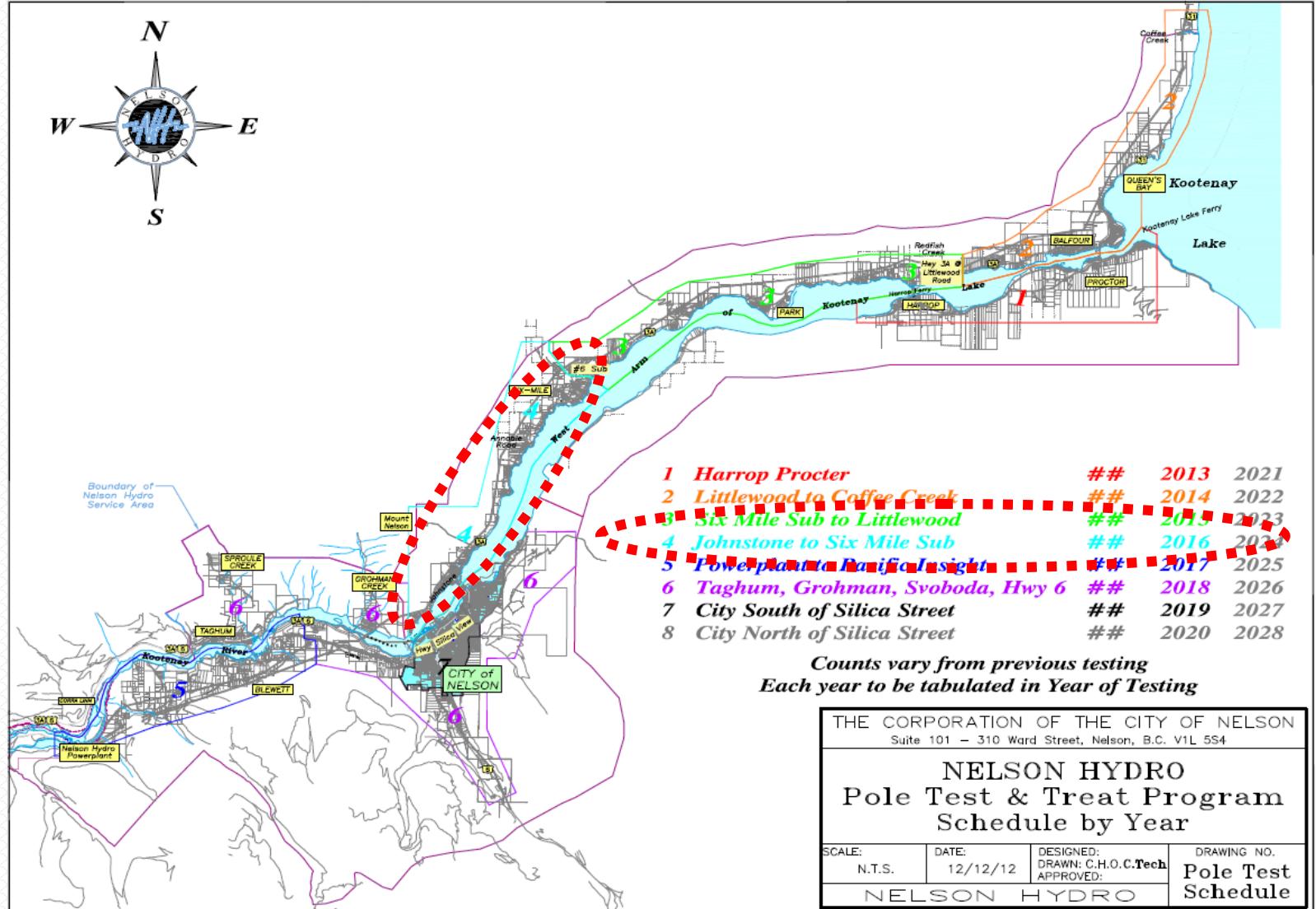


TEST & TREAT → POLE REPLACEMENT



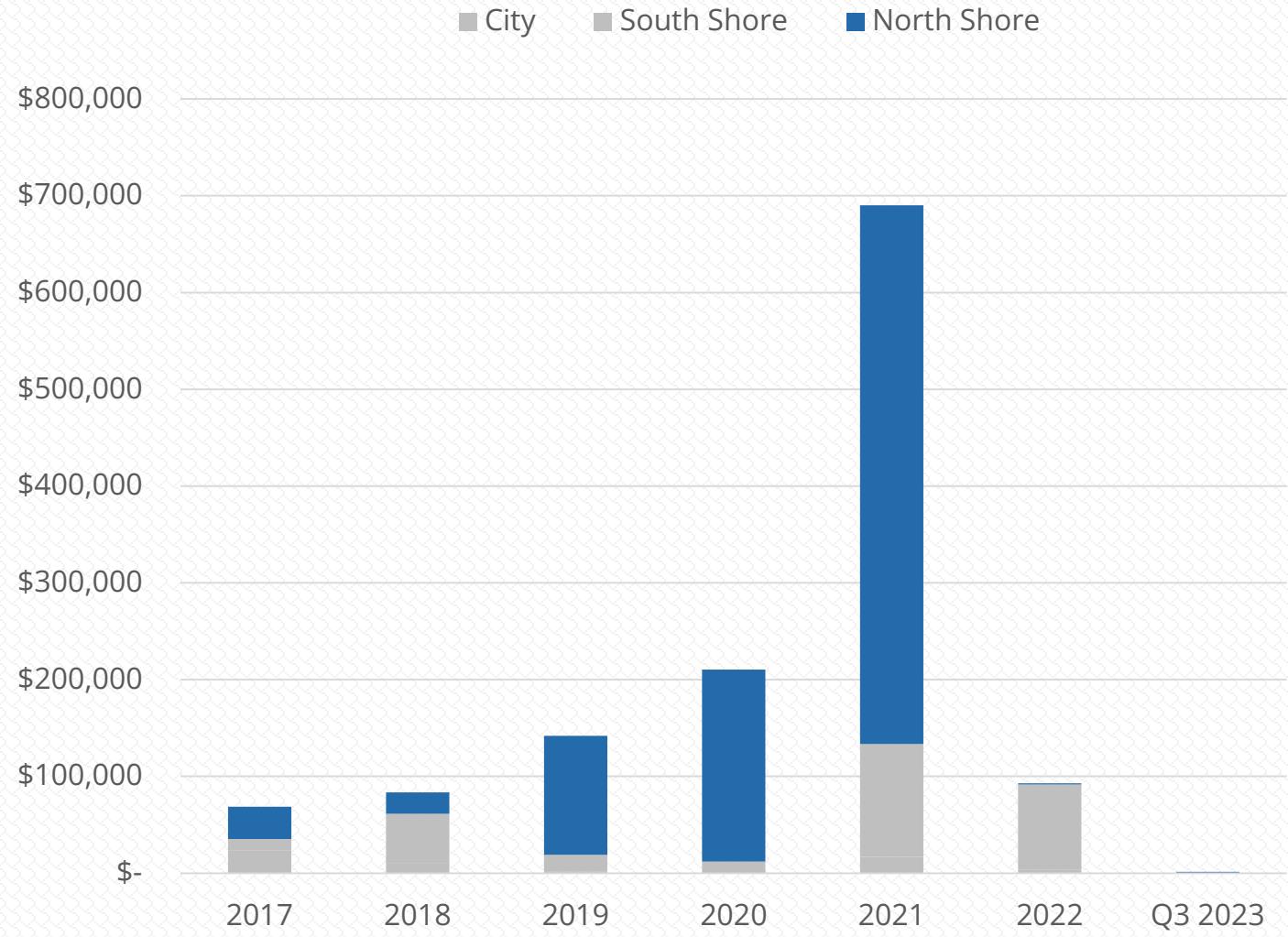
Test & Treat Pole Count by Zone (as of 2022)

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	

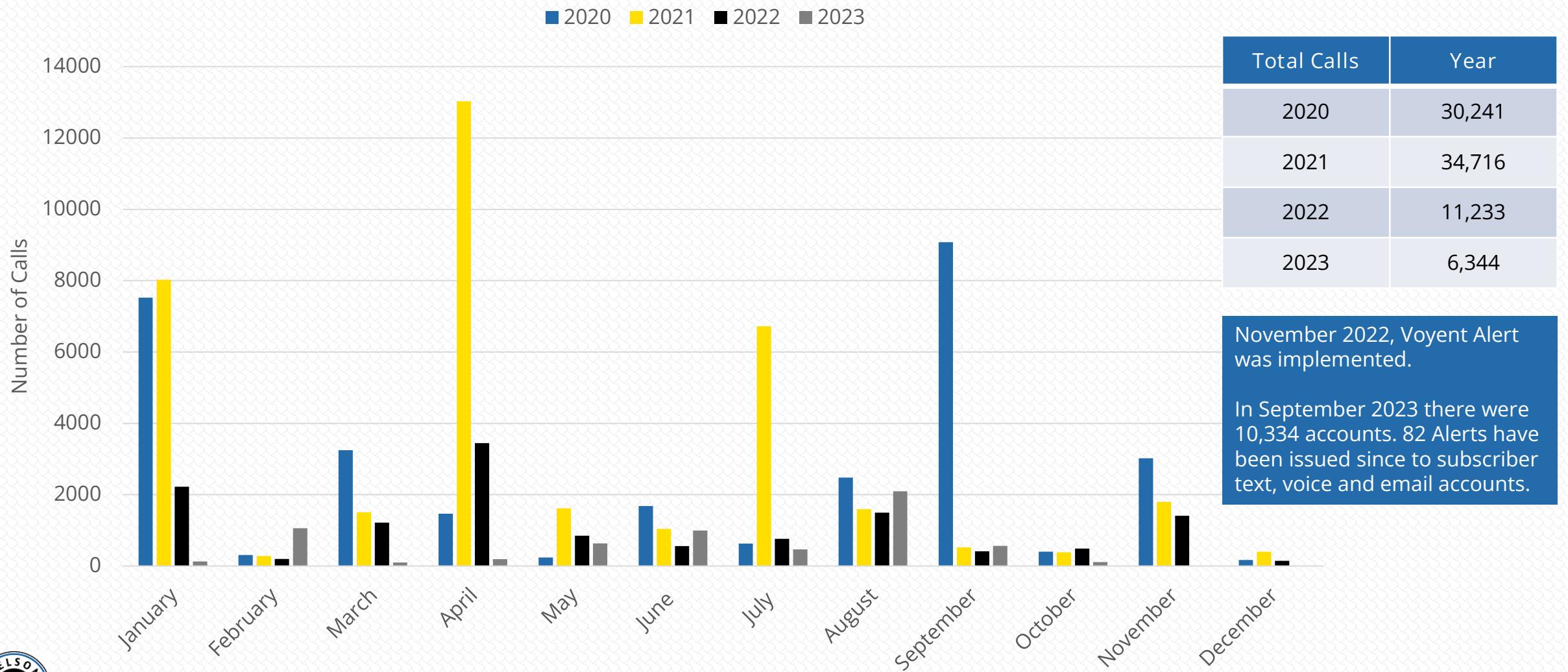


MAJOR STORM EXPENSE

- 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.



