



**To:** Mayor and Councillors (“the Shareholder”)

**Date:** April 26, 2022

**From:** Peter Russell, MCIP, RPP  
Director, Sustainability and District Energy

**Re:** **2022 Annual General Meeting Resolution of the Lulu Island Energy Company**

**Staff Recommendation**

That the unanimous consent resolutions of the shareholder in Attachment 1 of the Lulu Island Energy Company report dated April 11, 2022, be endorsed.

Peter Russell, MCIP, RPP  
Director, Sustainability and  
District Energy  
(604-276-4130)

Att. 1

<b>REPORT CONCURRENCE</b>	
<b>CONCURRENCE OF GENERAL MANAGER</b>	
<b>REVIEWED BY SMT</b>	<b>INITIALS:</b> 
<b>APPROVED BY CAO</b>	





6911 NO. 3 ROAD  
RICHMOND, BC V6Y 2C1

## Report

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**DATE:** April 11, 2022  
**TO:** Board of Directors  
**FROM:** Alen Postolka, P.Eng., Manager, District Energy  
**Re:** **2022 Annual General Meeting Resolutions of the Lulu Island Energy Company**

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### Staff Recommendation

That:

1. the Board recommend to Council (the Shareholder) that they approve and adopt the unanimous consent resolutions (Attachment 1) of the staff report dated April 11, 2022 addressing the business that would otherwise be required to be transacted at an annual general meeting;
2. KPMG LLP be appointed as auditors of the Lulu Island Energy Company (LIEC) until LIEC's next annual reference date or until a successor is appointed, at a remuneration to be fixed by the Directors (Attachment 2);
3. the following persons be appointed to the offices set opposite their respective names to hold office at the pleasure of the Directors (Attachment 3):  
John David Irving – CEO  
Jerry Ming Chong – Chair and CFO  
Cecilia Maria Achiam – Vice Chair and Corporate Secretary
4. the financial statements of the Company for the period ending December 31, 2021, and the report of the auditors thereon, are hereby approved, and that any one director of the Company is hereby authorized to sign the financial statements to confirm that approval (Attachment 4);
5. the Lulu Island Energy Company 2021 Annual Report (Attachment 5) be approved and presented to the shareholder at the Special Council Meeting on May 16, 2022.

## **Origin**

Lulu Island Energy Company Ltd. (LIEC) is required, at least once in every calendar year, within six months of its fiscal year end and no more than 15 months from its last annual reference date to have its sole shareholder, the City of Richmond, endorse consent resolutions addressing the business that would otherwise be required to be transacted at an annual general meeting.

Furthermore, LIEC articles of incorporation requires that the Board appoint an auditor and officers of LIEC, and that LIEC holds an annual information meeting open to the public, at which LIEC will present the audited financial statements for the previous fiscal year approved by the Board on April 12, 2022.

This report presents resolutions for the LIEC Board's approval to address the above legislated requirements.

## **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.

LIEC currently owns and operates the Alexandra District Energy (ADEU) Utilities, Oval Village District Energy (OVDEU), and advances new district energy opportunities in the City Centre area. Both the Alexandra and the Oval Village neighbourhoods are experiencing rapid redevelopment, and LIEC has been expanding to meet this increased energy demand, while maintaining exceptional reliability, transparency in operations, industry-competitive customer rates and quality customer service. In the City Centre, negotiations are nearing completion as the service area continues to expand.

## **Analysis**

As per Section 10.2 of the LIEC articles of incorporation, in order for the annual general meeting of the LIEC shareholder to be deemed as held, the City of Richmond, as the only shareholder of LIEC, is required to consent by a written resolution under the Business Corporations Act to all of the business that is required to be transacted at a shareholder meeting. The practice of the City is that this is carried out at a Special Council meeting. The details of the annual business that is required to be transacted at this meeting are included in the resolution in Attachment 1.

At the same time, there are also some annual legislated requirements, which need to be reviewed and approved by Directors of the corporation in accordance with the British Columbia *Business Corporations Act* and LIEC's articles. The details of these requirements are included in Attachments 2, 3, 4 and 5.

The LIEC 2021 Annual Report is presented to the Board for their approval. In summary, LIEC financial statements show positive financial results and good financial health of the company. In recognition of the company's innovative and progressive initiatives with the focus on customer service excellence, LIEC was the recipient of two major awards in 2021.

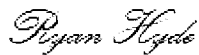
Overall, by the end of 2021, over 5.3 million square feet of residential, commercial, and institutional buildings were serviced by district energy in Richmond.

### **Financial Impact**

None.

### **Conclusion**

The presented resolutions are legislated requirements under LIEC's articles and the British Columbia *Business Corporation Act* and it is recommended that they be approved.



