

HOLDCO PRESENTATION



TOWN OF COBOURG HOLDINGS INC. INFORMATION SESSION WITH COUNCIL

June 15th, 2023 - 2:00 pm

1

Introduction by Holdco Chair, David Tsubouchi



**Lakefront
Utilities
Inc.**



**Lakefront
Utility
Services
Inc.**

Invited Attendees



2

Town of Cobourg Council members:

Mayor Lucas Cleveland, Deputy Mayor Nicole Beatty, Councillors: Adam Bureau, Brian Darling, Aaron Burchat, Miriam Mutton, Randy Barber.

Holdco Board of Directors:

Chair David Tsubouchi, Vice-Chair Robert Bell, Directors: Lucas Cleveland, Fred Clifford, Mandy Martin, Lisa McBride.

Lakefront Utilities Inc. (LUI) Board of Directors:

Chair Gil Brocanier, Directors: Manuela Ris-Schofield, Neil Freeman, Fred Clifford

Lakefront Utility Services Inc. (LUSI) Board of Directors:

Chair Robert Bell, Directors: Graham Fisher, Kelley Irwin, Guru Kalyanraman, Karen Webb

Invited Attendees (Cont.)



3

Lakefront Staff:

President & CEO Dereck Paul, VP Regulatory Finance Adam Giddings, Corporate Secretary Susan Spicer, Manager of Water Systems Larry Spyrka, Manager Electric Distribution Marc Moreau, HR Generalist Paola Garcia.

Town of Cobourg Staff:

CAO Tracey Vaughan, Treasurer & Director Corporate Services Ian Davey, Director Legislative Services & Municipal Clerk Brent Larmer, Director Planning & Development Anne Taylor Scott, Director Public Works Laurie Wills, Director Community Services Brian Geerts

Vision, Mission & Values



4

Vision

- ▶ We are recognized as a high-performance local ownership organization, providing exceptional value to our customers and communities through dependable, responsive and innovative services.

Mission

- ▶ We are committed to responsibly delivering fair-cost, reliable, safe, energy and water solutions for the benefit of our customers through the uniqueness of our integrated utility operations.

Values

- ▶ Our values serve as the organization foundation that guides our decisions and directions. Our commitment to our employees, customers and stakeholders are **Integrity, Safety, Reliability, Accountability, Service, Collaboration, Respect, Engagement and Innovation.**

What we do – Primary Objectives



- Ensure full compliance with all related Acts, Regulations, Standards, Directives and Agreements related to utilities operations and protecting the organization and shareholders from legal liabilities, including items related to water safety.
- Sustain and improve asset value while achieving appropriate annual rates of return and providing prudent dividends to shareholders.
- Operate in accordance with the Shareholders Agreement ensuring the independence of the Board with transparency, accountability, integrity and high ethical standards



Core Activities

6

- Ensure appropriate financial control, risk management, quality assurance and monitoring tools are in place for system reliability, health and safety.
- Monitor all systems for regulatory compliance and for effective performance by tracking regular KPI's to ensure that mandates are fulfilled
- Develop timely and detailed long-term financial forecasts, achieved through rolling 5-year budgets and business plans.
- Strive to keep customer charges moderate while balancing operational needs.
- Sustain utilities infrastructure through its prudent ongoing maintenance, replacement, upgrading and expansion.
- Support the Town's initiatives related to Lakefront through effective coordination with Town staff, especially on capital projects.
- Recruit, evaluate and retain Directors and employees, ensuring that their qualifications, experience and perspective collectively add value to the corp.
- Communicate frequently and effectively with all stakeholders.
- Seek opportunities to collaborate with strategic business partners to grow.

2023 Specific Initiatives



7

- ESG (Environmental, Social, Governance) – engage stakeholders on Climate Action Plan towards Green House Gas reduction & drive to Net-Zero
- Enhanced Reliability & Capacity through effective maintenance & New substation
- Cyber Security effectiveness through audits, controls & managing 3rd parties
- Strengthen & Grow areas of Expertise to Remain Competitive
- Innovate through new technologies, collaborating with others, utilizing grants
- Manage supply issues – inventory, high inflation & price increases
- Develop succession and talent development plan
- Improve Operational (Capital & Maintenance) planning
- Identify & monitor organization financial key vulnerabilities & risks
- Establish a sustainable revenue, economic model for resiliency



Future Adaptations

8

- **Growth** – multiple active developers currently in Cobourg – projecting approx. 50% growth in 10 years. Growth = power and water capacity + future ability to service & maintain
- **Transportation Electrification** = sustainable capital build + capacity
- **Infrastructure Resiliency** – severe weather resistant = climate action plan
- **DER – Distributed Energy Resource** - connection & integration into distribution system
- **DSO – Distribution System Operator** – emerging new model - responsible for managing local grid conditions while enabling complex interactions to occur among grid-connected energy resources. These include interactions between distribution-connected devices and the bulk (transmission-level) power system
- **Costs** – significant water & electricity capital investments + managing debt
- **Resources** – knowledge, skills, talent, experience & retention.

HOLDCO Committees



- **Governance Committee** consists of the Chairs of all affiliates as well as the President & CEO with mandate that include Director nominations, orientation, education, performance assessment, skills and competencies, succession planning, policies, etc.
- **Finance Audit & Risk Committee** provides support to the Board in fulfilling its responsibilities to ensure the financial viability of the organization and implications of changes in legislation related to financial matters, labour and human resources, safety and operations. It also has oversight of all risk management policies and practices.

