

Rate Adjustment Application

October 3, 2016

Progress to date and long-term goals

LEC 2003 – 2016

- 65 connections/customers totaling 4.3 million sq. ft. including 3,749 residential suites
- 4 heat sources: natural gas, solar, geo-exchange, heat recovery
- 3 service areas: Lower Lonsdale, Central Lonsdale, Marine Drive / Harbourside
- 8.3 km (trench pipe) of distribution system

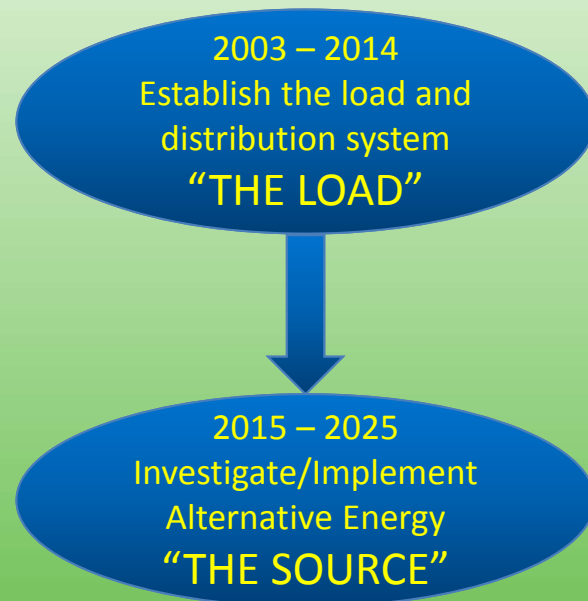


Lonsdale Energy Corporation			District Energy Service Network		
Drawn : C. Miles	Designed	Checked	Scale: 1/8"=1'-0"	Map Issued: 2016-03-22	
Approved		Date			

Drawing Location: X:\EPE Projects\5230 Public Works Projects\5230-20 Design Projects by Name and Proj Num\5230-20 District Energy System - See S210\Overview System\Service Network 2016-March.dwg

District Energy Key Plans
Service Network
 2016-March
 Sheet Number 1 of 4

Past, Present & Future



- Stop the use of electric baseboards
- Standardize & combine energy needs of the community
- Maximize the use of the distribution system's flexibility
- Diversify & use the most appropriate source of energy at all times

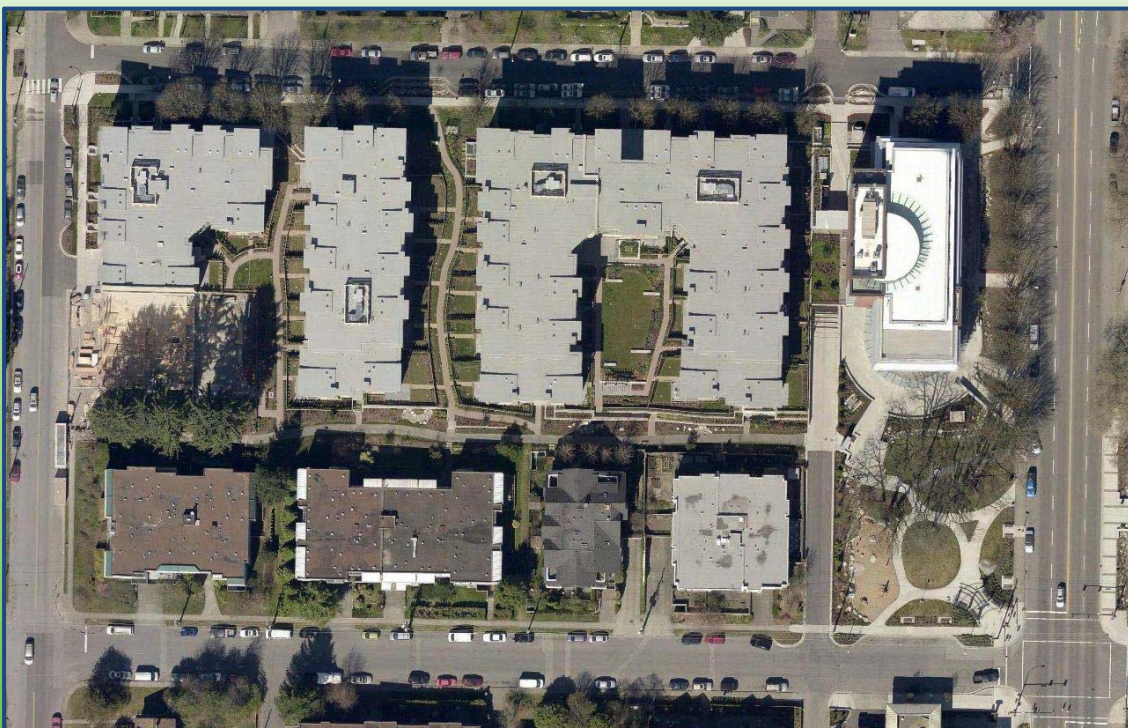


LEC's 120
solar panels
on the roof
of the City
Library

Cost of Alternative Energy



- Average cost charged by LEC in 2015: \$0.0806 per kW.hr of heat
- Cost of energy produced by solar panels on library (annual depreciation / 2015 energy produced): \$0.256 per kW.hr (\$0.052 per kW.hr net of grants)
- Solar energy sold to Ontario Power Authority: \$0.443 per kW.hr