Ryan Hyde,  
Assistant Project Manager  
Lulu Island Energy Company  
(604-204-8706)

- Att. 1: Unanimous Resolutions of the Shareholder of LIEC
- Att. 2: Notice of Appointment of Auditor
- Att. 3: Consent Resolution of the Directors of LIEC – Appointment of Officers
- Att. 4: Consent Resolution of the Directors of LIEC – Financial Statements
- Att. 5: LIEC 2021 Annual Report

**UNANIMOUS RESOLUTIONS OF THE SHAREHOLDER OF**  
**LULU ISLAND ENERGY COMPANY LTD.**  
(the "Company")

The undersigned, being the sole voting shareholder of the Company, hereby consents to and adopts in writing the following unanimous resolutions:

**Annual General Meeting**

RESOLVED THAT:

1. the shareholder acknowledges that the financial statements of the Company for the period ended December 31, 2021, and the report of the auditors thereon, have been provided to the shareholder in accordance with the requirements of the British Columbia *Business Corporations Act*;
2. all lawful acts, contracts, proceedings, appointments and payments of money by the directors of the Company since the last annual reference date of the Company, and which have previously been disclosed to the shareholder, are hereby adopted, ratified and confirmed;
3. the number of directors of the Company is hereby fixed at 6;
4. the following persons, each of whom has consented in writing to act as a director, are hereby elected as directors of the Company, to hold office until the next annual general meeting of the Company or unanimous resolutions consented to in lieu of holding an annual general meeting, or until their successors are appointed:  
  
Cecilia Maria Achiam  
Jerry Ming Chong  
John David Irving  
Joseph Erceg  
Kirk Taylor  
Anthony Capuccinello Iraci
5. KPMG LLP be appointed as auditors of the Company until the next annual reference date of the Company or until a successor is appointed, at a remuneration to be fixed by the directors; and
6. May 16, 2022 is hereby selected as the annual reference date for the Company for its current annual reference period.

DATED as of \_\_\_\_\_, 2022.

CITY OF RICHMOND

Per: \_\_\_\_\_

**NOTICE OF APPOINTMENT OF AUDITOR**

TO: KPMG LLP  
Metrotower II  
2400 - 4710 Kingsway  
Burnaby, BC V5H 4N2

Pursuant to Section 204(6) of the British Columbia *Business Corporations Act*, notice is hereby given of your appointment as auditor of Lulu Island Energy Company Ltd. (the "Company"), to hold office until the close of the next annual reference date of the Company, or until a successor is appointed.

DATED as of \_\_\_\_\_, 2022.

LULU ISLAND ENERGY COMPANY LTD.

Per: \_\_\_\_\_

**CONSENT RESOLUTION OF THE DIRECTORS OF  
LULU ISLAND ENERGY COMPANY LTD.  
(the "Company")**

The undersigned, being all of the directors of the Company entitled to vote on the resolution, hereby consent to and adopt in writing the following resolution:

**Appointment of Officers**

RESOLVED THAT the following persons be appointed to the offices set opposite their respective names to hold office at the pleasure of the directors:

Name	Office
John David Irving	Chief Executive Officer
Jerry Ming Chong	Chief Financial Officer and Chair
Cecilia Maria Achiam	Corporate Secretary and Vice Chair

**Execution by Counterparts**

This resolution may be consented to by the directors signing separate counterparts of the resolution, which may be delivered by electronic means, and notwithstanding the respective dates of execution of the separate counterparts shall be deemed to be effective as at \_\_\_\_\_, 2022.

\_\_\_\_\_  
CECILIA MARIA ACHIAM

\_\_\_\_\_  
JERRY MING CHONG

\_\_\_\_\_  
JOHN DAVID IRVING

\_\_\_\_\_  
JOSEPH ERCEG

\_\_\_\_\_  
KIRK TAYLOR

\_\_\_\_\_  
ANTHONY CAPUCCINELLO IRACI

**CONSENT RESOLUTION OF THE DIRECTORS OF**

**LULU ISLAND ENERGY COMPANY LTD.**

(the "Company")

The undersigned, being all of the directors of the Company entitled to vote on the resolution, hereby consent to and adopt in writing the following resolution:

**Approval of Financial Statements**

RESOLVED THAT the financial statements of the Company for the period ended December 31, 2021, and the report of the auditors thereon, are hereby approved, and that any one director of the Company is hereby authorized to sign the financial statements to confirm that approval.

**Execution by Counterparts**

This resolution may be consented to by the directors signing separate counterparts of the resolution, which may be delivered by electronic means, and notwithstanding the respective dates of execution of the separate counterparts shall be deemed to be effective as at \_\_\_\_\_, 2022.

\_\_\_\_\_  
CECILIA MARIA ACHIAM

\_\_\_\_\_  
JERRY MING CHONG

\_\_\_\_\_  
JOHN DAVID IRVING

\_\_\_\_\_  
JOSEPH ERCEG

\_\_\_\_\_  
KIRK TAYLOR

\_\_\_\_\_  
ANTHONY CAPUCCINELLO IRACI





2021 | Annual Report



Clean, efficient  
energy, for now  
and the future.

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A view inside the mechanical room of a building connected to district energy services.





