Overview

Electrical

- The Electric Department is responsible for providing safe, efficient, and reliable electrical service to residential, commercial and industrial customers within the municipal boundaries of the City of Penticton.
- 16 dedicated employees design, maintain and construct ALL of the electrical distribution, street lighting and traffic lighting infrastructure.

18,646 active customer accounts **4 substations feeding 21 distribution circuits** **4,063 power poles (2,940 wood, 1,123 steel)**	**2,697 Distribution Transformers** **362 kms of overhead power lines** **175 kms of Underground cables**
3, 335 Street Lights (1,471 on steel standards, 1,748 on power poles and 116 on steel traffic poles)	**39 Traffic Signals (32 Full & 7 Half)** **191 steel traffic poles** **4 Pedestrian Crossing Signals**

2019 Achievements

Electrical

- ✓ Converted Carmi Substation feeders from 8kV to 12kV feeding the Industrial Area.
- ✓ Completed the electrical, communication, sanitary and storm sewer rebuild of the East Lane of the 200 Block Main Street & the 100 Block of Front Street.
- ✓ Adopted the new Electric Utility Bylaw.
- ✓ Extended the Home Energy Loan Program to 2022.
- ✓ Adjusted the payment plan to include low interest loans for solar panels.
- ✓ Continued with the multi-year program of replacing 1st generation digital meters with a view to reducing future meter reading costs.
- ✓ Improved traffic intersections safety and pedestrian and vehicle movements.
- ✓ Added area lighting in a number of strategic areas City Wide.

Challenges & Opportunities

Electrical

Balancing Demands – Development in the City has been very busy over the last few years which has created competing demands in the Electrical Department: provide service to new development or undertake electrical distribution work.

Public Safety Issues - The number of issues around public safety and security has been increasing. There are numerous requests for cross walk lighting, traffic signals, increased area lighting, vendor pedestals and parks electrical. The Electrical Department is under resourced to address all of these items in a timely manner. The crosswalk lighting and parks budgets have been increased to address these items.

Best Practices – Opportunity exists to improve best practices with respect to record keeping, mapping and health and safety hazard risk assessments.

Innovations & Cost Savings

Electrical

- High Power Meters – When installation is complete, the City will be able to read electric meters from fixed collectors eliminating the need to drive the route to collect billing data.
- Voltage Conversion – 2020 will see the conversion of the entire City from 8kV to 12kV making an improvement in reliability and reducing line losses.
- Street Lighting – Improvement to public safety by providing street lighting at cross walks.
- Accessible Pedestrian Signals – The installation of audible cross walk signals to improve accessibility for those with disabilities.
- Intersection Cameras – Eliminates the need to replace loops and provides additional functionality such as car counting and improved traffic control functionality.

2020 Initiatives

Electrical

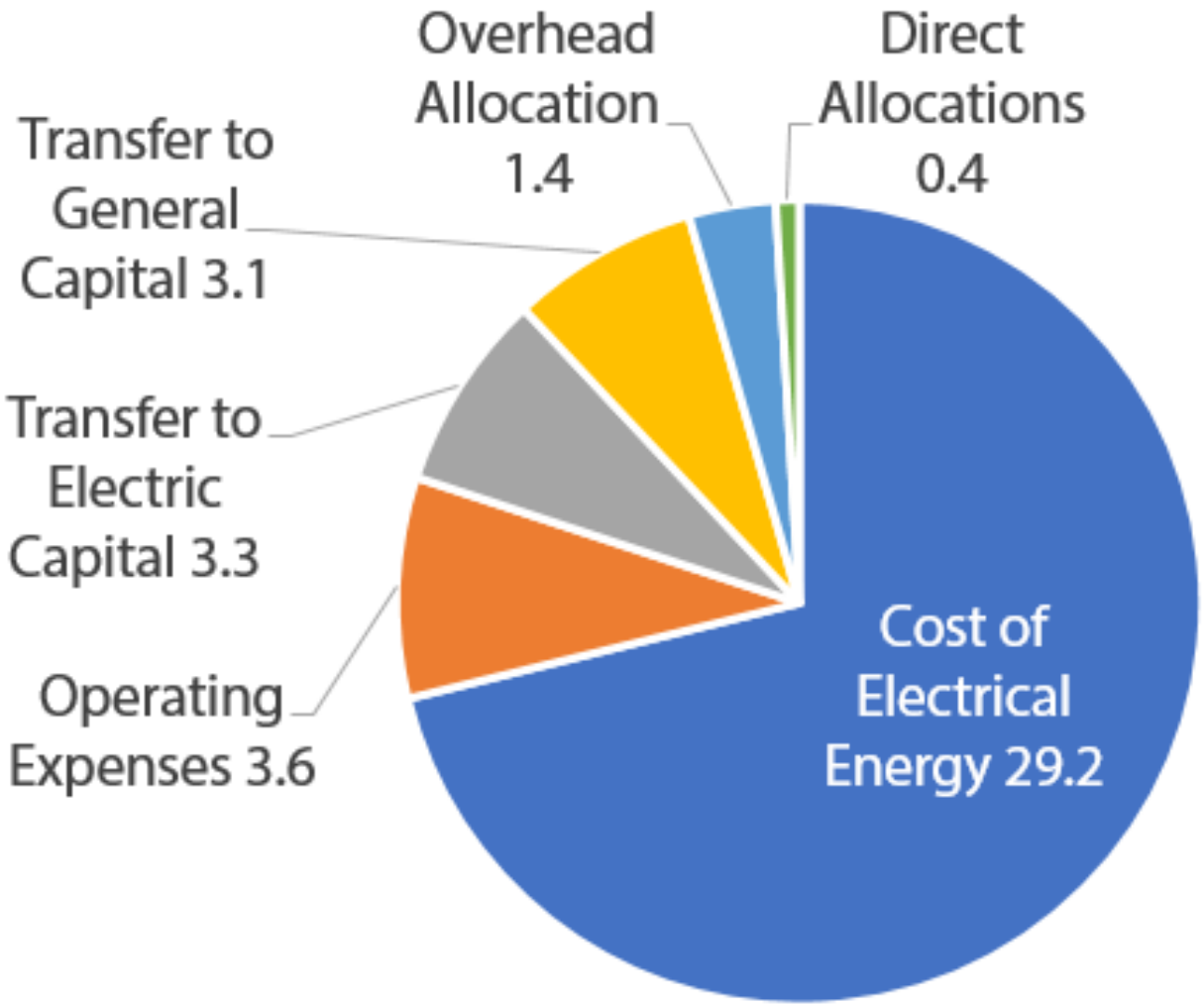
- Voltage Conversion – Completion of the 8kV to 12kV conversion for the entire City.
- Fixed Meter Reads- Continue to install high power meters that can be read by a fixed collector.
- Power Generation – Upon completion of the study to examine possible power generation options staff will come forward to council with a project for their consideration.
- Strategic Street Lighting – The installation of street lights at strategic location to improve safety.