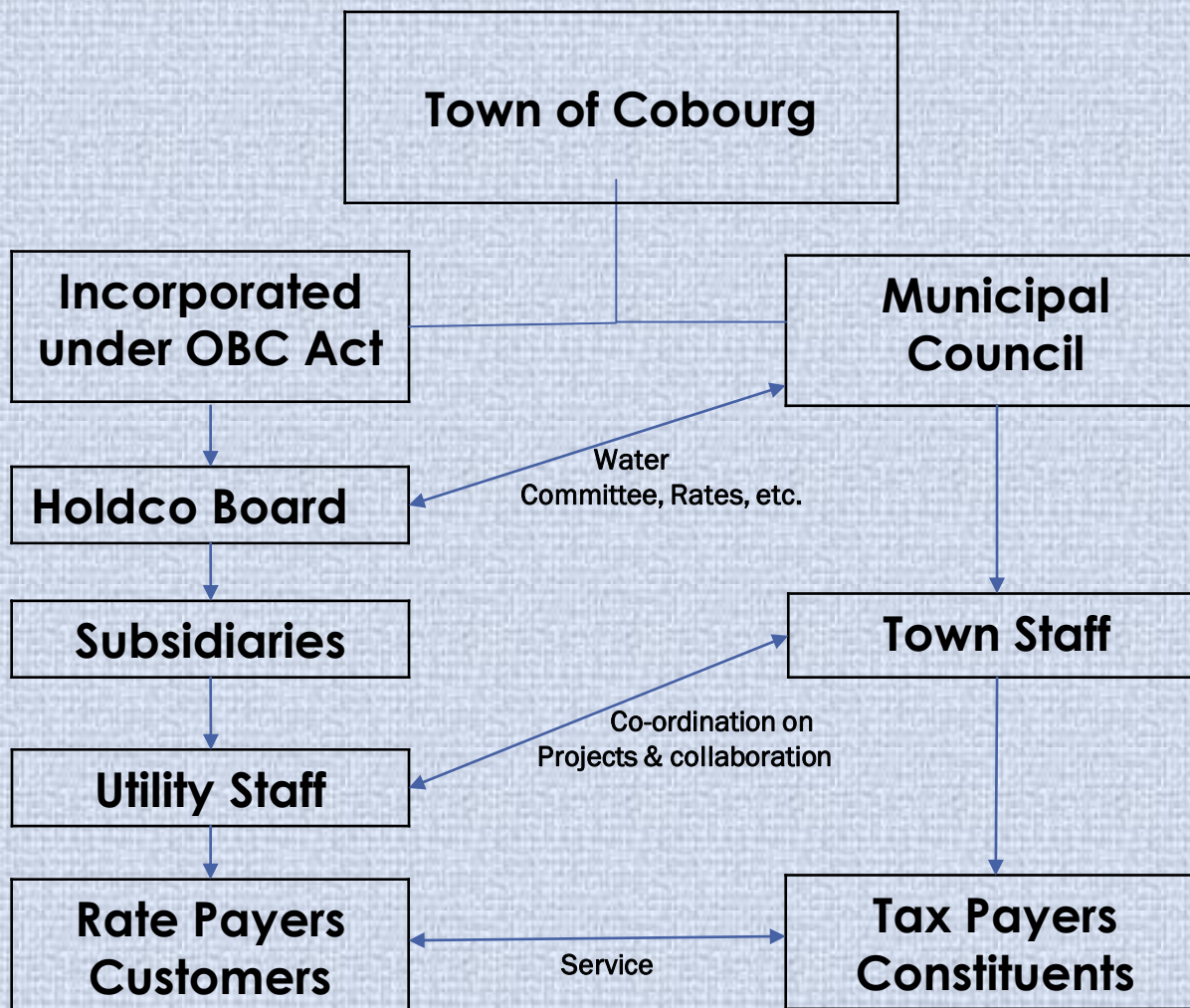
HOLDCO Committees (Cont.)

10



- **Strategic Planning Committee** consists of the Chairs of the subsidiary companies, the President & CEO, Chair of the Audit & Risk Committee, and an independent Director. The Mandate includes exploring future revenue growth opportunities that are synergistic with our core services.
- **Environmental Social & Governance (ESG) Committee** consists of the Chair, LUI Director Neil Freeman, LUI Director Kelley Irwin, and LUSI Director Guru Kalyanraman. The Mandate includes overseeing on matters relating to environmental and social governance, including the development of policy, the implementation of programs, and the disclosure of information.

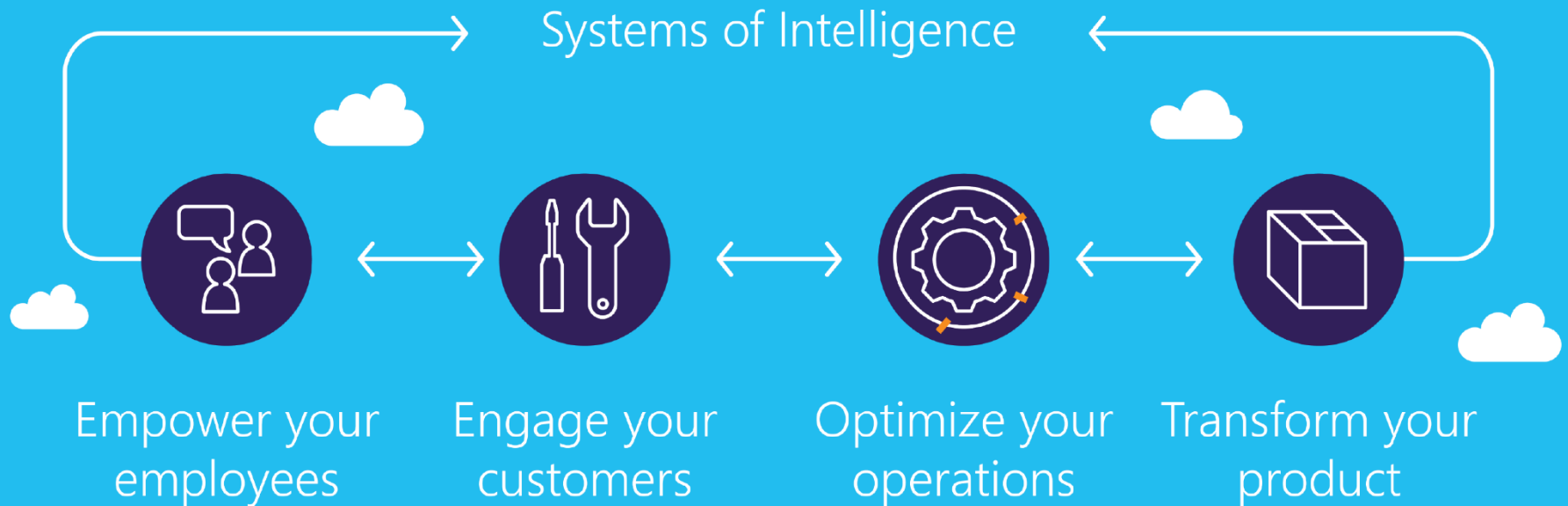
Lakefront Structure



Thank You



Digital Transformation



Questions?