## ■ MESSAGE FROM THE BOARD CHAIR

The Lulu Island Energy Company (LIEC) continues to grow and provide exemplary service to customers while simultaneously achieving community objectives to create a more sustainable future for Richmond. In the face of uncertainty and changing working conditions, district energy service areas expanded to meet increased demand for clean energy. We understand that our customers were at home more often than usual due to health orders, making our services that much more critical. Despite challenges caused by the pandemic, the Alexandra, Oval Village and City Centre District Energy Utilities further expanded in order to meet demand while maintaining LIEC's commitment to efficient, reliable service to existing customers. Overall, the Company forged ahead after transitioning to a flexible workplace and continued to maintain its commitment to customer service excellence. As expected, the LIEC team focused on supporting new connections to the district energy network; new development and construction continued in 2021 without any delays. All of these important events are summarized in this year's annual report.

2021's work by the Company solidified LIEC's district energy business as an important contributor in achieving the City of Richmond's vision. In this context, I present the 2021 Annual Report to our shareholder, the City of Richmond, as a record of the company's financial performance and customer service excellence.

A handwritten signature in black ink, appearing to read 'Jerry Chong'.

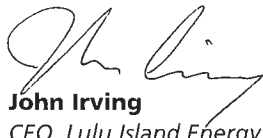
**Jerry Chong**  
*Chair, Lulu Island Energy Company*

## MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

In 2021, LIEC expanded infrastructure and service areas despite ongoing challenges brought on from the COVID-19 pandemic. The uncertainty caused by the pandemic was mitigated by LIEC's focus on customer service and attention to operational excellence. Despite facing industry-wide supply chain disruptions that resulted in cost escalation and procurement challenges, staff diligently collaborated with partners and customers to ensure the timely and efficient delivery of scheduled projects.

LIEC continued to grow service areas by connecting new customers to the district energy network in 2021. The Alexandra District Energy Utility (ADEU), powered by geo-exchange technology, continued its expansion by connecting a new residential development. During an unprecedented heatwave, the ADEU met 100% of the cooling demand from customers using its low-carbon geo-exchange system. The Oval Village District Energy Utility (OVDEU) continued expansion with the addition of a mixed-use development which will be connected to the future permanent sewer heat recovery energy centre. Completion of this project is estimated for early 2025. LIEC was recognized by the Community Energy Association as Richmond was presented with the 2021 Climate and Energy Action Award, highlighting the district energy implementation program and its exemplary best practices in technology, impact and economics.

The City Centre service area continued to grow to approximately 5 million ft<sup>2</sup> with the addition of another development. Significant construction activity is underway as the first City Centre District Energy Utility building is developed. New developments in this area will be serviced by low carbon energy systems in the coming years. I am pleased to report that LIEC continues to be Richmond's solution for delivering "clean, efficient energy for now and the future." This report provides a summary of the outcomes of the company's hard work with its partners and customers in 2021 and its excellent financial standing.



**John Irving**  
CEO, Lulu Island Energy Company





CNCL - 70  
(Special)



## ■ ABOUT THE COMPANY AND DISTRICT ENERGY IN RICHMOND

LIEC is a wholly-owned municipal corporation, established to operate district energy utility systems in the City of Richmond on the City's behalf.

The goals of LIEC are to:

- establish a highly efficient district energy network providing heating and, in some cases cooling services to buildings at competitive rates;
- provide reliable, resilient local energy for the benefit of its customers;
- operate and maintain low carbon energy systems;
- position the City of Richmond to be a national and international leader in district energy utilities;
- develop and manage effective partnerships; and
- sustain long term financial viability.

LIEC was incorporated in August 2013. On December 31, 2021, LIEC had tangible capital assets of \$38,905,146 relating to the development of the Alexandra and Oval Village District Energy Utilities. For the year ended December 31, 2021, LIEC had revenues of \$6,718,069 related to meter billing fees, service fees, connection fees, and energy model review fees, and total expenses of \$5,807,029.

### Did you know?

The ADEU met 100% of the cooling demand from the 2.4 million ft<sup>2</sup> service area during the record-breaking 2021 heatwave.



Distribution piping at the OVDEU.

## ■ SPOTLIGHT ON 2021: PROGRESS REPORT

### LIEC Provides Essential Service During the COVID-19 Pandemic

During the COVID-19 pandemic in 2021, LIEC continued to deliver uninterrupted service to customers while energy demand increased due to residents staying at, and working from home. Even with LIEC delivering business as usual services, customer rate increases were kept below conventional utility rates to support residents during this time of economic hardship. LIEC's goal was to provide the highest level of service to its growing customer base so customers could focus on navigating the challenges brought on by COVID-19.

### Historic Heatwave: Alexandra District Energy Utility (ADEU) Meets High Cooling Demand

In June, demand for cooling was a top priority for Richmond residents as temperature records were broken during a heatwave. Even with substantial increases in cooling usage, the ADEU met 100% of the cooling demand from the 2.4 million ft<sup>2</sup> of connected floor area using its low-carbon geo-exchange system and evaporative fluid coolers. The ADEU provides resilient and reliable service to customers through unprecedented temperature fluctuations.