Staffing

2019	2020
16	16

2020 Budget

Electrical



2020 Budget

Electrical

	2019 Budget	2019 Forecast	2020 Budget	Variance
Revenue	(42,092,822)	(42,092,822)	(42,567,428)	1.1%
Expense	33,613,842	30,898,228	32,835,476	6.3%
Transfers	6,583,283	9,396,856	7,916,714	
Net Cost Allocations	1,895,697	1,797,738	1,815,238	
Net Expense/(Revenue)	**-**	**-**	**-**	

Note: Variance column represents change between 2019 Forecast and 2020 Budget

2020 Capital Budget Overview

Electrical

Description	Budget
Non-Discretionary	1,427,881
Sustainment	646,533
Enhancement	485,735
Expansion	100,000
Departmental Tools	306,200
Total Capital Expense	**2,966,350**
Recoveries	(1,219,449)
Net Capital Expense	**1,746,901**

2020 Capital Budget – Non-Discretionary *Electrical*

Non-Discretionary		
Description	Budget	Comments
New Services & Service Upgrades	1,269,665	Recoverable, budgeted based on historical averages
New Underground Subdivisions	158,216	Estimated 20 new lots
Total	**1,427,881**	

2020 Capital Budget - Sustainment

Electrical

Non-Discretionary Sustainment		
Description	Budget	Comments
Distribution System Rebuild	646,533	Continuation with the 8kV to 12kV conversion program

2020 Capital Budget - Enhancement

Electrical

Enhancement		
Description	Budget	Comments
Supervisory control and data acquisition (SCADA)	55,057	Install additional communication between SCADA room and field devices
CIS Software	10,000	Electrical portion of annual upgrades
Reliability Improvements	420,678	Replacing switches, conductor upgrades, faulted circuit indicator installation
Total	**485,735**	

2020 Capital Budget - Expansion

Electrical

Expansion		
Description	Budget	Comments
Fiber System Redundancy	100,000	Redundant supply improves reliability

2020 Capital Budget - Tools

Electrical

Departmental Tools	
Description	Budget
PLT & Engineering Tools	191,200
Hybrid Electric Van	40,000
City Yards - FOB Safety System	10,000
55' Pole Trailer	65,000
Total	**306,200**

2020 Budget

Street Lighting

	2019 Budget	2019 Forecast	2020 Budget	Variance
Expense	435,028	435,211	400,000	-8.1%
Net Expense/(Revenue)	**435,028**	**435,211**	**400,000**	

Note: Variance column represents change between 2019 Forecast and 2020 Budget

2020 Budget – Operating

Traffic Control

	2019 Budget	2019 Forecast	2020 Budget	Variance
Expense	114,434	114,490	120,000	4.8%
Net Expense/(Revenue)	**114,434**	**114,490**	**120,000**	

Note: Variance column represents change between 2019 Forecast and 2020 Budget

2020 Capital Budget Overview

Traffic Control

Description	Budget	Comments
Traffic Signals - New Traffic Detection Devices	64,750	2 Intersections/year (15 intersections remaining)
Traffic signalization - Upgrade Controllers	105,436	2 controllers/year (6 complete cabinets and 14 controllers remaining)
Total	**170,186**	

Questions

THAT Council approve in principle the Electrical business plan initiatives and proposed budget, subject to final review.