**Lakefront
Utility
Services
Inc.**

Chair, Robert Bell
Graham Fisher
Kelley Irwin
Guru Kalyanraman
Karen Webb

LUSI (Non-Regulated) Structure



Water Distribution and Treatment Services

Town of Cobourg

Hamilton Township

Village of Grafton

Fibre Optic Services

Town of Cobourg

Police & Fire

LUI

Waterworks

Generation Services

Joint Venture

Water Treatment Plant

EV Chargers

Human Resource Services

LUI

Waterworks

Holdco

LUSI Functions



Revenue from fibre-optic high-speed dedicated data system.

Revenue received from operating the water system for Hamlet of Grafton, as well as providing Drinking Water Quality Management System services to Hamilton Township.

Fee charged to Lakefront Utilities Inc. and Waterworks on all shared management/supervisor staff wages.

LUSI has a joint venture with Elexicon Energy Inc. and Solera for solar panels at Venture 13. LUSI also installed solar panels at the Water Treatment Plant.

Fibre

Operations

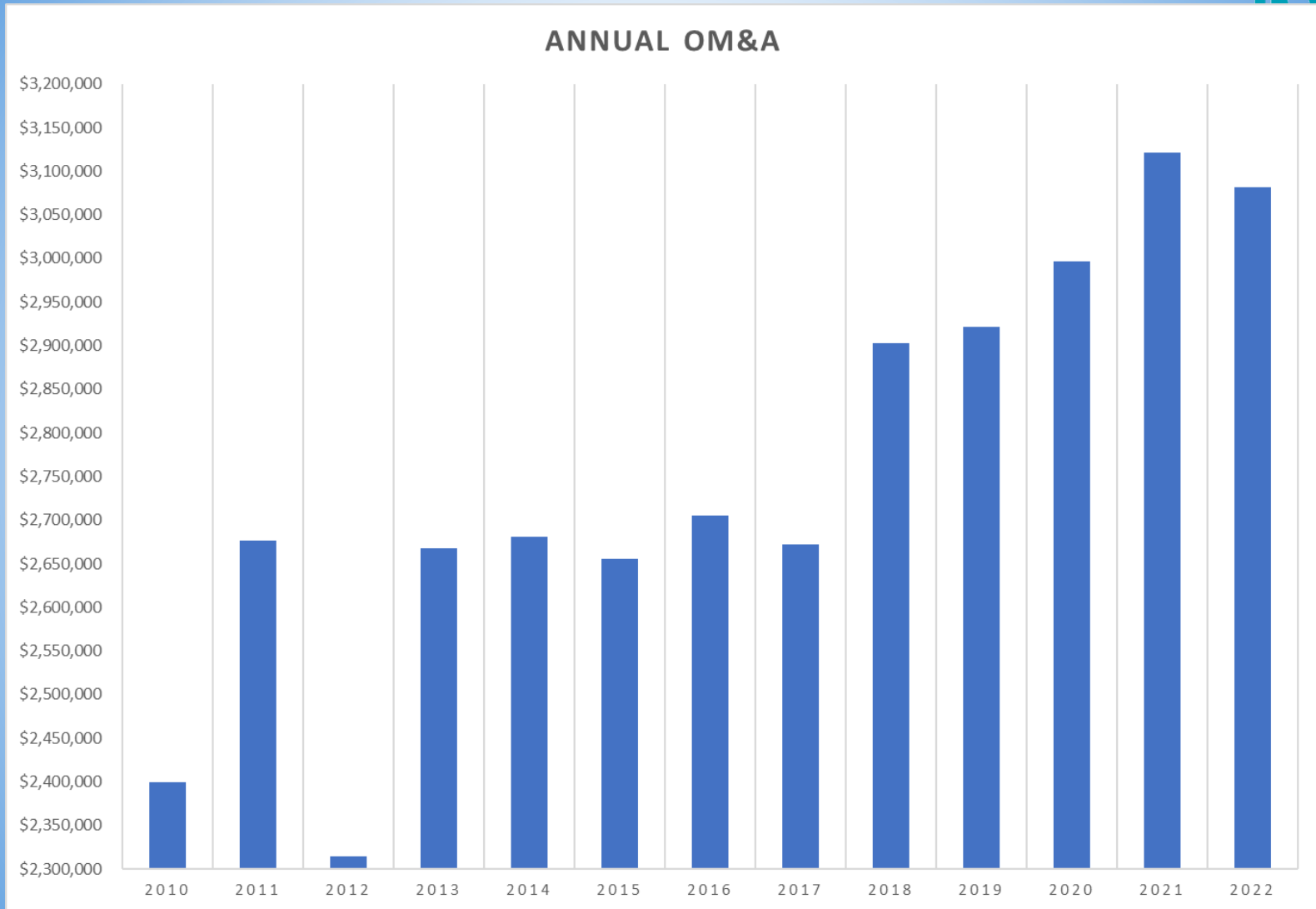
Management Fees

Solar Projects

2022 Initiatives



Annual OM&A



12 Year Avg Increase – 2.37%

2022 Water Rates



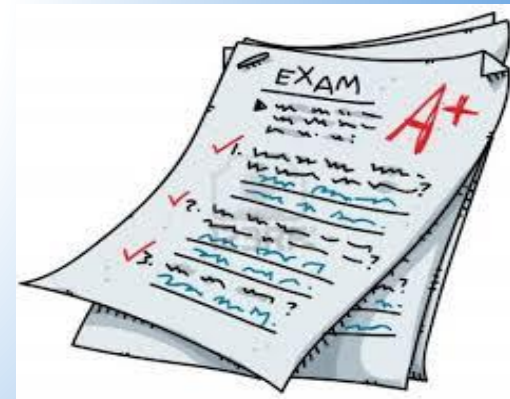
Municipality	Monthly Base Charge (5/8")	\$/m3	Total
Municipality of Port Hope	\$47.28	\$1.81	\$856.96
Township of Alwick/Haldimand	\$39.65	\$2.33	\$848.60
City of Kawartha Lakes	\$32.05	\$2.88	\$845.40
Township of Cavan Monaghan	\$34.00	\$1.89	\$710.40
Township of Cramahe	\$25.54	\$2.45	\$698.48
City of Belleville	\$26.06	\$1.96	\$626.32
Municipality of Trent Hills	\$29.85	\$1.26	\$559.80
Municipality of Brighton	\$22.90	\$1.52	\$518.00
Peterborough Utilities Commission	\$22.84	\$1.49	\$512.61
Township of Hamilton	\$22.51	\$1.47	\$505.26
City of Quinte West	\$24.00	\$1.31	\$497.60
Cobourg - 2023	\$16.93	\$1.69	\$473.56
Cobourg - 2022	\$15.79	\$1.57	\$440.68
Region of Durham	\$19.29	\$1.15	\$415.16