### Oval Village District Energy Utility (OVDEU) Service Area Expansion

As of 2021, the OVDEU's three interim energy centres provide heating and domestic hot water energy services to 11 buildings in the Oval Village (6 multi-unit residential buildings and 5 mixed-use buildings) connecting 2,541 units and just over a total of 2.9 million ft<sup>2</sup> of floor space. The interim energy centres, complete with 15MW of heating capacity, provided a reliability of 99.8%. A permanent energy centre is scheduled to be completed by 2025 which replaces the interim energy centres currently servicing the OVDEU. The permanent energy centre will extract renewable thermal energy from the Gilbert Trunk sanitary force main sewer to provide clean energy to Richmond residents in the service area. The OVDEU also added a mixed-use building to its network in 2021 which was connected in Q2.

### ADEU New Building Connections

One new development was connected to the ADEU in 2021, increasing the total connected floor area to over 2.4 million ft<sup>2</sup>. LIEC's flagship geo-exchange system now provides energy services to 13 buildings (10 multi-unit residential buildings, the Jamatkhana Temple, the Central at Garden City development, and Richmond's Fire Hall No. 3) connecting over 2,200 residential units and over 300,000 ft<sup>2</sup> of non-residential floor area. As of December 31, 2021, the ADEU system delivered 48,427MWh of energy to customers for space heating, cooling and domestic hot water heating. Due to the efficient operation of the system, more than 90% of the energy delivered was low carbon energy from the local geo-exchange fields. In 2021 ADEU was also awarded EuroHeat and Power's 2021 Emerging Market Award, recognizing the utility's excellence in providing sustainable energy solutions.



## District Energy in the City Centre Area

The City Centre District Energy Utility's (CCDEU) due diligence process, assessment of infrastructure strategies and low carbon solutions is being finalized. LIEC implemented a servicing strategy to expand LIEC's customer base that enables immediate implementation of GHG emissions reduction for upcoming developments throughout the City Centre area. This servicing strategy requires developments in the City Centre area undergoing rezoning to utilize onsite low-carbon energy plants so that LIEC can provide immediate heating, cooling, and domestic hot water heating service to these customers. To-date, 11 developments have been incorporated into the CCDEU bylaw service area, amounting to approximately 5 million ft<sup>2</sup>. The majority of this space is residential use, with some commercial, office and retail uses as well. LIEC eagerly anticipates the connection of the first CCDEU building as it nears the end of its development. The CCDEU systems are under various stages of development and will service customers in 2022.

## Barn Owl Box Update at the ADEU

Barn owl nesting boxes were included in the design of the ADEU energy centre with the hope that barn owls would use them as a nesting location. In April 2021, LIEC was pleased to find that a barn owl had been brooding in the owl box attached to the ADEU energy centre. The Fraser Valley Conservancy's tracking system determined that this individual was likely born in another owl box in Richmond. These boxes will provide a safe home for barn owls, as well as nearby access to a community parks for hunting. LIEC is not only committed to providing clean energy to Richmond residents but also to taking measures to ensure community wildlife is protected in the process.



The ADEU network is further expanded to provide more customers with clean energy.

## LOOKING FORWARD: 2022 WORK PLAN

### Ongoing Development in the Oval Village Area

Development activity continues in the Oval Village DEU service area. LIEC continuously monitors development activity and is working diligently with the OVDEU concessionaire, Corix Utilities, to ensure OVDEU customers receive quality service and build the necessary infrastructure to service new developments. With the receipt of \$6.2 million in funding from the CleanBC Communities Fund in 2020, LIEC has commenced a sewer heat recovery energy centre (SHR) project which will serve as the permanent energy centre for the OVDEU. This project will increase service capabilities and be completed by 2025. The service area also expects two new connections in 2022, Aspac Lot 13 and Aspac Lot 17, which will add over 532,000 ft<sup>2</sup> of floor space to be serviced by the OVDEU. By leveraging expertise in design, construction and operation of district energy utilities, the OVDEU team will ensure the delivery of 2022 expansion projects are on time and budget, while continuing to provide resilient and reliable energy services to our existing customers.

#### Anticipated Occupancy

Aspac Lot 13 – 6899 Pearson Way	2022
Aspac Lot 17 – 6811 Pearson Way	2022
Riva Building 4 – 7771 Alderbridge Way	2023
Aspac Lot 7a – 5491 No 2 Road	2024
Aspac Lot 7a – 5491 No. 2 Road	2024



Distribution piping being implemented to connect another building to the OVDEU.

## Alexandra District Energy Utility Expansion

After rapid growth in 2021, expansion and development in the West Cambie neighbourhood continues. One new building is expected to connect to ADEU in 2022. This new developments will increase the connected floor by over 200,000 ft<sup>2</sup>, bringing the total serviced area to 2.5 million ft<sup>2</sup> with 14 connected buildings. Efficient planning allowed for the prior installation of distribution piping for this building, so the connection will be completed with no impact to the public roadways. The implementation of new supervisory control and data acquisition (SCADA) system and remote video monitoring system will allow LIEC to improve its remote operation capabilities, lowering operating costs and improving system reliability. Additionally, replacement piping will be installed along McKim Way due to operational issues with the current distribution piping in the area.