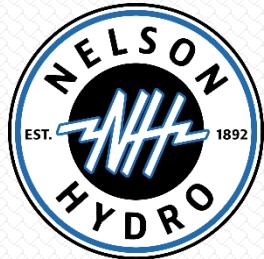
CALLS TO OUTAGE INFORMATION LINE



2024 OPERATIONS & LINE

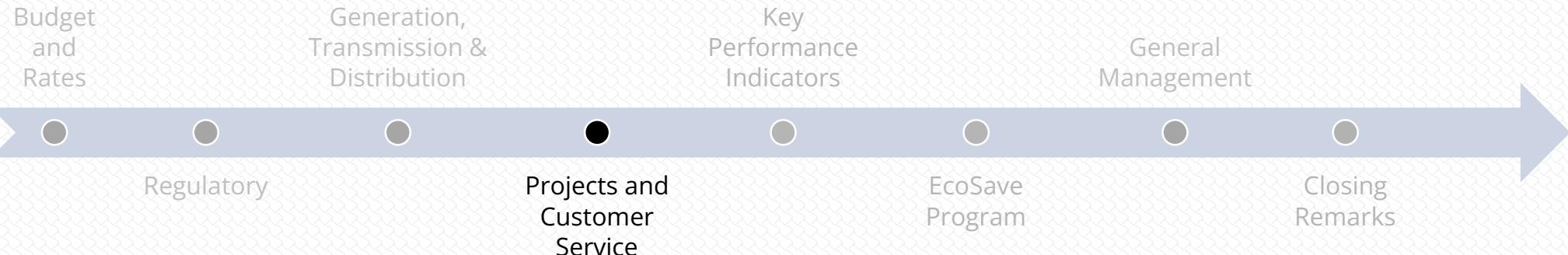
- Asset Management Framework aligns:
 - Dam Emergency Plan (DEP), Operations, Maintenance and Surveillance Plan (OMS), and Dam Safety Management Plan, (DSMP)
 - Preventative Maintenance (PM), Computerized Maintenance Management System (CMMS), Equipment Health Rating, and Reliability Centered Maintenance.
- 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