MECP Compliance/Certification

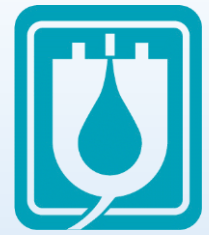


Ministry of Environment, Conservation & Parks Water Treatment/Distribution MECP Annual Audits systems

- Cobourg - July/14/2022 - 100%
- Hamilton – July/14/2022 - 100%
- Grafton – Sept./1/2022 - 96.26%



Master Plan, Rate Study & Water Tank update



- LUSI initiated a Cobourg Water Master Plan development in 2020 – the first of its kind for Cobourg Municipality.
- Deployment of a larger Zone 1 Water Tank & Booster Station (WT & BS) to ensure capacity for future development & fire protection were forecast at **\$7.9M** & **\$2M** respectively.
- Current projections based on high inflation, supply & demand & increased costs tag the project (WT & BS) at over **\$15M**.
- Green Stream funding applied for with Provincial & Federal govts were obtained for **\$3.66M** for the Water Tank.
- Development charges, rates and debentures will need to fund the difference.
- Work conducted in preparing the Master Plan also included pushing out the replacement of the Clarifier 7-10 years at a projected cost of approx. **\$13M** which includes a 3rd filter for sufficient redundancy.
- The Clarifier cost is expected to be minimum \$5M higher at **\$18M** approx.

Water Master Plan & Rate Study Progress Update



- Burke, Blake & Victoria Streets watermain replacement jointly with Town - completed.
- Summer/Fall reconstruction of Westwood Drive (Burnham St. to Kerr St.) underway.
- Design work for King St. West reconstruction in 2024.
- RF Meter installations complete and AMI (Advance Meter Infrastructure) for automatic collector deployment in Q3 2023.
- Asset Management Plan – working with Town of Cobourg for completion

Other Businesses with Strategic Partners



LUSI has established several strategic partners to jointly offer the following services to customers in our service territory and beyond:

- Solar Generation on Purchase-Power-Agreements (PPA) with Solera Sustainable Energies Ltd.
- Combined-Heat-and-Power (CHP) – (micro-turbines) Generation with Vergent Power & Capstone Green Energy Corp.
- Geothermal-Exchange – with Oakville Enterprises Corp.
- strongest case involves high-density vertical build (condos, etc.)

Residential EV Charger Program (Rent/Lease)



01

Lakefront Utility Services Inc. – offer residential customers in our service territory the opportunity to rent or lease-to-own level 2 electric vehicle charger

02

Lakefront will supply a high-quality level 2 charger that is manufactured in Ontario and is CUL certified.

03

Safe installation at the customer's home by a qualified electrician.

04

Customers will have the option of either a rental or lease-to-own agreement with LUSI. The monthly fee will be added as a line item to the customer's Lakefront bill.

◆ No upfront capital required to purchase and install EV charger – hassle-free purchase. Cost to purchase includes installation costs.

◆ Vetted EV chargers available on the market and selected a high-quality charger manufacturer in Ontario – built to withstand harsh Canadian winter.

◆ Qualified and reputable electrical contractor to ensure a safe and efficient installation at customer's home.

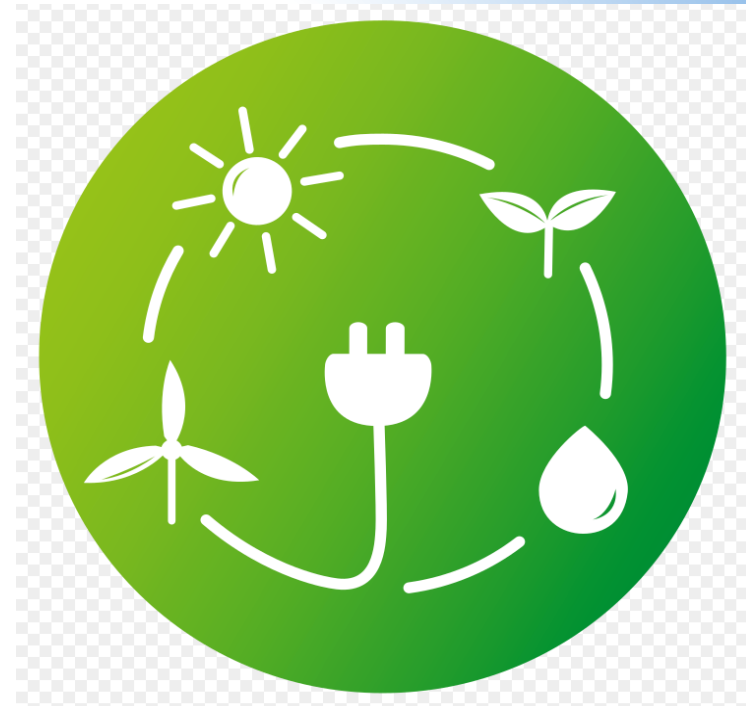
◆ If there are any issues with the charger and/or installation – customer deals directly with Lakefront – warranty period based on rental or lease-to-own.

◆ Installation of EV charger is convenient and easy for the customer and done through their local utility.

◆ Easy monthly payments added directly to customer's current bill.



Thank You



Questions



**Lakefront
Utilities
Inc.**

Chair, Gil Brocanier

Fred Clifford

Neil Freeman

Manuela Ris-Schofield



Electricity Sector Structure

OEB & the Electricity System

The Government of Ontario, through the Ministry of Energy, sets the overall policy for the energy sector. It does this mainly through laws and regulations.



We regulate the energy sector in the public interest.



Generation

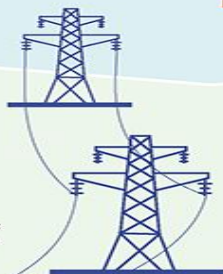
Generators produce the power we use. They include nuclear, hydro, natural gas, wind and solar. You can purchase your power through your utility or an energy retailer. This is reflected on the "Electricity" line of your bill.