### Anticipated Occupancy

Primstone Gardens – 4008 Stolberg Street	2022
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## New District Energy Services in City Centre

Once CCDEU due diligence for a servicing strategy is complete, LIEC will be providing to City Council, recommendations on the expansion of the City Centre DEU service area, as well as the proposed implementation delivery model. LIEC staff continue to work closely with the developments already committed to installing onsite low carbon energy plants to ensure the infrastructure is designed and constructed to meet LIEC's high quality standards, and is ready to connect to future CCDEU infrastructure.





Rapid development continues in Richmond.

## ALEXANDRA DISTRICT ENERGY UTILITY

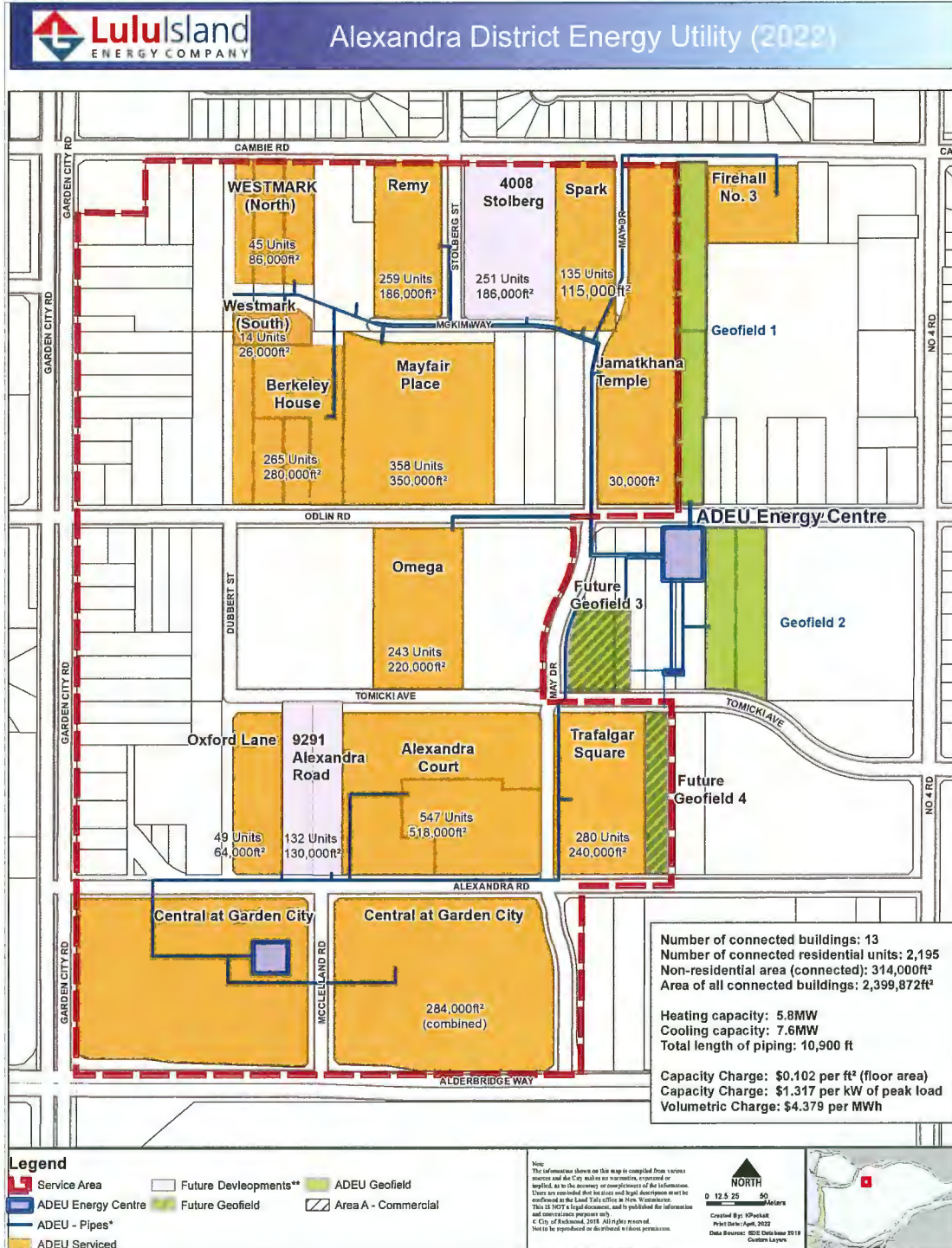
ADEU has been operating since 2012 as a sustainable energy system which provides a centralized energy source for heating, cooling and domestic hot water heating for residential and commercial customers located in the Alexandra/West Cambie neighbourhood. ADEU assists in meeting the community-wide greenhouse gas emission reduction targets adopted as part of Richmond's Sustainability Framework by providing buildings with renewable low carbon energy through geo-exchange technology.