School District 44





www.LonsdaleEnergy.ca

Geo-Exchange Boreholes



Mini-Plant #6



Other Cooling Cycle Heat Recovery Projects

- Tap and Barrel
- Pipe Shop Building
- Polygon Gallery
- Lot 5 including future ice rink
- Onni CentreView (2 buildings)
- First Street West – 135 West 1st Street

Other Projects in Progress

- Until We Meet Again - 839 W 1st St
- Connection of Marine Drive and Central Lonsdale
- Moodyville
- Passive Houses

Future Energy Source Opportunities

- Metro Vancouver wastewater treatment plant
- Biomass
- Synergies and waste energy from businesses (ICBC, Lions Gate Hospital)

Financial Position

Summary of City Loans

CNV Loans	Date Authorized	Amount Authorized	Current Balance	Remaining Balance
Distribution System	12/16/2013	\$11,500,000	\$11,194,696	\$305,304
Working Capital	12/16/2013	\$500,000	\$500,000	\$0
Corix Settlement 1	7/8/2015	\$2,000,000	\$2,000,000	\$0
Corix Settlement 2	11/13/2015	\$611,966	\$611,966	\$0
MP-8 Construction	1/25/2016	\$1,600,000	\$0	\$1,600,000
Moodyville Connection	4/4/2016	\$2,300,000	\$0	\$2,300,000
160 East 6th Connection	4/4/2016	\$600,000	\$0	\$600,000
UWMA Interim	9/19/2016	\$3,250,000	\$0	\$3,250,000
		\$22,361,966	\$14,306,662	\$8,055,304

Funding Use

- 2015 Net income: \$12,655
- 2015 Interest paid to City: \$247,282
- 2015/2016 MP-5 Construction: \$900,000
- \$2 million MFA Loan approx. \$175k per year (current balance \$1.3 million)

Rate Adjustment

Rate Adjustment Rationale

- Only one increase since 2003 when the Capacity Charge was increased by 10% in two phases (Oct. 2013 and July 2014)
- LEC takes advantage of load diversification and energy sources interconnection
- Equipment, construction and maintenance costs are increasing

Rate Adjustment Rationale (cont'd)

- Impact of City growth required hiring of staff
- Interest payment to the City
- New service areas take a few year to densify
- Low gas price
- Limited senior government grants and contributions
- Cost of alternative energy sources

Rate Structure Adjustment

- Introduction of a rate schedule 1 and schedule 2
- Rate equity vis-à-vis the connection of smaller buildings
- In line with other utility's practices

Proposed Rate Adjustment

Charge	Description	Current Rates	Proposed Bylaw		% Change
Meter Charge	Monthly charge for each Service Connection serving the Premises	\$150 / month	\$30 / month	RATE 1 Up to 300,000 kWh / yr	-80.0%
			\$161.55 / month	RATE 2 Over 300,000 kWh / yr	7.7%
Capacity Charge	Monthly charge per kilowatt multiplied by the energy capacity of the Premises in kilowatts.	\$3.231 / kW	\$3.5541 / kW	RATE 1 & RATE 2	10.0%
Commodity Charge	Charge per kilowatt hour of Hydronic Energy provided to the Premises.	\$0.02747 / kW.h *	\$0.03398 / kW.h	RATE 1 Up to 300,000 kWh / yr	23.7%
			\$0.02871 / kW.h	RATE 2 Over 300,000 kWh / yr	4.5%

* Commodity Charge as of April 1, 2016 is adjusted to follow FortisBC gas price fluctuation

Charges to Developers

- Connection fee of \$75 per kW of nominated capacity (proposed increase from \$60/kW)
- Aims at encouraging building efficiency
- Builders are saving the cost of boilers and room

Competitiveness of LEC

Table - Comparison of LEC rate with other providers

Energy Provider	Type of Service	Year of rate	Rate (\$ / MW.hr)	Difference with LEC
LEC	Hot Water	2015	\$80.60	-
BC Hydro	Electricity	2016	\$108.78	35%
Fortis BC	Stand-alone NG Boiler	2015	\$88	9%
River District Energy (East Fraserlands)	Hot Water	2016	\$108	34%
South East False Creek (SEFC)	Hot Water	2016	\$103	28%
SFU UniverCity Energy	Hot Water	2016	\$150	86%
Richmond Oval Village District Energy	Hot Water	2016	\$86	7%
Surrey City Energy	Hot Water	2015	\$105	30%