- ✔ **OEB'S ROLE**
 - License generation companies

Transmitters

The power travels long distances across high-voltage lines, called the transmission grid, to your utility.

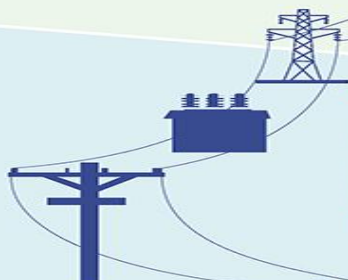
- ✔ **OEB'S ROLE**
 - License transmission companies
 - Review and set the transmission rate – the same across Ontario



IESO

The Independent Electricity System Operator (IESO) directs the flow of electricity across the transmission lines, connecting generators, transmitters, local utilities, and industrial companies that use it in large quantities.

- ✔ **OEB'S ROLE**
 - License IESO
 - Set fees IESO can charge



Your Utility

The utility owns and operates the distribution system – wires and equipment – that delivers the power to your home or business. It is also responsible for billing you.

- ✔ **OEB'S ROLE**
 - License utilities
 - Make and enforce rules and customer service standards
 - Review and set delivery rates for each utility

Energy Retailers

Private companies that sell electricity under contract. You pay the price you and the retailer agreed to in the contract.

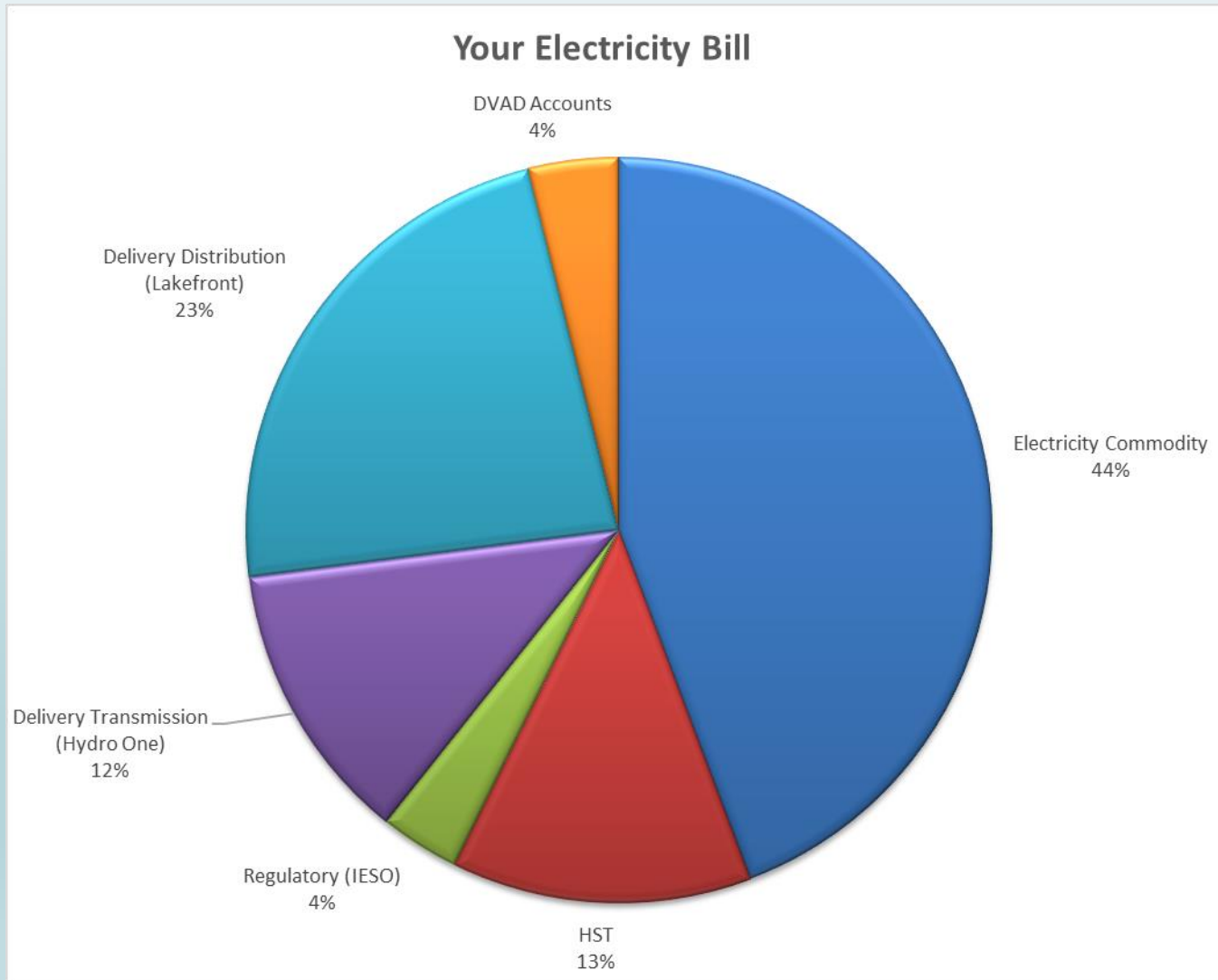
- ✔ **OEB'S ROLE**
 - License energy retailers
 - Make and enforce rules
 - Impose penalties/fines of up to \$1 million/day



You, the customer

- ✔ **OEB'S ROLE**
 - Set reasonable rates for generation, transmitters and utilities
 - Promote consumer awareness and protection
 - Protect, engage and empower consumers

LUI's Portion of Bill





LUI exceeds ALL OEB 2021 benchmark targets

* There is a 20 month lag on the 2022 Scorecard from the OEB. Will be available Sep 23

Scorecard - Lakefront Utilities Inc.