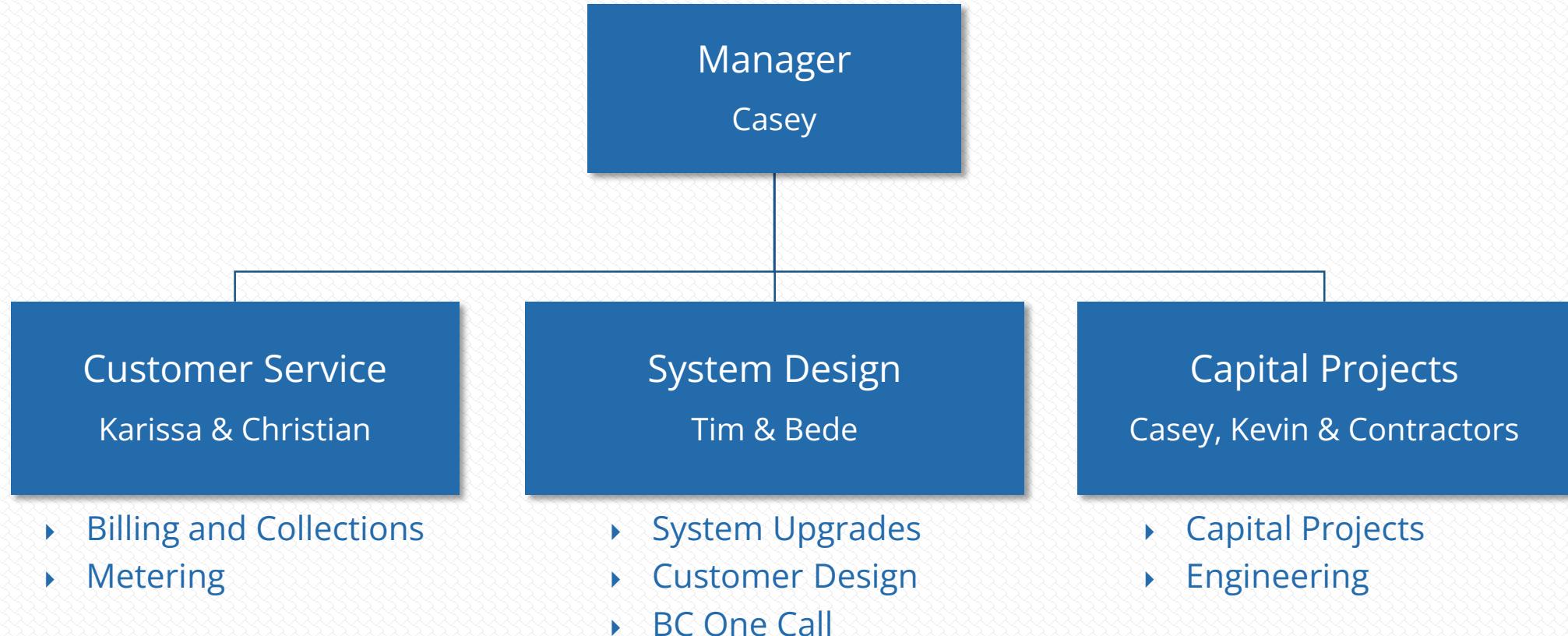


Projects and Customer Service

Casey Smit, P.Eng., PMP, MBA



ORGANIZATION

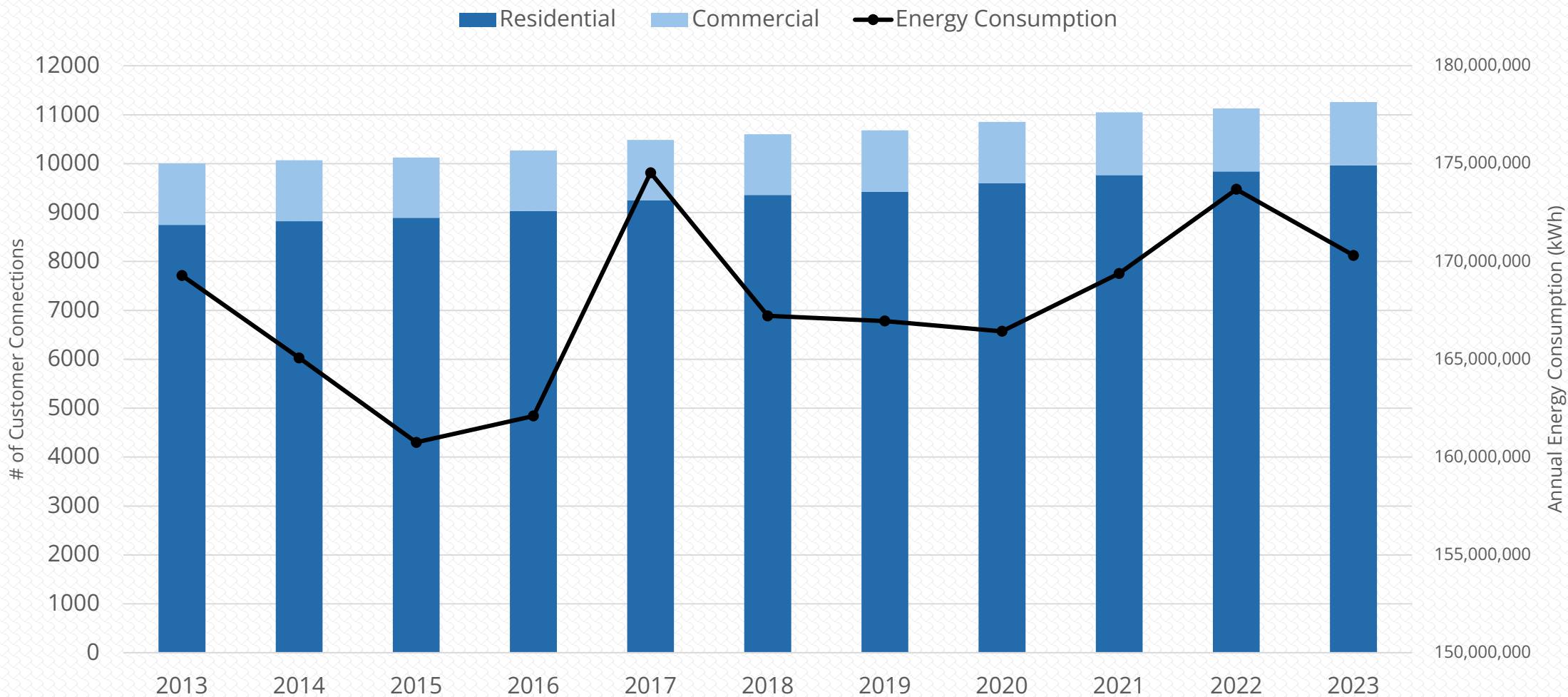


SAFETY

- 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

Suite 101, 310 Ward St., Nelson, BC

ACCOUNTS WILL BE SUBJECT TO A 5% LATE CHARGE IF PAYMENT IS NOT RECEIVED BY THE DUE DATE

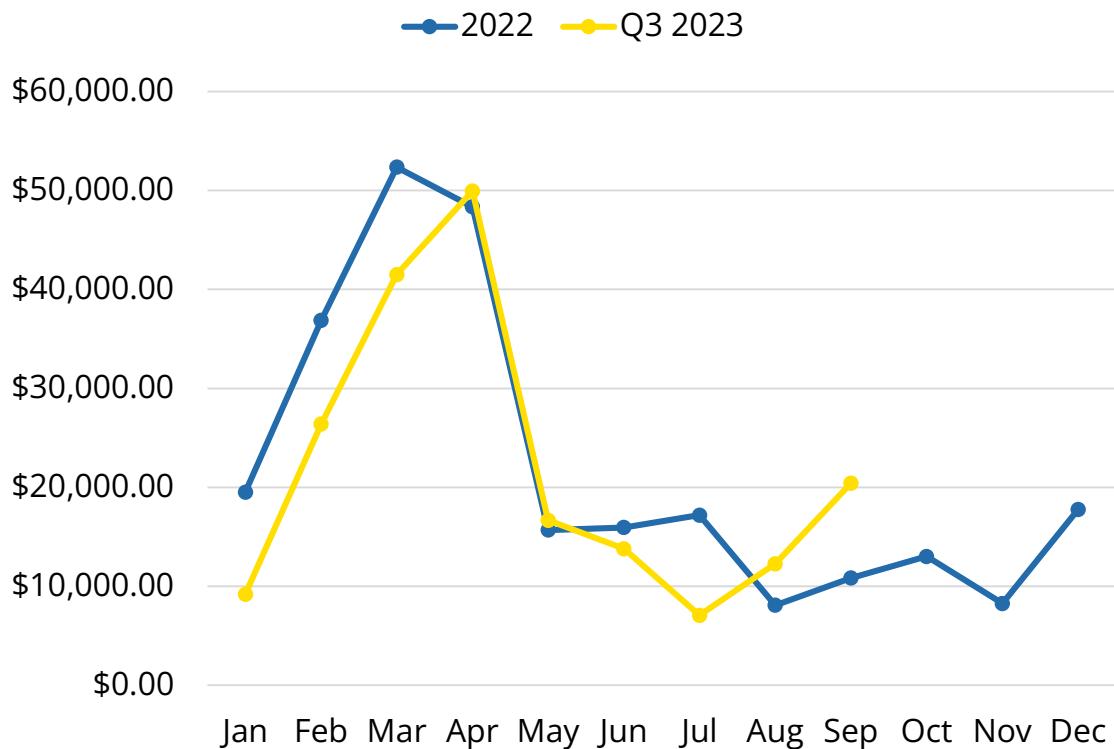
Meter	RateCode	BillingType	Prev.Read Date	Curr.Read Date	Days	Prev. Read	Curr. Read	Mult	Usage	Units
TB100001	N12	RE	12-Jun-2023	10-Aug-2023	59	1798	1825	60.00	1620	KWH
TB100001	N12	RE	12-Jun-2023	10-Aug-2023	59	526	550	60.00	1440	KWH

Received Vs Delivered

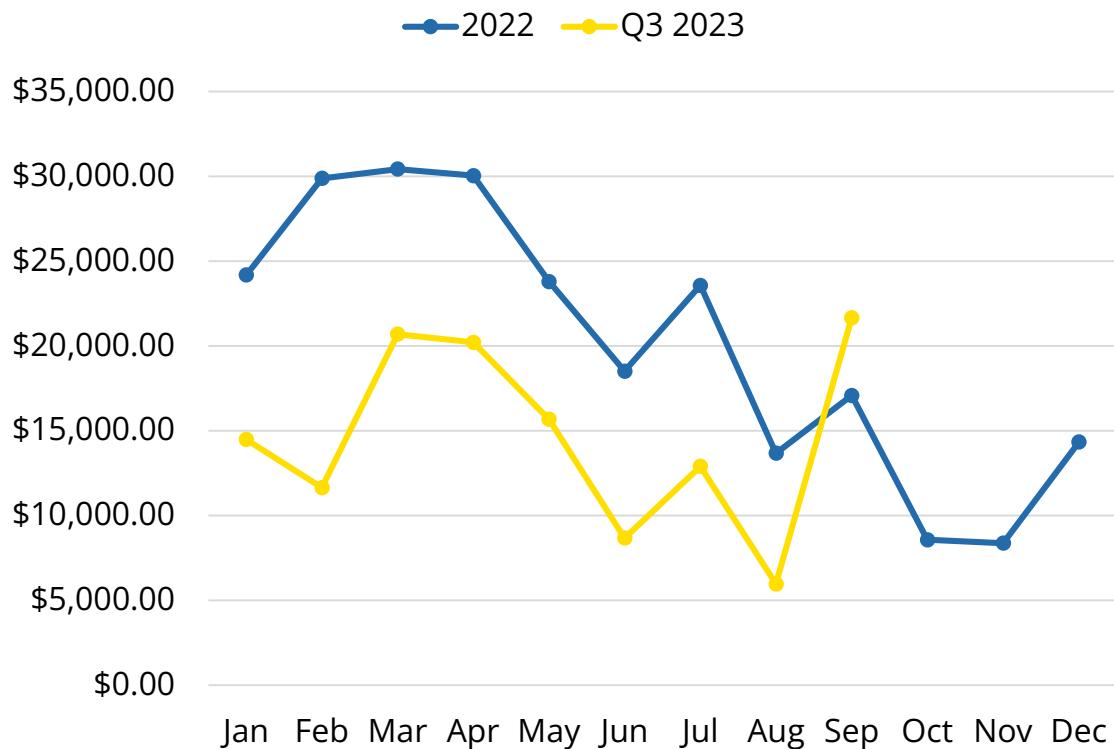
Description	Rate	Usage	\$ Amount
Billing			\$8.06CR
Balance Forward Due Now			\$8.06CR
Basic Charge - Rural			\$18.88
Customer Generated - Residential	-0.12230	1440	\$176.11CR
Billed Consumption - Res Rural	0.12230	1620	\$198.13
Federal Sales Tax (GST)			\$10.85
Current Charges Due 18-Sep-2023			\$51.75
Total Amount			\$43.69

CUSTOMER SERVICE

Total Amount Overdue on Active Accounts
for Rural Customers



Total Amount Overdue on Active Accounts
for Urban Customers



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



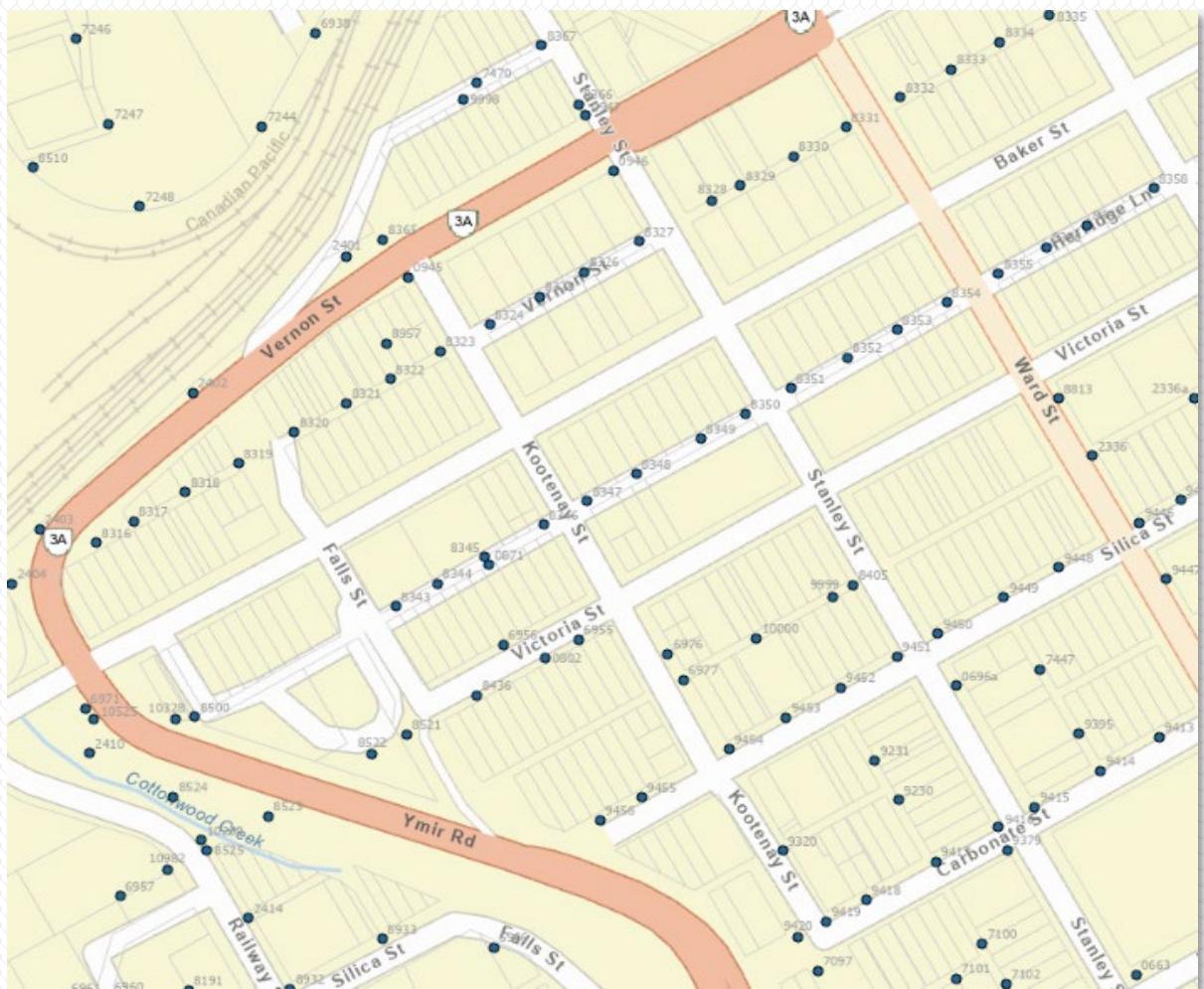
CAPITAL PROJECT – ONGOING

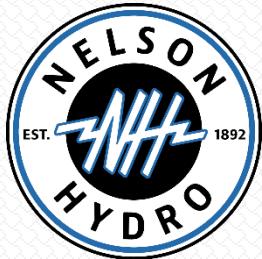
- Generating station battery bank replacement
- North Shore capacity review
- Mill St. Substation upgrade
- G3 and G4 exciter replacement
- Geographic Information System (GIS)
- Design Standardization
- CYME software
- SCADA
- GIS



CAPITAL PROJECTS - NEW

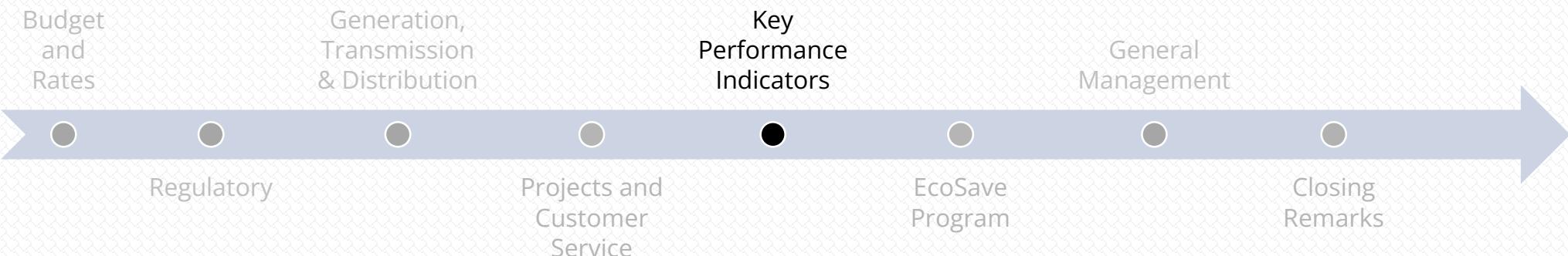
- Dam safety projects
- Mt. Nelson line replacement
- Pressure vessel replacements
- 10 year equipment replacement planning
- System improvement scoping
- BESS - pending grant funding





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.