### Infrastructure Overview

<b>Energy Station</b>	9600 Odlin Road, Richmond, BC V6X 1C9 Satellite Energy Plant (Area A) — 4751 McClelland Road, Upper Parkade, Richmond, BC V6X 0M5
<b>Service</b>	Residential: Space heating, cooling and domestic hot water Commercial: Space heating and cooling
<b>Technology</b>	ADEU Phases 1 and 2 were commissioned in July 2012. The ADEU will potentially service up to 3,100 residential units and 1.1 million ft <sup>2</sup> of commercial uses at build out in approximately 10 to 15 years. Heating, cooling and domestic hot water are provided to connected residential buildings, and only heating and cooling for large commercial and institutional spaces are provided through a hydronic (water) energy delivery system. In heating mode, ground source heat pump technology extracts heat (geothermal energy) from the ground via a network of vertical pipe loops. Built-in back up natural gas-fired boilers provide 100% back up in the event that the ground source heat pumps shut down or require maintenance. This system cools buildings as well. During the summer months, the energy flow is reversed and heat is extracted from buildings and pumped into the ground. In this way, energy that was extracted from the ground for heating buildings is "recharged" allowing heat to be available for the next cold season. Phase 3, completed in 2015, added heating and cooling capacity through the addition of a second geo-exchange field, two cooling towers and three boilers. Furthermore, Phase 4 completed in 2016, brought the addition of a new satellite energy plant at the Central at Garden City (Smart Centres) commercial development. Located on the rooftop parkade, this plant utilizes efficient air-source heat pump technology to provide space heating and cooling for the large commercial customers within the development. This new energy plant is also interconnected with the current ADEU energy plant allowing for energy sharing with the main ADEU distribution system. Individual buildings connected to the ADEU require smaller sized boilers for increasing the temperature of domestic hot water and reducing the overall cost of maintenance to buildings. The performance of the system is monitored continuously, providing the highest level of reliability to customers.

<b>Length of Distribution Network</b>	3,660 m (12,000 ft.) of high-density polyethylene piping 726 vertical closed-loop boreholes, each 250 ft. deep
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## Alexandra District Energy Utility Service Area Map



## Did you know?

Air source heat pumps, used in district energy infrastructure, can extract “usable heat” from sub-zero outdoor temperatures.

## Customers and Energy Rates

Customer energy rates are set in the City of Richmond Service Area Bylaws, which are approved by City Council. This approach ensures that transparency and accountability is maintained for all district energy projects in the City. The rate and bylaw provisions are reviewed and approved by Council on an annual basis.

Energy rates are set based on City Council’s objective to provide customers with energy costs that are equal to or less than conventional system energy costs, based on the same level of service. In the absence of district energy services, a typical building would have in-building equipment that would use a combination of natural gas and/or electricity and result in operational and maintenance expenses. This is the basis for comparing district energy rate costs with conventional utility, energy and maintenance costs. District energy customer rates in Richmond have met this requirement. As with other energy utilities, this rate includes utility costs related to infrastructure development, operation and maintenance, commodities (e.g. electricity and natural gas) and other administrative costs.

### 2021 Rate Structure

Each building includes one master meter. Strata corporations are billed on a quarterly basis, at a rate that is comprised of two charges:

- Capacity charge: Charge based on the gross square floor area of the building ( \$0.0992 per ft<sup>2</sup>)
- Volumetric Charge: Charge based on the energy consumed by the building (\$15.808 per MWh)

### Buildings

Building Name	Use	Area (ft <sup>2</sup> )
Remy – 4099 Stolberg Street	Residential	186,000
Mayfair Place – 9399 Odlin Road	Residential	351,000
Omega – 9333 Tomicki Avenue	Residential	222,000
Alexandra Court – 9399 Alexandra Road	Residential	518,000
Jamatkhana Temple – 4000 May Drive	Institutional	30,000
Oxford Lane – 4588 Dubbert Street	Residential	64,000
Trafalgar – 9500 Tomicki Avenue	Residential	262,000
Camden Walk (North) – 9211 McKim Way	Residential	62,800
Spark – 4033 May Drive	Residential	115,600
Berkeley House – 9233 Odlin Road	Residential	282,500



Building Name	Use	Area (ft <sup>2</sup> )
Central at Garden City – Walmart – 9251 Alderbridge Way	Commercial	160,000
Central at Garden City, Building A/B – 4751 McClelland Road	Commercial	124,000
City of Richmond Fire Hall #3 – 9660 Cambie Road	Institutional	24,995

### Customer Service

LIEC provides support 24 hours a day, 7 days a week for ADEU customers. Customers can contact customer service via a telephone hotline by calling 1-844-852-5651.

### Energy and Greenhouse Gas Emissions (GHGs)

The driving forces behind the establishment of district energy systems in Richmond were to reduce GHG emissions that cause climate change, develop low carbon renewable energy systems and support local green jobs.

The amount of energy delivered by the end of 2021 was 48,427MWh. Greenhouse gas performance by the end of 2021 was 7,861 tonnes of CO<sub>2</sub>e avoided, equal to removing over 2,300 cars from City of Richmond roads for one year.