5/26/2023

Performance Outcomes	Performance Categories	Measures	2018	2019	2020	2021	2022	Trend	Target		
									Industry	Distributor	
Customer Focus Services are provided in a manner that responds to identified customer preferences.	Service Quality	New Residential/Small Business Services Connected on Time	98.99%	97.57%	91.17%	92.89%	94.80%	📈	90.00%		
		Scheduled Appointments Met On Time	99.09%	100.00%	100.00%	93.62%	98.89%	📈	90.00%		
		Telephone Calls Answered On Time	95.47%	94.10%	82.27%	95.62%	90.27%	📈	65.00%		
	Customer Satisfaction	First Contact Resolution	99.14%	99.41%	99.77%	99.46%	99.88%	📈			
		Billing Accuracy	99.96%	99.95%	99.79%	99.95%	99.97%	↔️	98.00%		
		Customer Satisfaction Survey Results	80.70%	80.70%	77.70%	77.70%	77.00%	📈			
Operational Effectiveness Continuous improvement in productivity and cost performance is achieved; and distributors deliver on system reliability and quality objectives.	Safety	Level of Public Awareness	83.30%	83.00%	83.00%	82.60%	82.60%	📈			
		Level of Compliance with Ontario Regulation 22/04 ¹	C	NC	NC	C	C	↔️		C	
		Serious Electrical Incident Index	Number of General Public Incidents	0	0	0	0	0	📈		0
			Rate per 10, 100, 1000 km of line	0.000	0.000	0.000	0.000	0.000	📈		0.000
	System Reliability	Average Number of Hours that Power to a Customer is Interrupted ²	0.32	0.76	4.67	0.99	0.63	📉		0.59	
		Average Number of Times that Power to a Customer is Interrupted ²	0.12	0.68	1.53	0.60	0.36	📈		0.46	
	Asset Management	Distribution System Plan Implementation Progress	Completed	Completed	Completed	Completed	81%				
	Cost Control	Efficiency Assessment	2	2	2	1					
		Total Cost per Customer ³	\$497	\$501	\$500	\$518					
		Total Cost per Km of Line ³	\$24,064	\$23,885	\$24,061	\$24,743					
Public Policy Responsiveness Distributors deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board).	Connection of Renewable Generation	Renewable Generation Connection Impact Assessments Completed On Time ⁴	100.00%	100.00%							
		New Micro-embedded Generation Facilities Connected On Time	100.00%			100.00%	100.00%	📈	90.00%		
Financial Performance Financial viability is maintained; and savings from operational effectiveness are sustainable.	Financial Ratios	Liquidity: Current Ratio (Current Assets/Current Liabilities)	1.62	1.32	0.97	0.95	0.78				
		Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio	1.07	1.02	1.15	1.09	0.96				
		Profitability: Regulatory Return on Equity	Deemed (included in rates)	8.78%	8.78%	8.78%	8.78%	8.66%			
			Achieved	7.76%	7.58%	5.49%	5.93%	10.87%			

1. Compliance with Ontario Regulation 22/04 assessed: Compliant (C); Needs Improvement (NI); or Non-Compliant (NC).
 2. An upward arrow indicates decreasing reliability while downward indicates improving reliability.
 3. A benchmarking analysis determines the total cost figures from the distributor's reported information.
 4. Value displayed for 2021 reflects data from the first quarter, as the filing requirement was subsequently removed from the Reporting and Record-keeping Requirements (RRR).

Legend:

5-year trend
 📈 up 📉 down ↔️ flat
 Current year
 🟢 target met 🟡 target not met



LUI 2021 Scorecard Analysis

Local Distribution Company	OM&A Cost per Customer	Residential Rates	SAIDI	SAIFI
Hydro Hawkesbury Inc.	1st	1st	53rd	53rd
Wasaga Distribution Inc.	2nd	7th	28th	16th
E.L.K. Energy Inc.	3rd	2nd	13th	8th
Cooperative Hydro Embrun Inc.	4th	60th	1st	1st
Welland Hydro-Electric System Corp.	5th	29th	32nd	37th
Lakefront Utilities Inc.	6th	6th	23rd	14th
Ottawa River Power Corporation	7th	9th	48th	39th
Kingston Hydro Corporation	8th	18th	31st	52nd
Orangeville Hydro Limited	9th	21st	33rd	26th
Kitchener-Wilmot Hydro Inc.	10th	5th	10th	19th
Hydro 2000 Inc.	20th	52nd	2nd	2nd
Fort Frances Power Corporation	28th	55th	3rd	7th
Wellington North Power Inc.	50th	65th	4th	6th
Centre Wellington Hydro Ltd.	27th	42nd	5th	9th
Rideau St. Lawrence Distribution Inc.	18th	19th	6th	3rd
Espanola Regional Hydro Distribution Corporation	39th	3rd	7th	4th
Renfrew Hydro Inc.	23rd	16th	8th	5th
Tillsonburg Hydro Inc.	34th	33rd	9th	10th
Oshawa PUC Networks Inc.	17th	13th	10th	18th
Hydro One Networks Inc.-Peterborough Distribution	N/A	4th	N/A	N/A
Brantford Power Inc.	15th	8th	19th	40th
Alectra Utilities Corporation-Enersource Rate Zone	35th	10th	22nd	30th



December Storm



Over 4,090 homes effected – starting December 23 at 11am.
Fully restored by December 24 at 9:30pm



Four lineman and three management staff along with after-hours answering service responding to calls.



All applicable staff responded to the storm and assumed additional responsibilities.



Over 3,300 phone call inquiries.



Over 2,000 inquiries through social media, mobile application, and emails.



Majority of inquiries were responded to throughout the week. Over 930 were responded within two days.



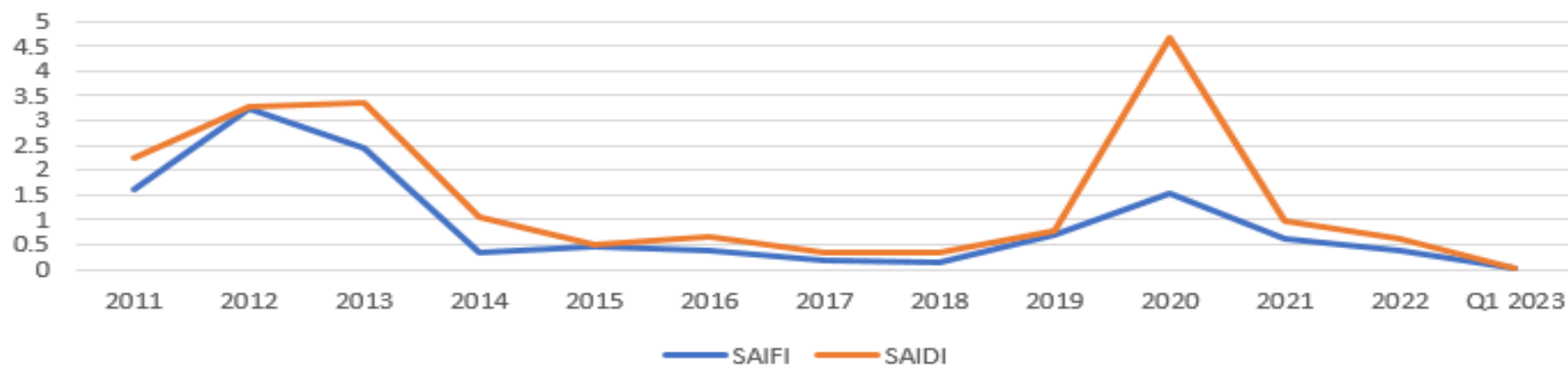
LUI Reliability Report

Distribution System Reliability for the first quarter of 2023 are excellent, with SAIDI at 0.01 and SAIFI at 0.02.

