



# City of Richmond

## Report to Committee

**To:** Finance Committee **Date:** November 17, 2016  
**From:** Robert Gonzalez, P.Eng. **File:** 01-0060-20-  
LIEC1/2016-Vol 01  
Deputy CAO and General Manager, Engineering  
and Public Works and Chief Executive Officer,  
Lulu Island Energy Company

Jerry Chong  
Director, Finance and Chief Financial Officer,  
Lulu Island Energy Company

**Re: 2017 Operating Budget for the Lulu Island Energy Company**

### Staff Recommendation

That the report titled "2017 Operating Budget for the Lulu Island Energy Company" dated November 17, 2016 from the Chief Executive Officer and Chief Financial Officer, Lulu Island Energy Company be received for information.

Robert Gonzalez, P.Eng.  
Deputy CAO and General Manager,  
Engineering and Public Works  
Chief Executive Officer,  
Lulu Island Energy Company

Jerry Chong, CPA, CA  
Director, Finance  
Chief Financial Officer,  
Lulu Island Energy Company

<b>REPORT CONCURRENCE</b>	
<b>CONCURRENCE OF GENERAL MANAGER</b>	
<b>REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE</b>	<b>INITIALS:</b> 
<b>APPROVED BY CAO</b>	



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RICHMOND, BC V6Y 2C1

## Report

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**DATE:** November 17, 2016

**TO:** Robert Gonzalez  
Chief Executive Officer, Lulu Island Energy Company

Jerry Chong  
Chief Financial Officer, Lulu Island Energy Company

**FROM:** Alen Postolka, District Energy Manager

Cindy Gilfillan, Manager Financial Reporting

**Re:** 2017 Operating Budget for the Lulu Island Energy Company

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### **Recommendation**

That the 2017 Operating Budget for the Lulu Island Energy Company (LIEC) be approved by the LIEC's Board of Directors as presented in the staff report titled, "2017 Operating Budget for the Lulu Island Energy Company" dated November 17, 2016.

### **Background**

LIEC, a corporation wholly-owned by the City of Richmond, was established to provide district energy services for the City. Under direction from Council, and following receipt of the necessary approval from the Inspector of Municipalities, the incorporation of LIEC was completed in August 2013.

In June 2014, the City and LIEC executed a District Energy Utilities Agreement, assigning LIEC the function of establishing and operating district energy systems as well as providing thermal energy services on behalf of the City.

In October 2014, LIEC and Corix Utilities executed a Concession Agreement whereby LIEC would own the Oval Village District Energy Utility's (OVDEU) infrastructure, and Corix would design, construct, finance, operate and maintain OVDEU, subject to the City, as shareholder of LIEC, setting rates for customers and defining service areas.

In order to consolidate the City's district energy operations, on October 11, 2016, Council authorized staff to transfer the City's district energy assets to LIEC. On November 7, 2016, Council, as the sole shareholder, ratified the resolution that, in exchange for the assets, LIEC will issue additional common shares to the City with a fair market value equivalent to the value of the assets transferred.

## Analysis

OVDEU is the first district energy project developed under the oversight of LIEC. Staff are working with Corix on the successful delivery of Phase 1 of the OVDEU project. There are currently six buildings (Carrera, Riva 1, Riva 2, River Park Place-Phase 1, Cadence, Tempo) connected to the OVDEU (Attachment 1), and Corix is continuing construction of the infrastructure necessary to connect more developments per LIEC's direction. The following table represents anticipated development connection timelines for the next year:

Table 1: Development Timing in OVDEU Service Area

	<b>Anticipated Occupancy</b>
Polygon (Carrera)	Occupied/Connected
Onni (Riva 1)	Occupied/Connected
Onni (Riva 2)	Occupied/Connected
Intracorp (River Park Place 1)	Occupied/Connected
Cressey (Cadence)	Connected
Amacon (Tempo)	Connected
Onni (Riva 3)	April 2017
Aspac (Parcel 9)	June 2017

At the end of 2016, over 1,300 residential units will be receiving energy from the OVDEU. Energy is currently supplied from the two interim energy centres with natural gas boilers which combined provide 11 MW of heating capacity. When enough buildings are connected to the system, a permanent energy centre will be built which will produce low carbon energy, currently planned to be harnessed from the Gilbert Trunk sanitary force main sewer. Over the project's lifetime, the OVDEU system is anticipated to reduce the GHG emissions by more than 52,000 tonnes of CO<sub>2</sub> as compared to business as usual.

Prior to the establishment of LIEC and OVDEU, the City successfully started operation of the Alexandra District Energy Utility (ADEU) within the City's Engineering & Public Works Division. As directed by Council, staff are currently working on transferring the ADEU assets and operations to LIEC. The transfer, planned to be completed effective December 31, 2016, will allow LIEC to fulfill its Council directed mandate to manage all district energy utilities on the City's behalf.