### 2021 Financial Summary

The total net book value of ADEU's capital asset as at December 31, 2020 is \$22 million. Revenue from ADEU customers has been gradually increasing in pace with the occupancy of serviced buildings and new connected buildings. Revenue from operations for 2021 is \$2,744,222 (2020-\$2,419,564). Revenue increased by \$324,658, mainly due to additional energy delivered as a result of a new building connections.

Corix Utilities remains engaged as the system operator under contract, to perform functional verification ensuring continuous operation and fine tuning of the system. Total cost of sales (utilities, contract services, depreciation expenses) are \$1,392,628 (2020-\$1,208,184). The increase of \$184,444 is mainly due to additional energy sales as a result of new connected buildings.

In the context of a growing customer base, ADEU financial, operational and environmental results show the DEU is progressing as planned.



District energy infrastructure within the ADEU plant.

## ■ OVAL VILLAGE DISTRICT ENERGY UTILITY

After the City’s successful implementation of the ADEU, the OVDEU was the first district energy project in development under LIEC’s direct oversight following Richmond City Council’s adoption of the OVDEU Service Area Bylaw in April 2014. In October 2014, LIEC entered into a Concession Agreement with Corix Utilities Inc. to design, construct, finance, operate and maintain the system. Today, over 2,541 residential units are receiving energy from the OVDEU. Space heating and domestic hot water heating energy is currently supplied from three interim energy centres (IECs). A permanent sewer heat recovery energy centre, planned for 2025, is under development to replace the IECs and produce low carbon energy harnessed from the Gilbert Trunk sanitary force main sewer. Similar to the ADEU, the OVDEU will assist in meeting the community-wide greenhouse gas emission reduction targets adopted as part of Richmond’s Sustainability Framework by providing buildings with renewable low carbon energy.

A system overview and service map for the Oval Village District Energy Utility is shown below.

### Infrastructure Overview

**Energy Station** Interim Energy Centre #1– 6111 Bowling Green Road, Richmond, BC  
 Interim Energy Centre #2– 7011 River Parkway, Richmond, BC  
 Interim Energy Centre #3– 7015 River Parkway, Richmond, BC

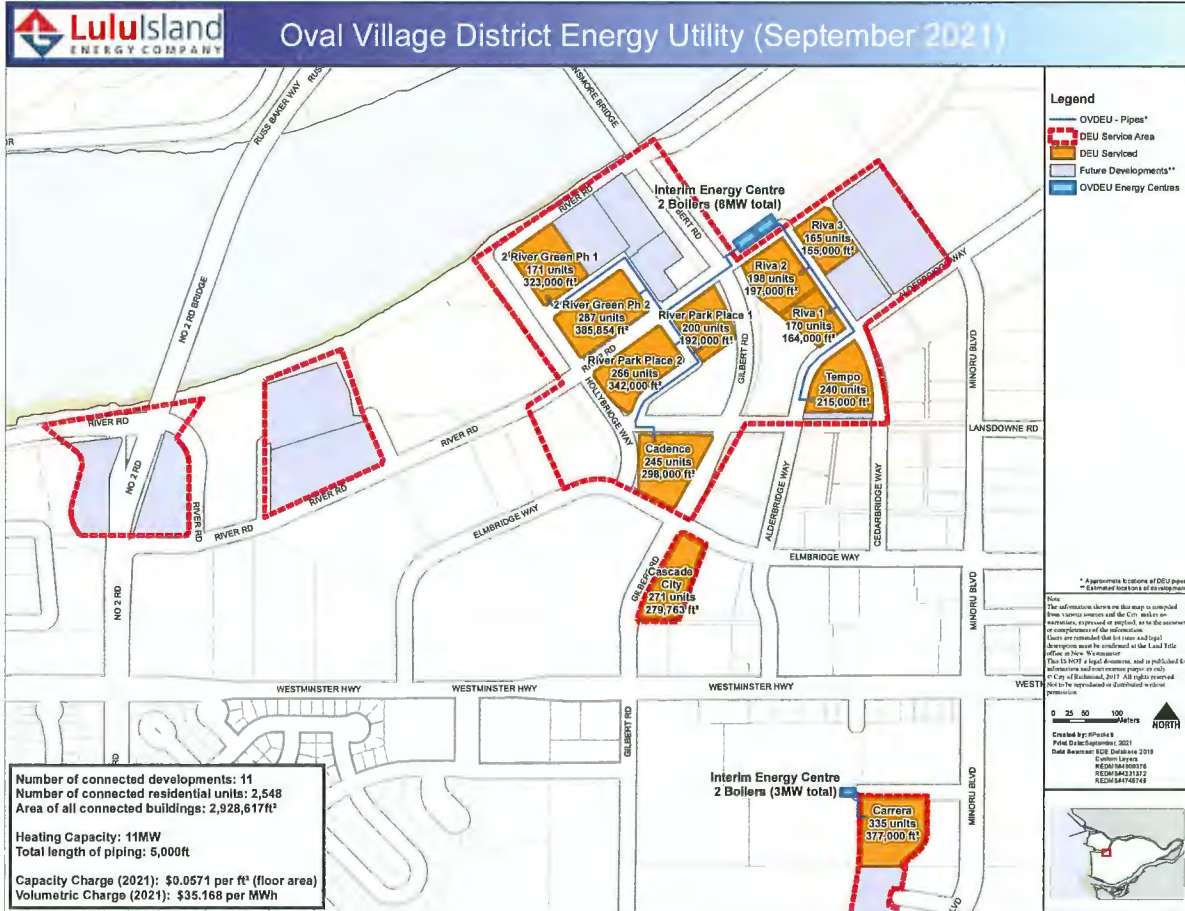
**Service** Residential: Space heating and domestic hot water heating