Final reliability for 2022 were also excellent with SAIDI at 0.63 and SAIFI at 0.36. Please note that these reliability results exclude loss of Hydro One supply and major events. The major winter storm of December 2022 was therefore excluded from these results. Had the major winter storm results been included SAIDI would be 32.09 and SAIFI would be 1.69.

Index	2011	2012		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Q1 2023
SAIFI	1.61	3.26		2.45	0.34	0.46	0.37	0.17	0.12	0.68	1.54	0.60	0.36	0.02
SAIDI	2.26	3.27		3.36	1.06	0.49	0.67	0.32	0.32	0.76	4.69	0.99	0.63	0.01

Reliability



2022 Activities



**2022 Capital –
\$2,119,689**

Elgin St. – Birchwood to Chipping
Park Blvd – OH rebuild

Right of Way – Burnham St.

Kerr St. Right of Way

Brook Road Substation – New
Feeder

Pole Replacements

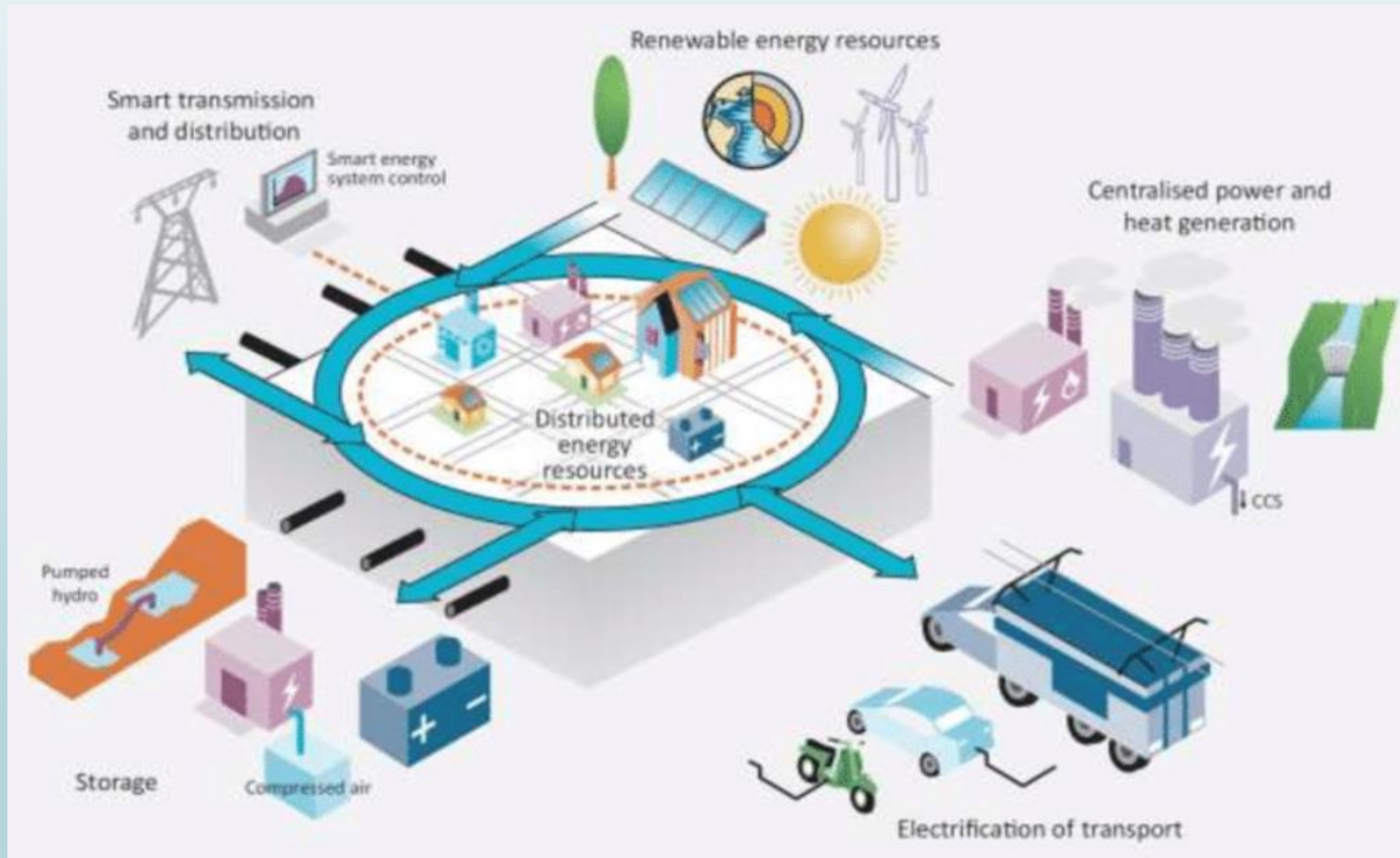
Future Initiatives & Challenges Beyond Capital & Maintenance



- Additional substation for system capacity by Dec/31/23
- Victoria substation replacement 2-3 years approx.
- Decommission & remediation of three 4kV stations - 2024
- Impact of Distributed Energy Resources - Electrification of Transportation, Distributed System Operator-on system
- Innovation-modernization of system; automation, proactive responses to down-time, mobile visibility, smart devices deployment towards 10yr goal of self-healing.
- Funding – diversification and infrastructure replacement as portions of the electrical infrastructure approach end of life.



Thank You



Questions

Finance & Customer Service

Adam Giddings, VP Regulatory Finance

Town of Cobourg Holdings Inc.