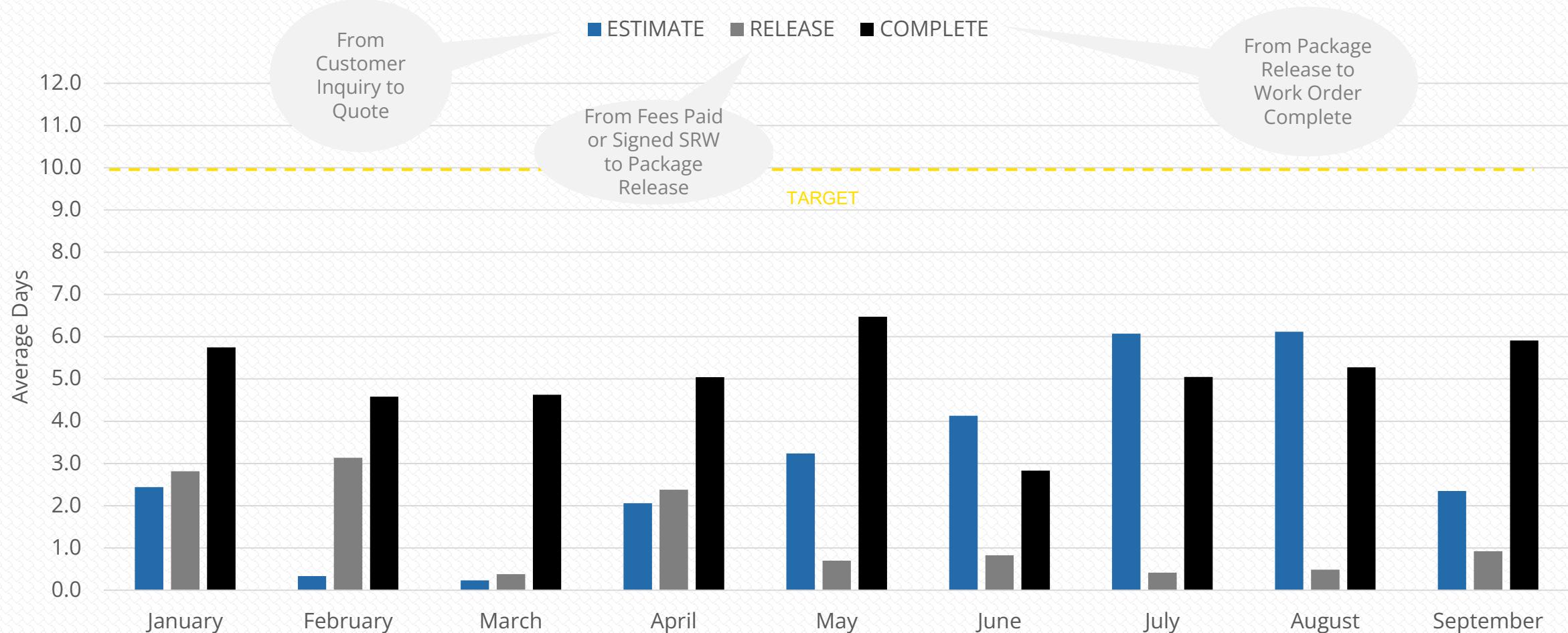
Measures our outage duration and frequencies and availability factor for each of the generating units.

SAFETY & COMPLIANCE

OPERATIONS

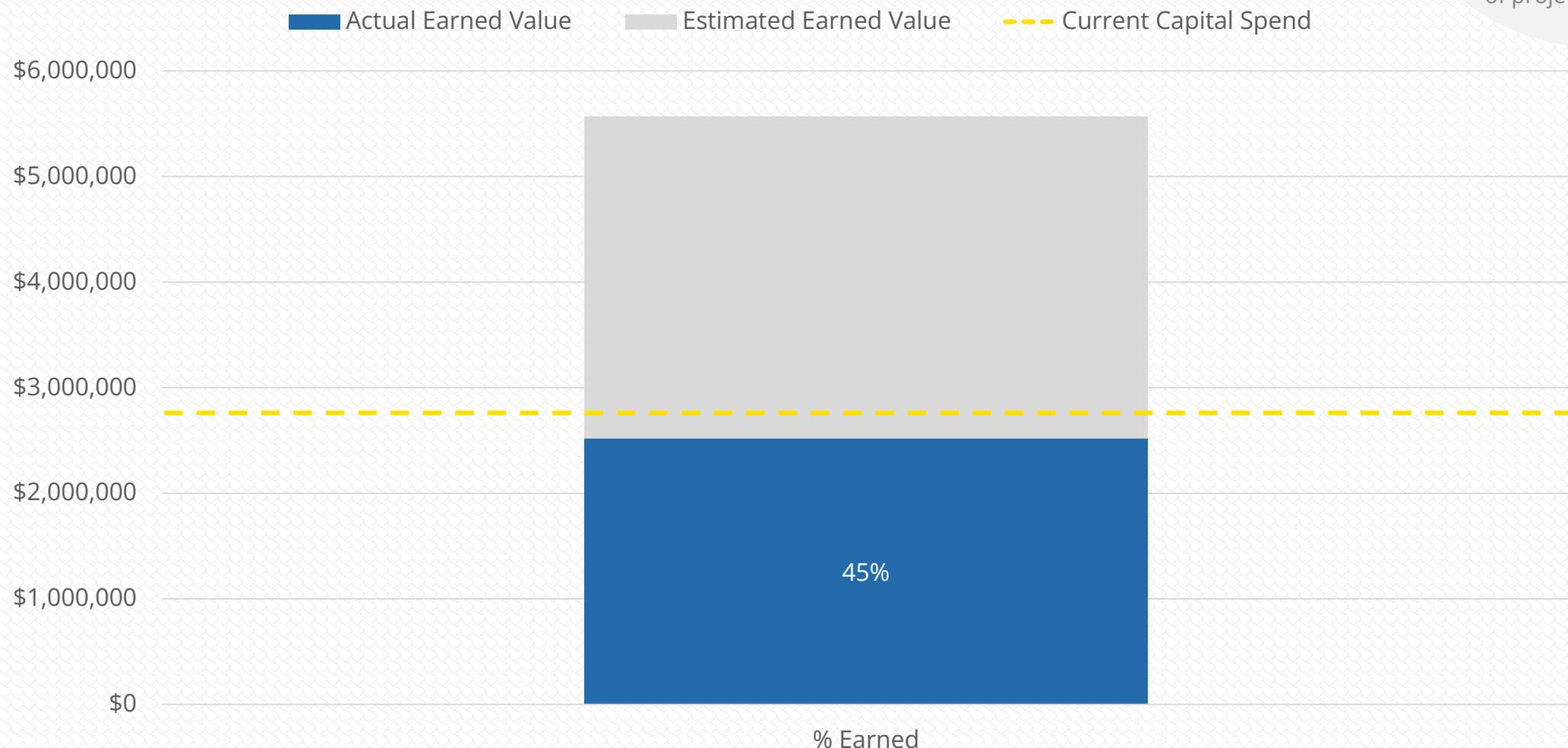
CUSTOMER PERSPECTIVE

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



CUSTOMER PERSPECTIVE

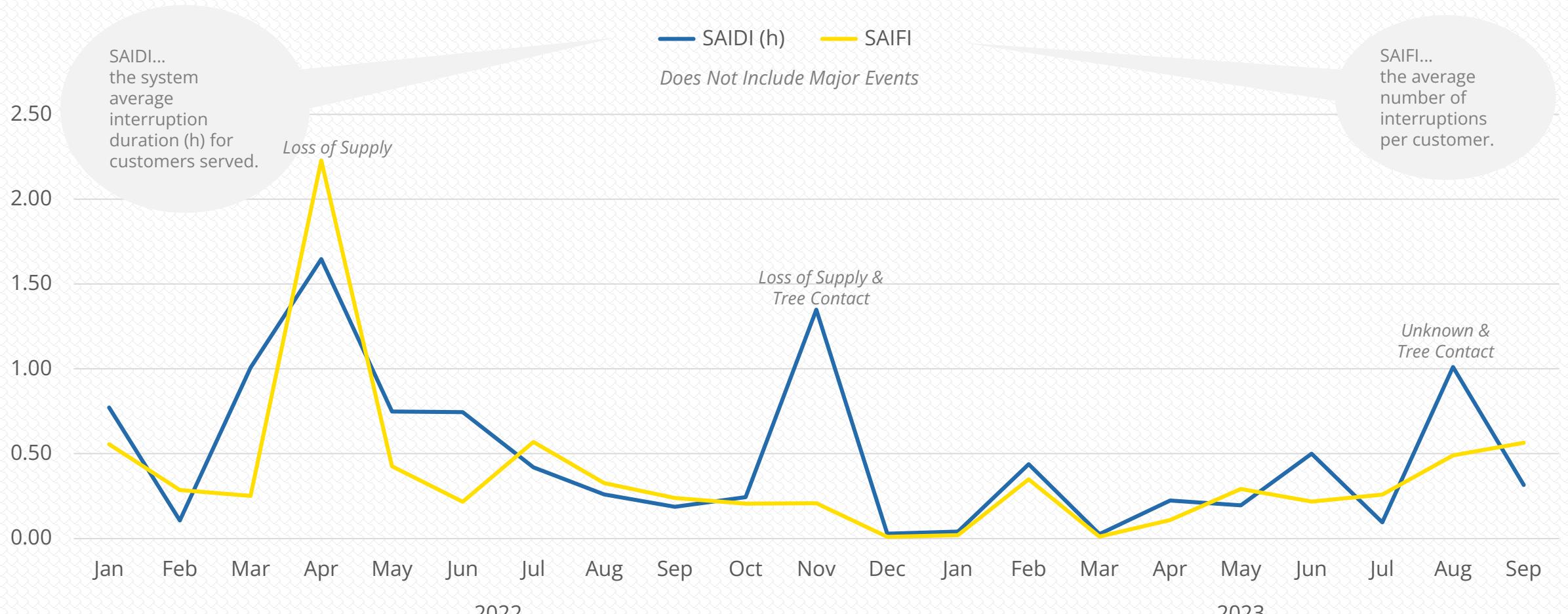
Capital Projects Earned Value quantifies the value of our capital project progress.



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.