ADEU currently provides heating and cooling services to six developments within the West Cambie neighbourhood (Mayfair Place, Remy, Omega, Alexandra Court, Richmond Jamatkhana and Oxford Lane), connecting over 1100 residential units and over 1 million square feet of floor area (Attachment 2). ADEU's first commercial customers, with more than 280,000 ft<sup>2</sup> of serviced floor area, will be connected before the end of 2016.

As of June 30, 2016 (end of second quarter billing), the ADEU system has delivered 7279 MWh of energy to customers for space heating, cooling and domestic hot water heating. While some electricity is consumed for pumping and equipment operations, almost 100% of this energy is produced locally from the geo-exchange fields in the greenway corridor and other City lands located within the West Cambie area. Staff estimate that this has eliminated 1250 tonnes of GHG emissions<sup>1</sup> in the community.

As the ADEU assets are being transferred under LIEC effective December 31, 2016, the 2017 LIEC budget presented contains LIEC Administration, Alexandra DEU operation, Oval Village DEU operation and City Centre DEU planning.

Both OVDEU and ADEU are in the early stages of operation, and as a result utility (electricity and natural gas), operation and maintenance costs are still largely based on projections from the models. In addition, the customers' energy use (building performance) is estimated based on the average building performance in the region and energy modeling reports prepared by the building designers. The 2017 Operating Budget incorporates estimated revenues and expenses from the ADEU and OVDEU based on the above projections and development activity. Over time, metered energy consumption and actual utility, operation and maintenance costs will be used to plan the budget.

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<sup>1</sup> Assumed that all energy was provided for heating. The business-as-usual (BAU) assumed that 40% of the building heating load would be provided from electricity and the remaining 60% would be from gas make-up air units.

Operating Budget

	2016 <sup>1</sup>	2017	\$ Increase (decrease)	% Increase (decrease)
<b>REVENUES</b>				
Service Fee (City of Richmond)	\$0	\$915,000	\$915,000	100%
Energy Modeling Review Fee	34,500	30,000	(4,500)	(13%)
Asset Contributions (ETS fee)	1,020,000	609,000	(411,000)	(40%)
Metered Billings (Quarterly)	1,915,142	3,040,000	1,124,858	59%
	<b>2,969,642</b>	<b>4,594,000</b>	<b>1,624,358</b>	<b>55%</b>
<b>EXPENSES</b>				
Salaries and Benefits	79,800	591,480	511,680	641%
General Operating Expenses	86,700	51,000	(35,700)	(41%)
Professional Fees	36,695	46,900	10,205	28%
Advertising and Marketing	5,000	5,150	150	3%
Contracts	611,694	906,000	294,306	48%
Insurance	30,000	35,900	5,900	20%
Utilities - Electric	188,505	225,000	36,495	19%
Utilities - Natural Gas	321,441	397,000	75,559	24%
Memberships	6,000	8,090	2,090	35%
PW Overhead Allocation	6,350	3,250	(3,100)	(49%)
Amortization	601,432	1,117,702	516,270	86%
Interest Expense	108,388	134,025	25,637	24%
	<b>2,082,005</b>	<b>3,521,497</b>	<b>1,439,492</b>	<b>69%</b>
<b>TRANSFERS</b>				
Transfer to Provision	464,464	1,256,205	791,741	170%
Transfer to Reserves	0	325,000	325,000	100%
Equity - Amortization	(601,432)	(1,117,702)	(516,270)	86%
Equity to Capital (ETS)	1,020,000	\$609,000	(411,000)	(40%)
	<b>883,032</b>	<b>1,072,503</b>	<b>189,471</b>	<b>21%</b>
Annual Surplus (Deficit) including transfers	<b>\$4,605</b>	<b>\$0</b>	<b>(\$4,605)</b>	<b>(100%)</b>

1. 2016 budget amounts have been restated to reflect the inclusion of ADEU and the financial statement presentation for OVDEU.

The 2016 budget has been adjusted to reflect the transfer of the ADEU and to present the OVDEU expenses in the same format as the financial statements. The 2015 financial statements highlighted a presentation difference between the format of the budget as approved by the Board and the expenses as recognized on the financial statements. The financial statements are prepared in accordance with generally accepted accounting principles (accrual basis) and include all expenses incurred in the period, regardless of the timing of payments. The original budget was prepared on a cash basis, which included an amount for the Corix fee which represents the cash payment anticipated to be made by LIEC. Staff have adjusted the 2016 budget to the accrual basis and the adjustments are included in attachment 3.