	2022	2021
Revenue		
Service revenue	4,865,953	4,700,731
Cost of power revenue	28,857,936	28,239,916
Contributions in aid of construction	131,474	114,688
	33,855,363	33,055,335
Cost of sales		
Cost of power purchased	28,857,936	28,239,916
Gross profit	4,997,427	4,815,419
Other operating revenue	871,398	652,788
Gross income from operations	5,868,825	5,468,207
Expenses		
Amortization	1,130,697	1,221,643
Customer billing and collecting	526,832	514,200
Interest	507,885	558,349
General and administration	1,686,812	1,724,509
Distribution	874,138	949,924
	4,726,364	4,968,625
Income before income taxes	1,142,461	499,582
Provision for income taxes	252,671	134,363
Actuarial gain	(151,277)	0
Net income	1,041,067	365,219

Lakefront Utilities Inc.



	<u>2022</u>	<u>2021</u>
Revenue		
Service revenue	4,806,840	4,615,313
Cost of power revenue	28,857,936	28,800,698
	<u>33,664,776</u>	<u>33,416,011</u>
Cost of power purchased	<u>28,857,936</u>	<u>28,800,698</u>
Gross profit	4,806,840	4,615,313
Other operating revenue	<u>596,353</u>	<u>298,560</u>
Gross income from operations	5,403,193	4,913,873
Expenses		
Amortization	1,115,841	1,205,046
Customer billing/collecting	526,832	514,200
Distribution	874,138	949,924
General and administration	1,313,071	1,298,207
Interest	611,970	590,441
	<u>4,441,852</u>	<u>4,557,818</u>
Income before income taxes	961,341	356,055
Provision for income taxes	203,149	95,521
Actuarial gain	(151,277)	0
Net income	909,469	260,534

Waterworks



	2022	2021
Revenue		
Sale of water	6,044,382	5,709,323
Other revenue	228,157	171,311
Development charges	188,124	55,726
Interest income	48,356	8,321
	<hr/> 6,509,019	<hr/> 5,944,681
Expenses		
Amortization	1,380,378	1,337,734
Interest on debt	33,635	21,648
Water distribution	907,571	858,347
Administration	1,448,514	1,564,767
Water treatment plant	725,503	698,627
	<hr/> 4,495,601	<hr/> 4,481,123
Net income	2,013,418	1,463,558

Customer Engagement



- Holdco's 2022 Annual Report publicly released in June
- Quarterly Stay Connected Newsletter
- Improved mobile application with new payment function, daily account balance updates, enhanced security and ease of use via Google & Apple sign-in, updated support system, and faster speed.
- Customer Satisfaction phone survey - 77%
- Electricity Safety and Conservation presentations to 3 Cobourg schools
- LUSI Engagement Committee
- Press Releases included the Advancement for Green Button Initiative, Announcement of Newly Appointed Directors, Public Awareness of Electrical Safety Survey Results of 82.6%, Positive News from the OEB's Benchmarking Report, LUSI Receives 100% Compliance, and reviews of the causes of various power outages
- Ongoing communication regarding Customer Choice, financial assistance programs, local scam warnings, electrical safety, planned work, rate relief, e-billing, Green Button, Scorecard, financial statements, watermain flushing, valve turning, water meter replacement, summer and winter rates, EV charger program, etc.
- LUSI's customer engagement channels include Facebook, Twitter, lakefrontutilities.com, on-bill messages, bill inserts, YouTube, mobile app, newsletters, MailChimp, branded on-hold phone messages, and Customer Portal Silverblaze



Town of Cobourg Holdings Inc.

Chair, David Tsubouchi



HOLDCO Benefits to Cobourg 2001-2022

41

Dividend	\$ 7,410,600
Interest	\$10,027,000
Total Cash Benefits	\$17,437,600
Add. Non-Cash Benefits	\$ 5,060,600 (Fiber Service, etc.)
Total	\$22,498,200

Community Involvement: Sponsor Civic Awards- Environmental, United Way- Day of Caring, Salvation Army, Local Food Bank, Help Centre, Lakefront Scholarships, etc.



Transformation to Utility 2.0

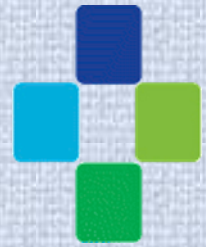
42



- Tesla built a massive battery pack in South Australia to avoid brownouts across the state. New Zealand is considering a \$4 billion investment in ‘pumped’ hydro to take the country to 100 per cent renewable electricity.
- Wherever you look, electricity, from its generation and transmission to its distribution and sale, is being disrupted by new technologies and business models.
- Industry players, who for the best part of a hundred years relied on a centralised grid for delivering electricity, are now faced with distributed energy resource (DER) and consumers with more visibility into and control over their energy consumption than ever before.
- That would all be fine if the electricity providers were well-equipped to deal with the lightning pace of change. But the reality is that innovation in the energy space is an area most woefully underinvest in.
- For decades, electricity utilities had a fairly simple innovation agenda – to generate power more cheaply, efficiently and with less pollution and emissions. While new technologies and the digitization of electricity management is helping with those priorities, disruption also means more scope for competition, new market entrants and the risk of being left behind.

Current Technologies Driving Change

43



- **The big data revolution** is alive and well in the electricity sector with the rise of smart meters offering a wealth of real-time data. If you can measure it, you can improve it. With electronic readings, bills are more accurate, improving the customer experience. But the full potential of smart meters is still yet to be realised. The utility can collect weather and system data from the meters to improve predictive maintenance. Most importantly, it can harvest large amounts of raw data to inform both its network management and to improve customer satisfaction and retention.
- **The digitization of electricity distribution stations and networks** is also generating significant data. As Internet of Things sensors are added to stations, wires and power poles, we will be able to optimize management of those assets and even add additional services such as wireless broadband and security cameras. AI, trained on utility data, will increasingly inform decision making from the utility to the home user.
- **Think micro-grid.** As towns, communities and individual households harness solar panels, wind and micro turbines to generate their own power, many jurisdictions are seeing the rise of 'micro' electricity grids. They may supply a collection of houses and businesses and often will typically connect to the electricity grid at a single point. Some can draw on the main power grid only when local production is insufficient. But the real driver of micro grids is a move towards cleaner energy and greater reliability of power infrastructure.



TOWN OF COBOURG HOLDINGS INC.

Thank you