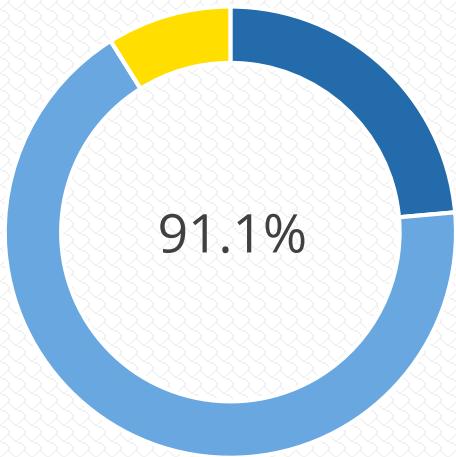
OPERATIONS PERSPECTIVE

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

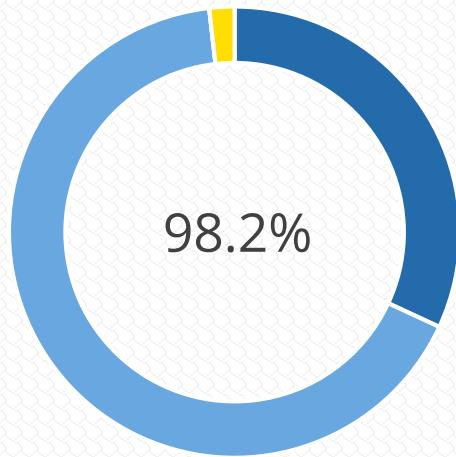
Availability Factor (%) =
Total Available Hours /
Total Number of Hours
in Period

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

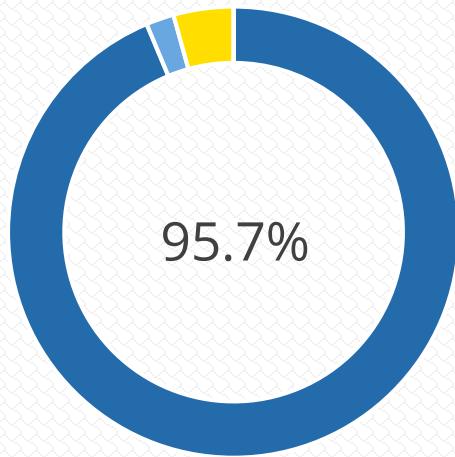
G2



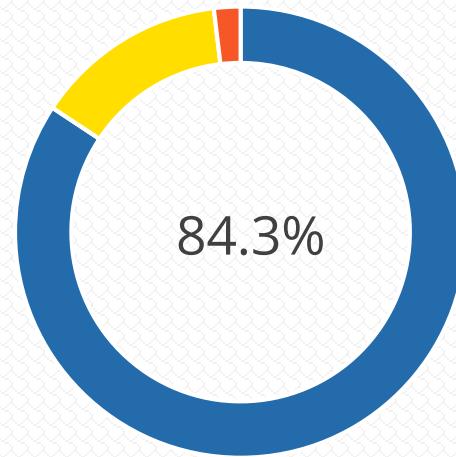
G3



G4



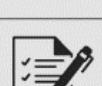
G5



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 approachFollow safe work procedures, safety standards and Safety Data SheetsUse appropriate PPEEnsure substance risks are known
	2. STOP <ul style="list-style-type: none">Contact Nelson Fire Dept at 352-3103Close valves, leaks, upright containersShut off pumpsPerform any emergency repairs
	3. SECURE <ul style="list-style-type: none">Limit spill area access to essential personnelSecure area with flagging or ropeEnsure closure of area to public or other staff
	4. CONTAIN <ul style="list-style-type: none">Protect any potential paths to waterIdentify extent of spilled materialContain and stabilize the spilled productTake pictures of spill and containment
	5. REPORT <ul style="list-style-type: none">Notify your Supervisor immediatelySupervisor reports spill 1-800-663-3456 if requiredSupervisor 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	
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?

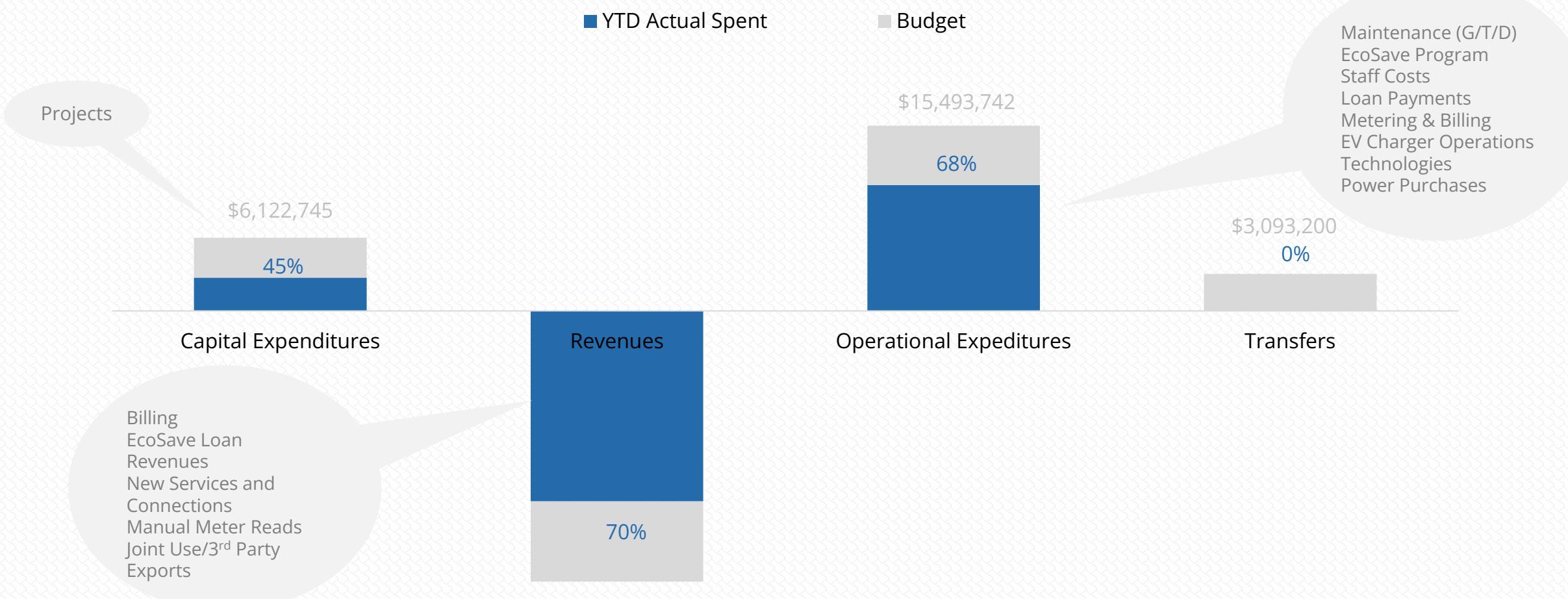
Spills of any quantity less than 10m from water OR larger than quantities listed in the table (left) MUST be reported to Emergency Management BC at 1-800-663-3456.

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

City of NELSON

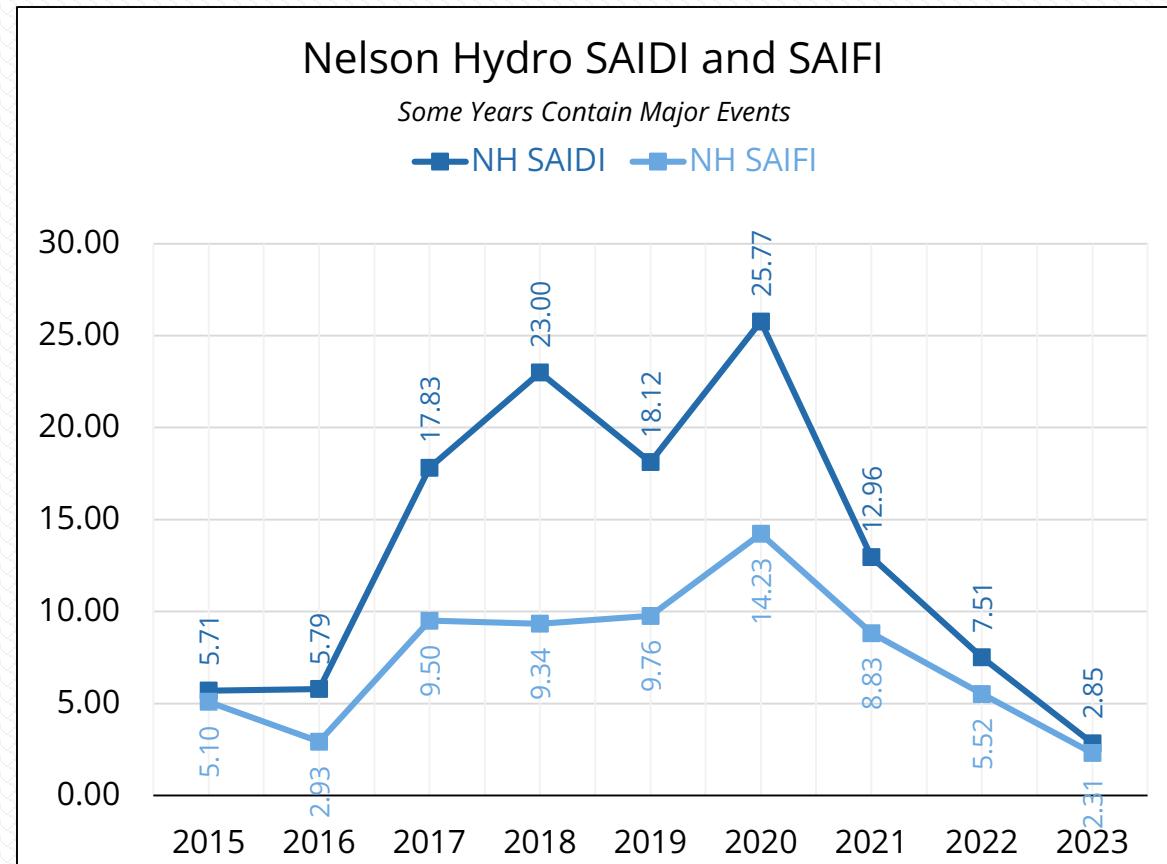
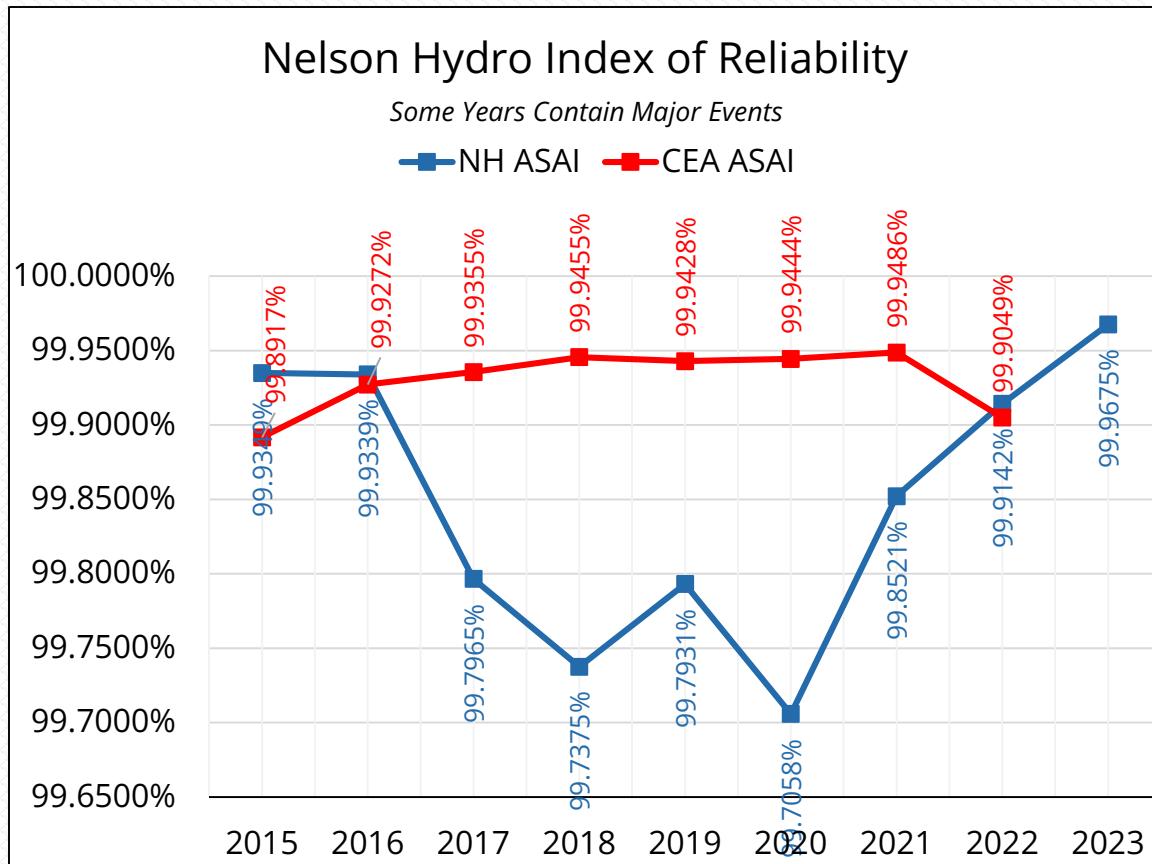
FINANCIAL PERSPECTIVE