### *Revenues*

The increase in budgeted revenues of \$1,624,358 to \$4,594,000 (2016 – \$2,969,642) is mainly due to the following:

- Service Fee - The \$915,000 Service Fee is funding from the City of Richmond for LIEC salary expenses, future advanced design activities and capital projects. The Service Fee concept was approved by Council in order for LIEC to build financial strength to manage any future volatility in rates to customers due to factors outside of LIEC control, and to continue successfully building a district energy utility business for the City. The contribution from the City has no tax impact as this will be funded from the City's surplus.
- Asset Contribution - The 2017 asset contribution revenues from developers relating to constructions of energy transfer stations are projected to be lower by \$411,000 to \$609,000 (2016 - \$1,020,000) due to fewer new building connections occurring in 2017.
- Metered Billings - The metered billings (user fee) revenues are expected to increase as this reflects a full year of energy sales to a number of buildings that were connected in 2016 (Riva 2, River Park Place 1, Cadence, Tempo, Fire Hall No. 3, Alexandra Court 4, Oxford Lane, SmartREIT).

### *Expenses*

The increase in budgeted expenses of \$1,439,492 to \$3,521,497 (2016 – \$2,082,005) is mainly due to the following:

- Salaries and benefits - The increase of \$511,680 is due to three City of Richmond district energy staff being transferred to LIEC and one new position (Financial Analyst). The City positions were previously funded from capital projects since they were developing the district energy assets.
- General operating expenses – The reduction of \$35,700 is due to the prior year's budgeted expense being reclassified and an increase of \$30,000 for best practices and opportunities review.
- Professional fees – The increase of \$10,205 reflects increased costs for advanced design of district energy ready developments in the City Centre area, coordinating design with the new developments including DEU corridors, development and securing a DEU-ready building base and design of the strategy to provide interim energy services outside of defined service areas.
- Contracts, utilities, amortization, and interest expense – The budgeted increases in 2017 are due to the operation and maintenance activities needed to service the eight new buildings that were connected in 2016.

- Insurance - The City's insurance coverage was extended to cover the liability associated with LIEC, as a fully owned subsidiary of the City. With the asset transfer, LIEC will acquire appropriate insurance coverage to remove the liability from the City.

### *Transfers*

The increase in budgeted transfers of \$189,471 to \$1,072,503 (2016 – \$883,032) is mainly due to the following:

- Transfers to provision - The budgeted increase in 2017 is due to increased revenues including metered billing revenue. This amount reflects the amount that is budgeted to be transferred to provision for future rate stabilization or capital projects.
- Transfer to reserves - The budgeted amount of \$325,000 is allocated from the Service Fee revenue and is the amount that staff have estimated is required for future advanced design of capital projects.
- Equity – Amortization - The increase of \$516,270 to a credit balance of \$1,117,702 for 2017 is due to the year over year change in amortization expense. The equity amortization figure reflects the decrease in investment in tangible capital assets within accumulated surplus directly related to amortization expense.
- Equity to capital - The equity to capital (ETS) decrease of \$411,000 to \$609,000 in 2017 is due to the year over year change in asset contribution (ETS fee) revenue. The equity to capital (ETS) reflects the increase in investment in tangible capital assets within accumulated surplus.

The 2017 LIEC Operating Budget has been prepared based on projections from the forecasts and modelling for the Alexandra District Energy Utility and Oval Village District Energy Utility. The 2017 fiscal year will be the first year of operations for the combined district energy businesses that previously resided in different entities. Therefore, staff will monitor LIEC's progress closely and advise the board and Council if any changes and budget amendments are required.

### **Financial Impact**

None.

**Conclusion**

The 2017 Operating Budget is presented as a balanced budget, with any surplus transferred to a provision which will be utilized for future rate stabilization or capital projects.