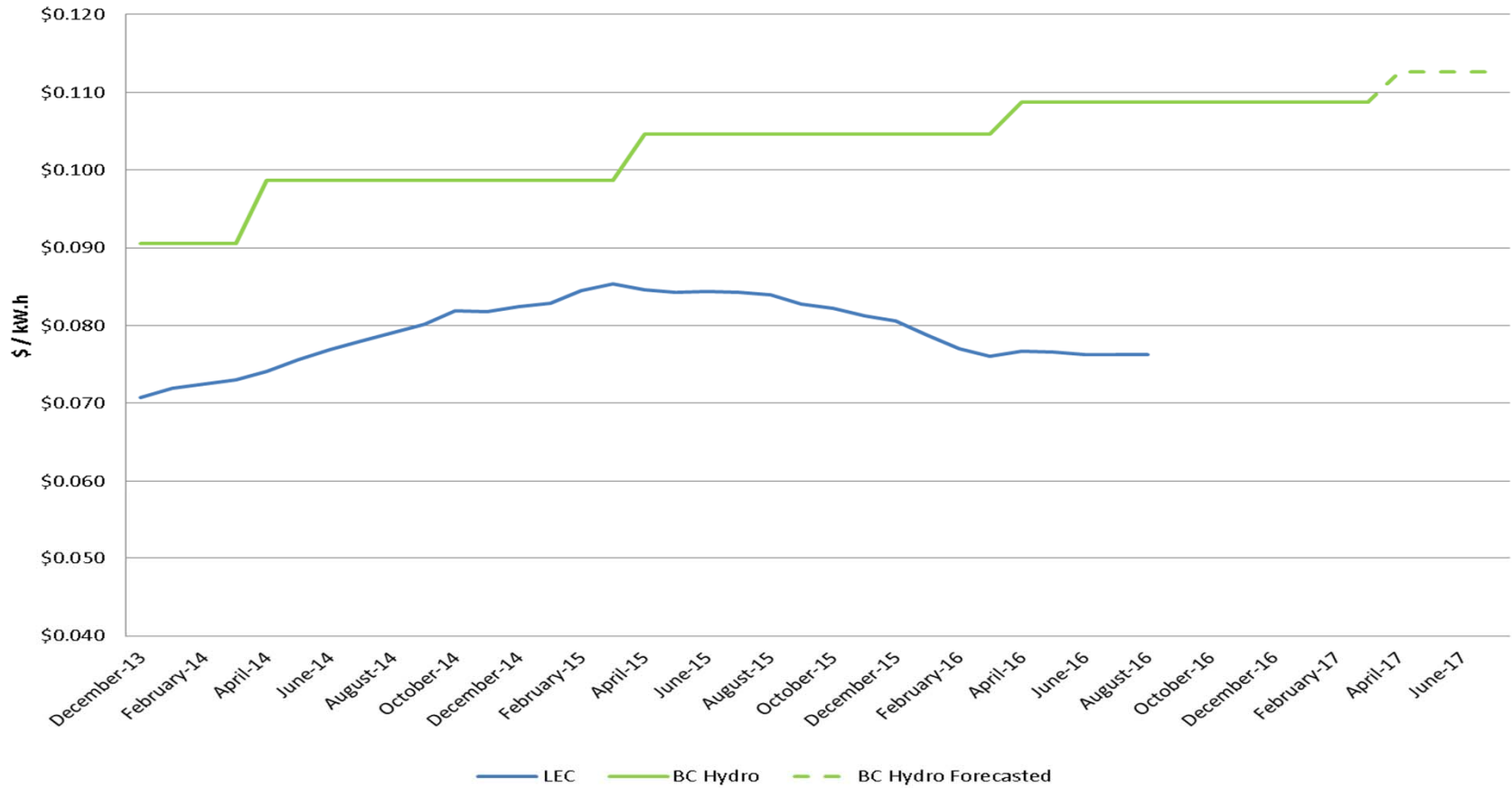
Notes:

LEC cost based on 2015 revenue and heat deliveries.

BC Hydro cost based on purchase of 50% residential step 1 and 50% residential step 2 electricity price and a 5% rate rider.

Cost of Fortis BC, River District Energy, SEFC, SFU UniverCity, Richmond Oval and Surrey City Energy taken from City of Vancouver report dated November 12, 2015.

Lonsdale Energy Corp. Average 12 Month LEC Heating Rate vs. BC Hydro



British Columbia Utility Commission

- Exemption of services provided by municipality within its own boundaries
- Voluntary compliance potentially costly
- BCUC stated in December 2012:
 - these systems warrant "light-handed" forms of regulation
 - full cost of service regulation is the “method of last resort”
... consider market-based pricing first

Thank you