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



All data is to the end of Sep 2023.

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

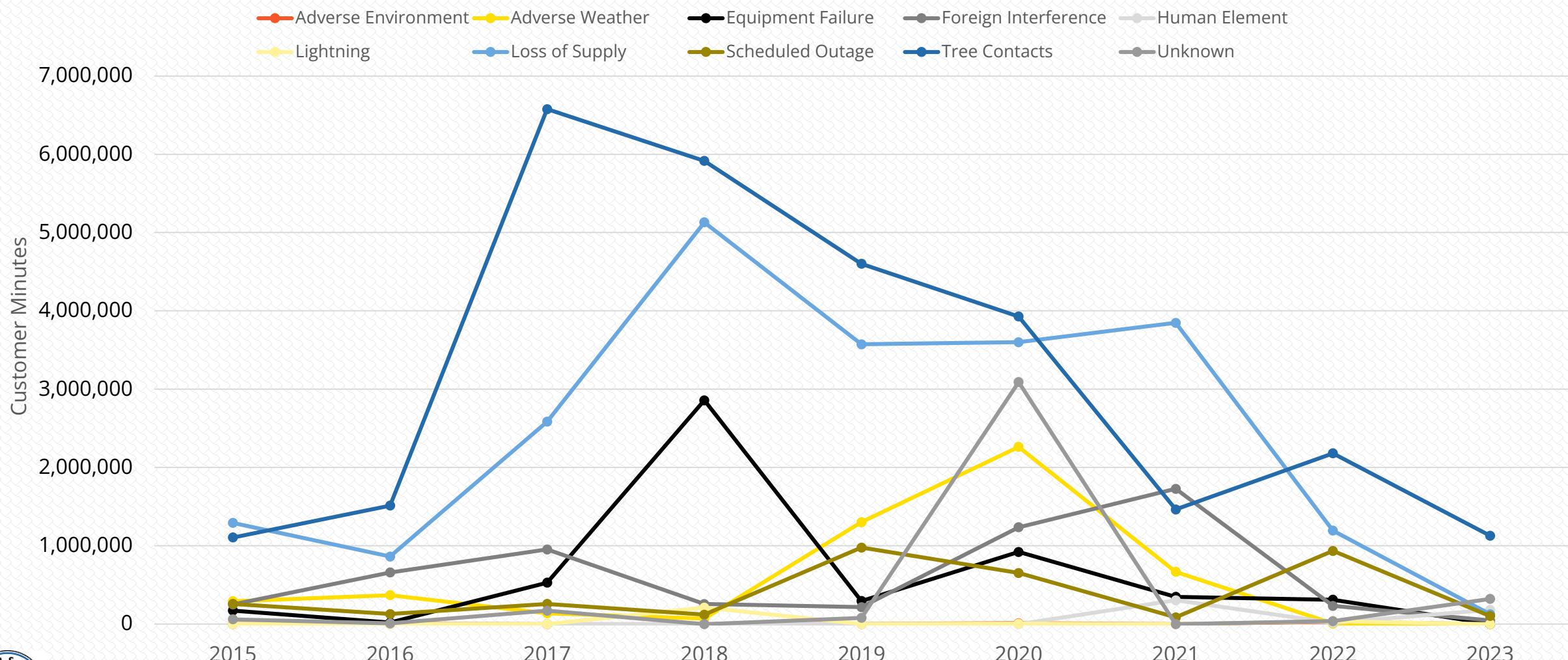
Customer interruptions caused by faults due to trees or tree limbs contacting energized circuits.

Unknown

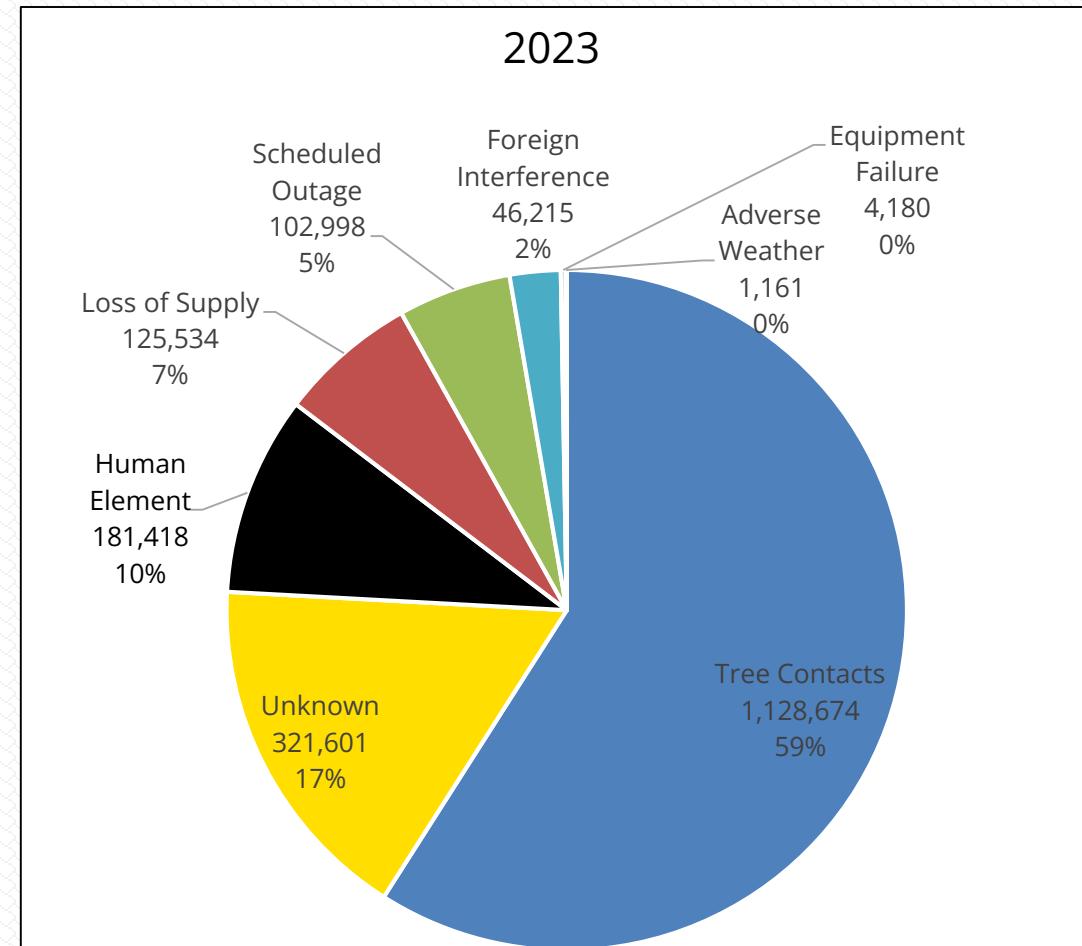
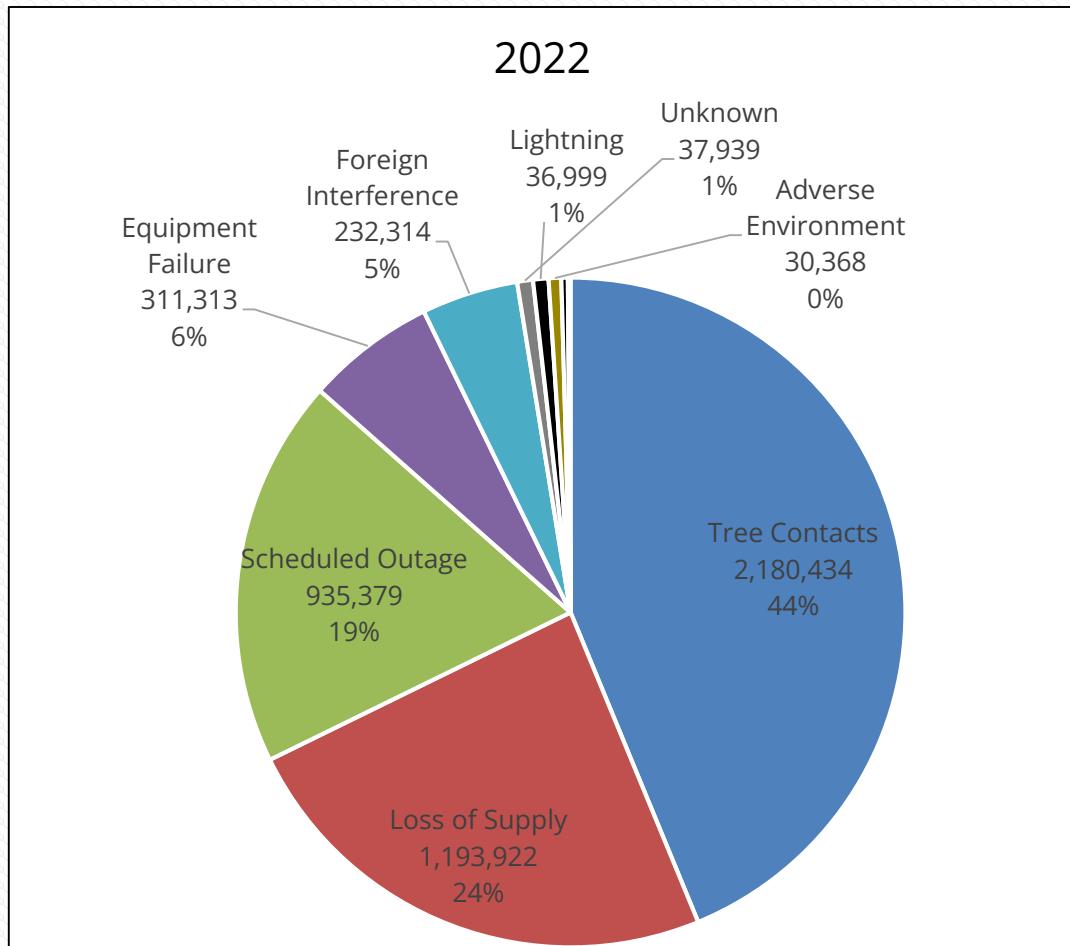
Customer interruptions with no apparent cause or reason could have contributed to the outage. Only to be used when all other reasons do not apply or the cause is legitimately unknown.