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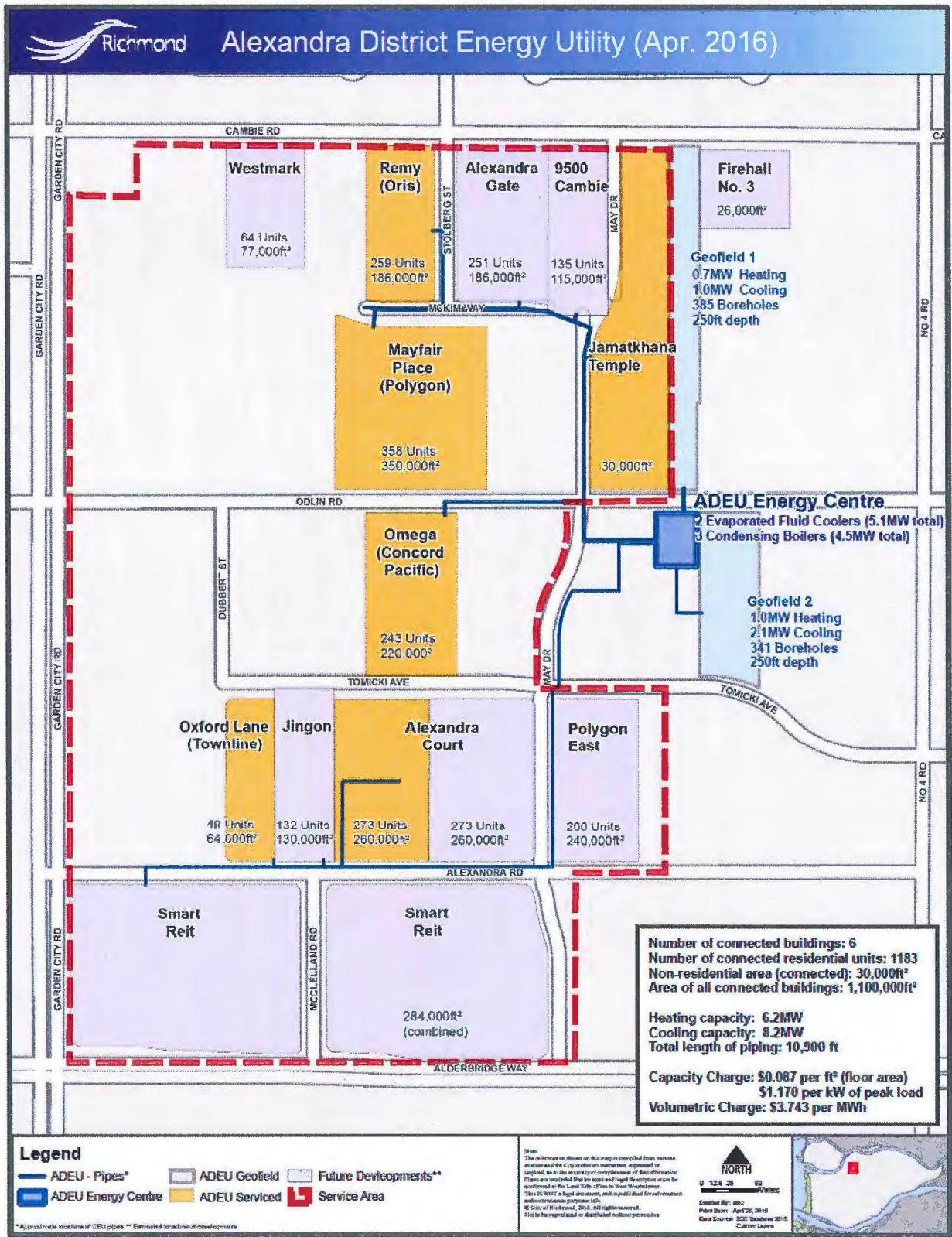
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- Att. 1: Oval Village DEU Service Area map (as of September 2016)
- Att. 2: Alexandra DEU Service Area map (as of April 2016)
- Att. 3: 2016 Adjusted Budget Reconciliation





Attachment 2 – Alexandra DEU Service Area map (as of April 2016)



**Attachment 3 – 2016 Adjusted Budget Reconciliation**

	<b>LIEC Original Budget</b>	<b>ADEU Approved Budget</b>	<b>Adjustments to Presentation</b>	<b>Adjusted 2016 LIEC Budget</b>
<b>REVENUES</b>				
Energy Modeling Review Fee	\$27,000	\$7,500	\$0	\$34,500
Asset Contributions (ETS fee)	1,020,000	0	0	1,020,000
Metered Billings (Quarterly)	547,342	1,367,800	0	1,915,142
	<b>1,594,342</b>	<b>1,375,300</b>	<b>0</b>	<b>2,969,642</b>
<b>EXPENSES</b>				
Salaries and Benefits	0	79,800	0	79,800
General Operating Expenses	71,000	15,700	0	86,700
Professional Fees	36,695	0	0	36,695
Advertising and Marketing	5,000	0	0	5,000
Contracts	420,892	244,600	(53,798)	611,694
Insurance	30,000	0	0	30,000
Utilities - Electric	0	171,100	17,405	188,505
Utilities - Natural Gas	0	128,400	193,041	321,441
Memberships	3,000	3,000	0	6,000
PW Overhead Allocation	3,150	3,200	0	6,350
Amortization	0	497,000	104,432	601,432
Interest Expense	0	0	108,388	108,388
	<b>569,737</b>	<b>1,142,800</b>	<b>369,468</b>	<b>2,082,005</b>
<b>TRANSFERS</b>				
Transfer to Provision	0	729,500	(265,036)	464,464
Transfer to Reserves	0	0	0	0
Equity - Amortization	0	(497,000)	(104,432)	(601,432)
Equity to Capital (ETS)	1,020,000	0	0	1,020,000
	<b>1,020,000</b>	<b>232,500</b>	<b>(369,468)</b>	<b>883,032</b>
 Annual Surplus (Deficit) including transfers	 <b>\$4,605</b>	 <b>\$0</b>	 <b>\$0</b>	 <b>\$4,605</b>