OUTAGES BY CAUSE WITH CUSTOMER MINUTES



OUTAGES BY CAUSE WITH CUSTOMER MINUTES

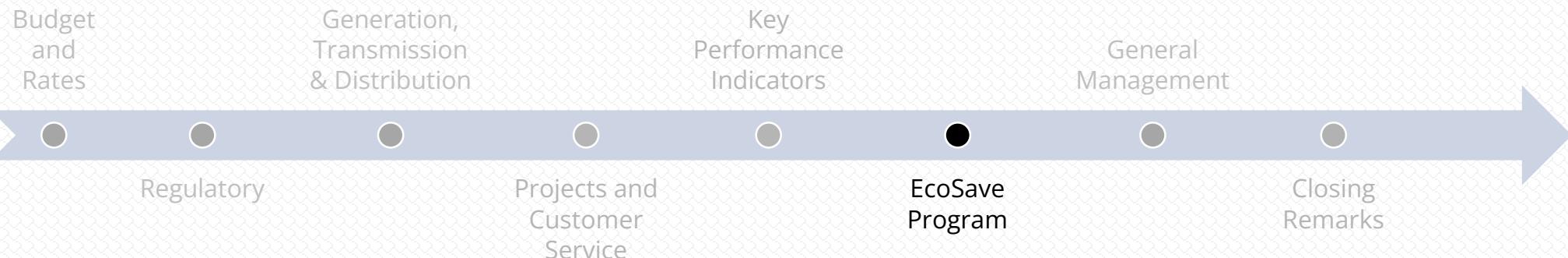


All data is to the end of Sep 2023.



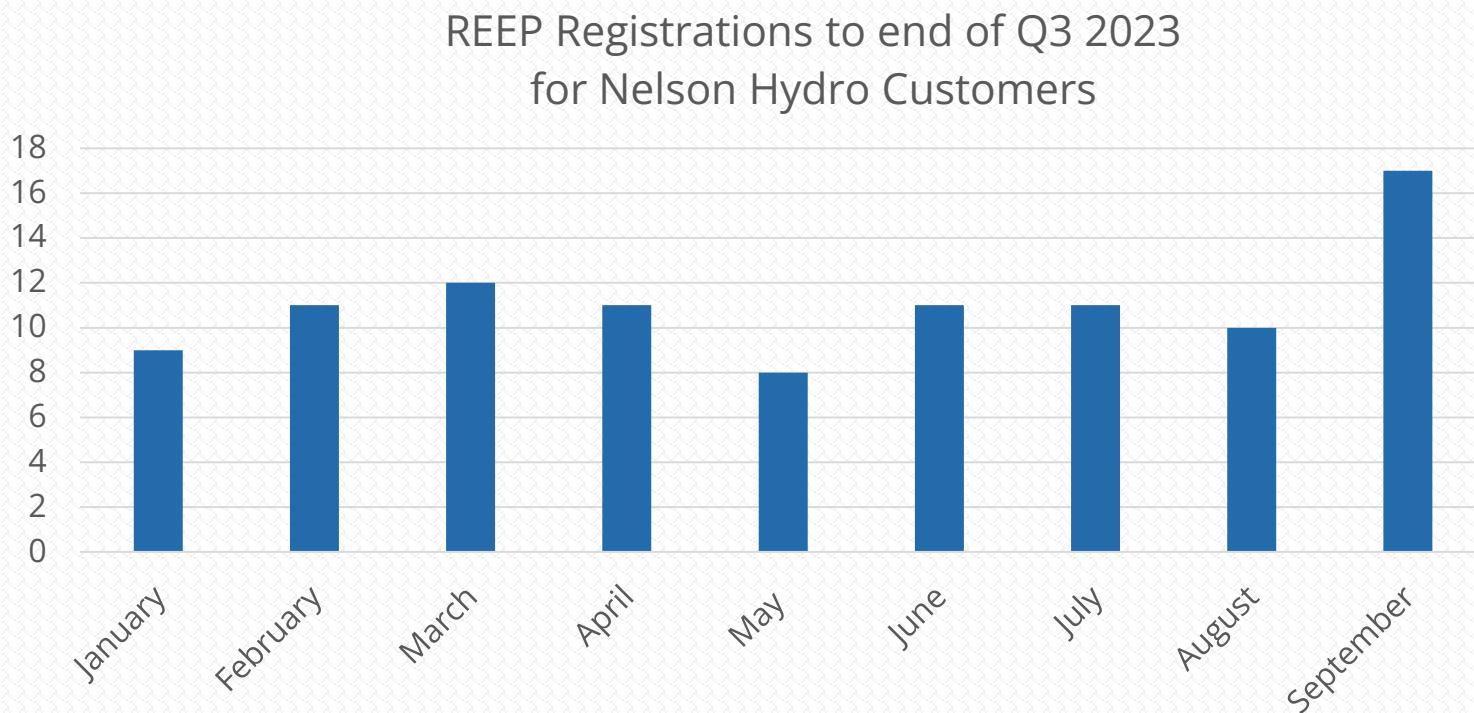
EcoSave Program

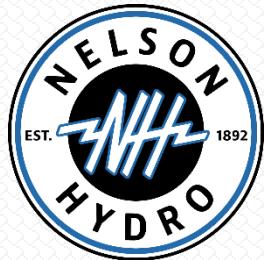
Scott Spencer



REGIONAL ENERGY EFFICIENCY PROGRAM

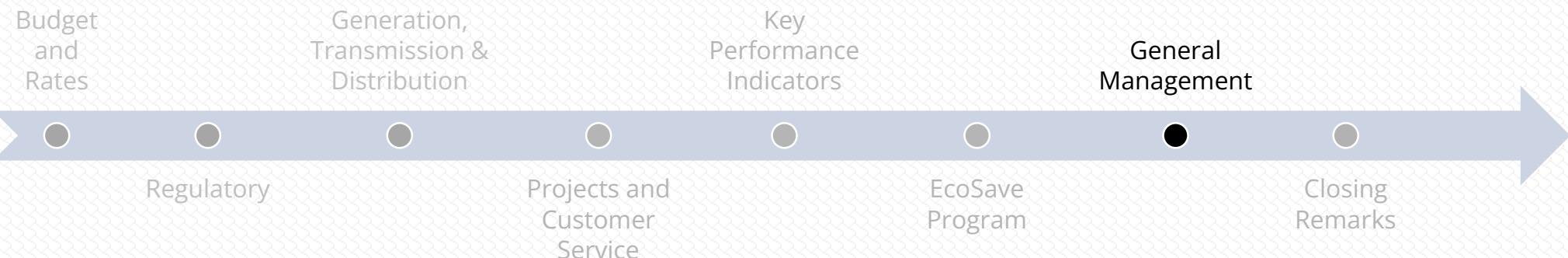
- 2023 increase in registrations (see chart)
- Community Efficiency Financing (CEF) grant application in final stages
- Progress in contractor advocacy
- More highlights will be presented by the Climate & Energy team





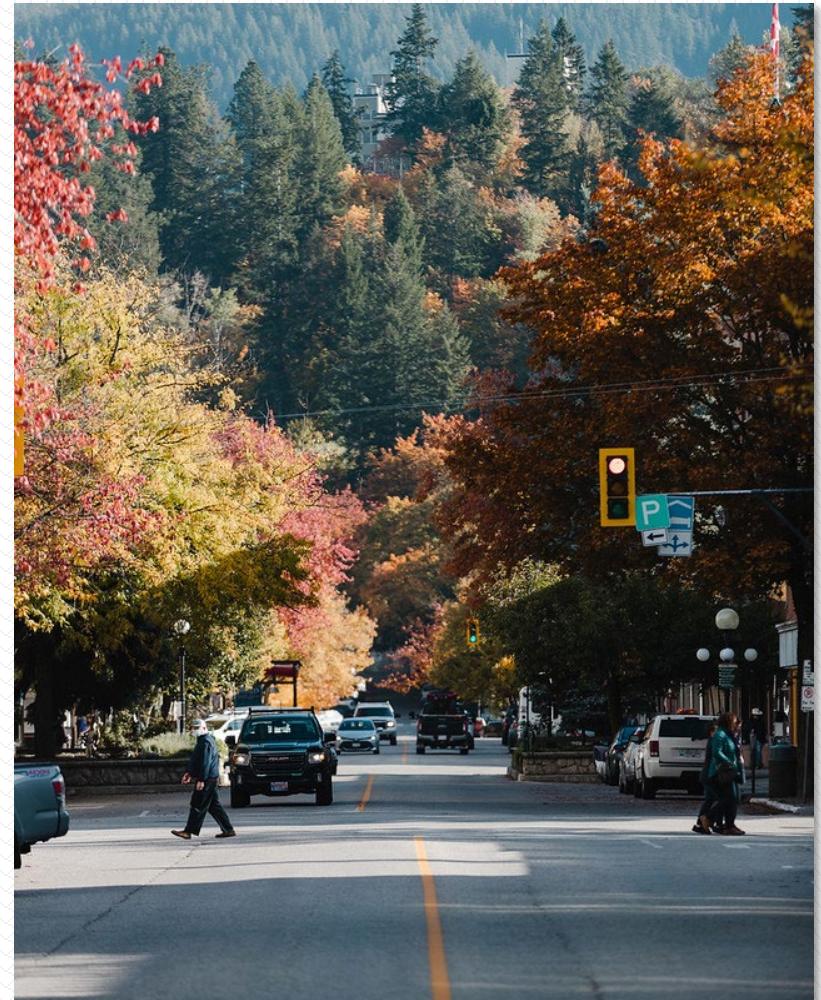
General Management

Scott Spencer

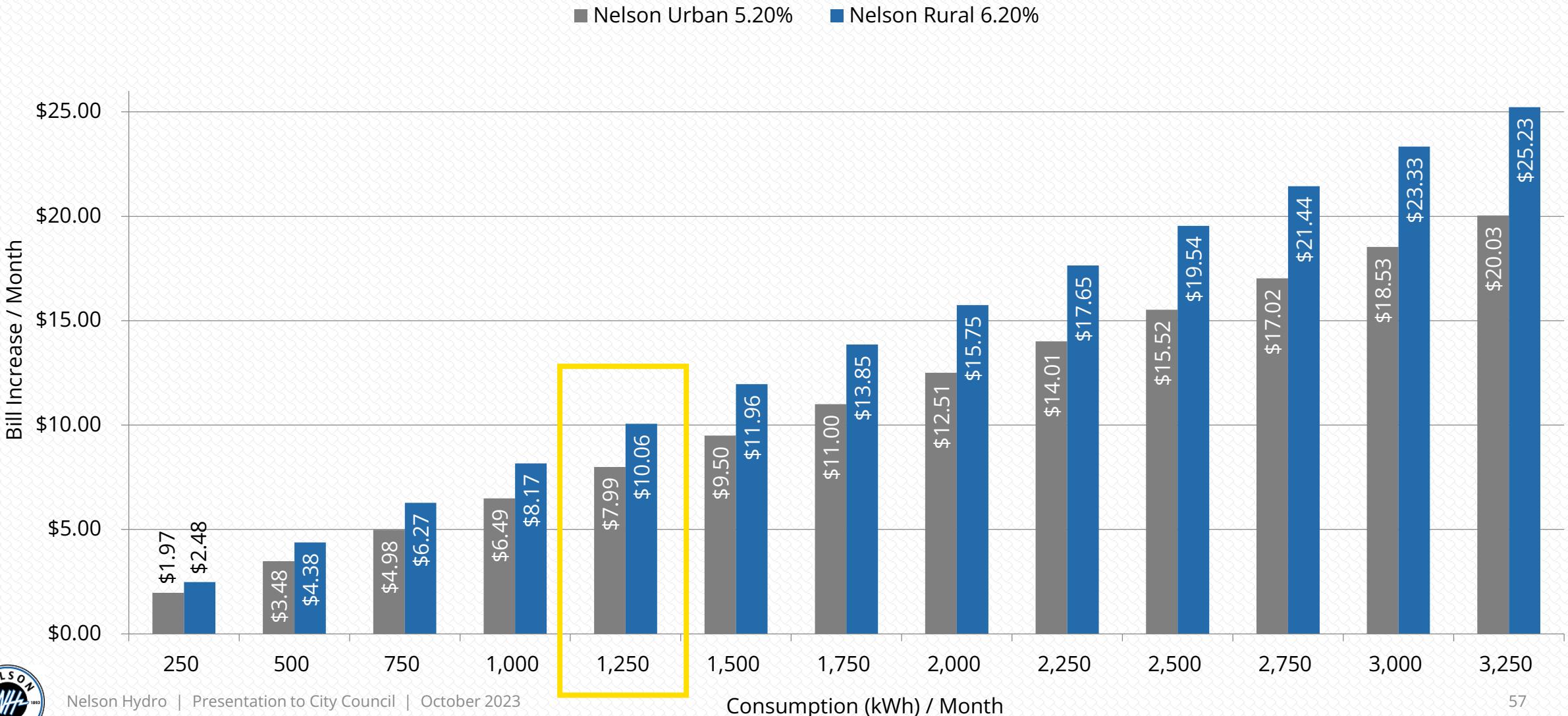


GENERAL MANAGEMENT HIGHLIGHTS

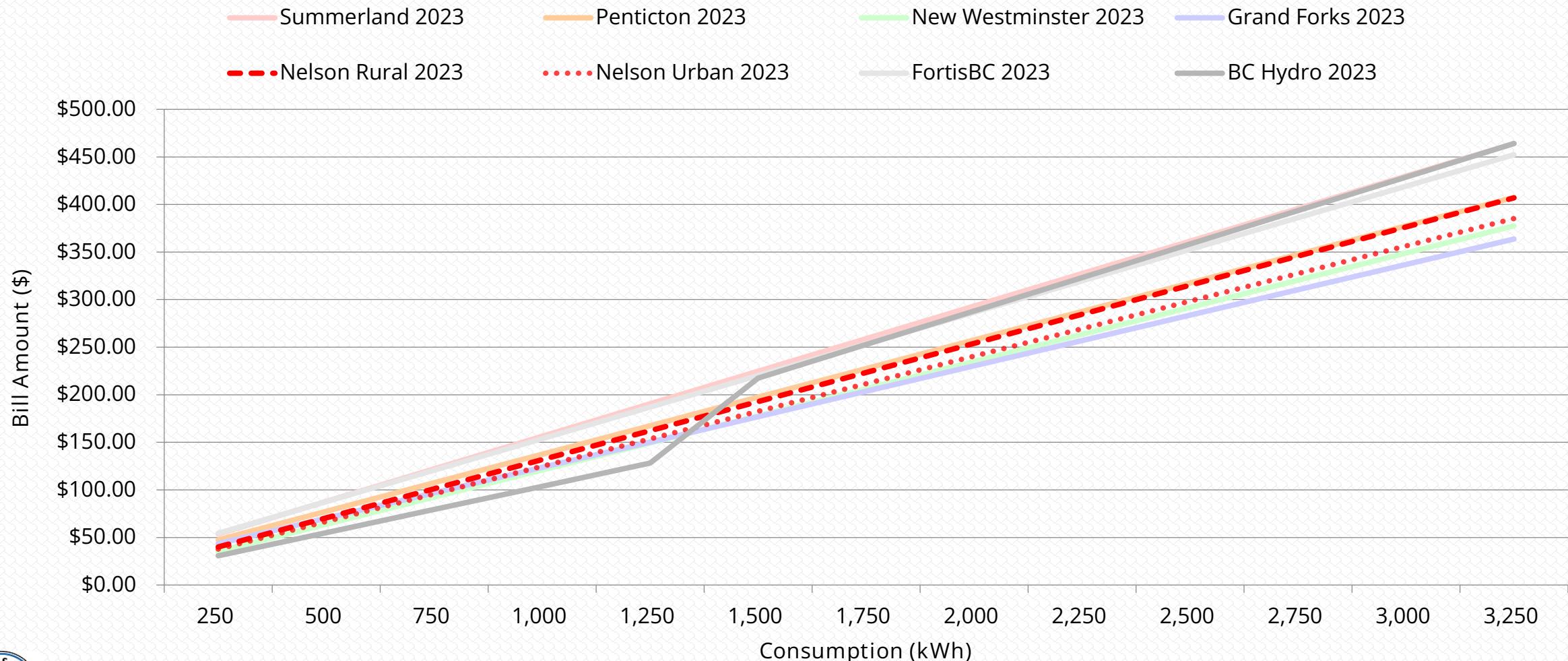
- Regulatory proceedings have consumed time and money
- Nelson Hydro strategic plan updated
- Communications plan implementation going well
- BC Hydro Water Rights Agreement arbitration in progress
- Telus Joint Use Agreement still not signed but implemented
- Continue to work with FortisBC on reliability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



RATE INCREASE COMPARISON



2023 RESIDENTIAL RATE COMPARISON



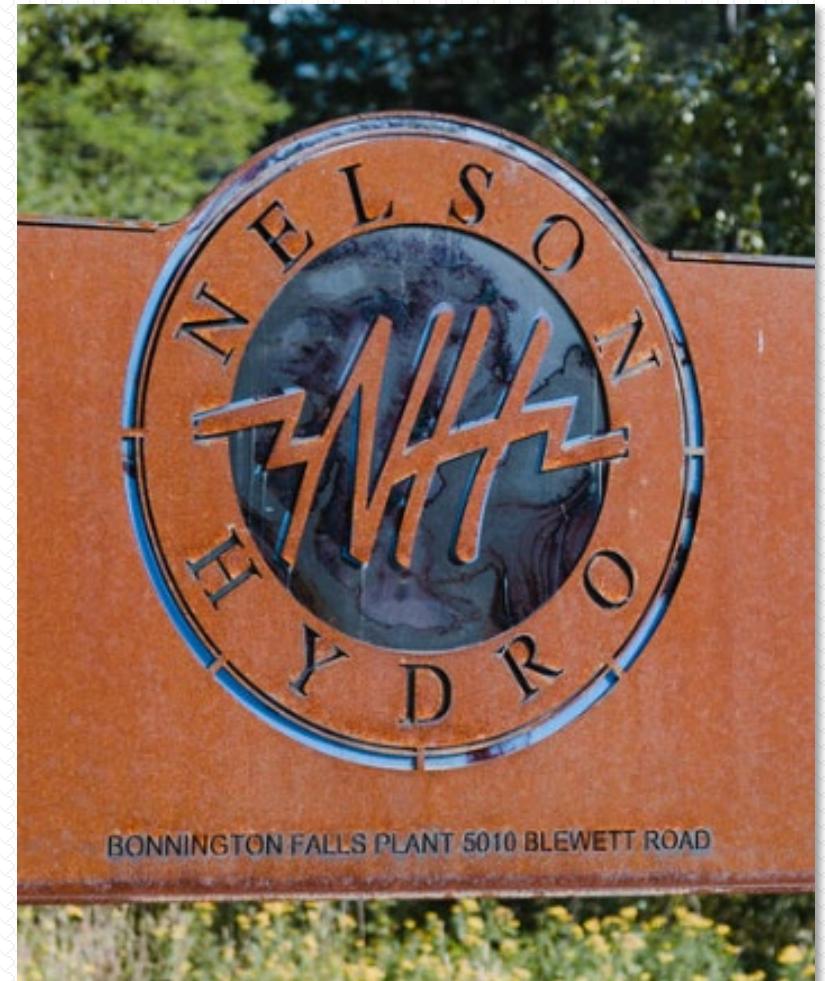
RECOMMENDATIONS

- 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?

Scott Spencer

General Manager, Nelson Hydro

sspencer@nelson.ca

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Cell: (250) 551-4512