**Technology** The OVDEU started operations in 2015, and currently services 11 buildings with 2,541 residential units and over 2.9 million ft<sup>2</sup>. At full build-out the OVDEU will potentially service up to 5500 residential units and 6.4 million ft<sup>2</sup> of floor space. Energy for space heating and domestic hot water is provided to connected buildings through a hydronic (water) energy delivery system. Energy generated at two interim energy centres provides 15MW of heating capacity to service these buildings. These interim energy centres currently use high efficiency natural gas boilers to produce energy. The performance of the system is monitored continuously, providing a high level of reliability to customers. The interim energy centres will be replaced by a permanent, sewer heat recovery energy centre that will extract heat from the Gilbert Trunk sanitary force main sewer; currently under development with expected completion by 2025.

**Length of Distribution Network** 1,800m (5,900 ft.) insulated steel piping



## Oval Village District Energy Utility Service Area Map



## Customers and Energy Rates

Customer energy rates are defined in the City of Richmond's Service Area Bylaws, which are enacted by City Council. This approach ensures transparency and accountability is maintained for all DE projects in the City. The rate and bylaw provisions are reviewed and approved by Council on an annual basis.

Energy rates are established based on City Council's objective to provide customers with energy costs that are equal to or less than conventional system energy costs, based on the same level of service. In the absence of district energy services, a typical building would have in-building equipment that would use a combination of natural gas and/or electricity and result in operational and maintenance expenses. This is referred to as a "business as usual" (BAU) scenario and is the basis for comparing district energy rate costs with conventional utility, energy and maintenance costs. District energy customer rates in Richmond have met this requirement. As with other energy utilities, this rate includes utility costs related to infrastructure development, operation and maintenance, commodities (e.g. electricity and natural gas) and other administrative costs such as staffing.

### 2021 Rate Structure

Each building includes one master meter. Strata corporations are billed on a quarterly basis, at a rate that is comprised of three charges:

- Capacity charge: Charge based on the gross square floor area of the building (\$0.0571 per ft<sup>2</sup>)
- Volumetric Charge: Charge based on the energy consumed by the building (\$35.168 per MWh)
- Excess demand fee of \$0.166 of each watts per square foot of the aggregate of the estimated peak heating energy demand that exceeds 6 watts per square foot (applied one time, at building connection).

### Buildings

Building Name	Use	Area (ft <sup>2</sup> )
Carrera – 7368 Gollner Avenue	Residential	377,404
Riva Building 1 – 5399 Cedarbridge Way	Residential	155,942
Riva Building 2 – 5311 Cedarbridge Way	Residential	196,967
River Park Place 1 – 6888 River Road	Residential/ Commercial	191,662
Cadence – 7468 Lansdowne Road	Residential/ Commercial	276,826
Tempo – 7688 Alderbridge Way	Residential	214,266
Riva Building 3 – 7008 River Parkway	Residential	155,829

ASPAC Lot 9 – 6611 Pearson Way	Residential	323,111
River Park Place 2 – 6899 Pearson Way	Residential/ Commercial	342,000
ASPAC Lot 12 – 6622 Pearson Way	Residential	385,854
Cascade City – 5766 & 5788 Gilbert Road	Residential/ Commercial	279,763

### Customer Service

LIEC provides support 24 hours a day, 7 days a week to OVDEU customers. Customers can contact customer service via a telephone hotline by calling 1-844-852-5651.

### Energy and Greenhouse Gas Emissions (GHGs)

The amount of energy delivered by the end of 2021 was 83,981 MWh. The system has reduced greenhouse gas emissions by an estimated 2,123 tonnes of greenhouse gases (CO<sup>2</sup>e), equal to removing 459 cars from City of Richmond roads for one year. At full build-out, the OVDEU system is anticipated to annually reduce GHG emissions by almost 9,000 tonnes of CO<sub>2</sub> as compared to business as usual.

### 2021 Financial Summary

In October 2014, LIEC and Corix Utilities executed a Concession Agreement whereby LIEC would own the OVDEU infrastructure, and Corix would design, build, finance, operate and maintain OVDEU. Payments to Corix, under the Concession Agreement, are based on Corix's Annual Revenue Requirement, which is based on the utility cost of service rate-setting principles in British Columbia utilizing forward test years.

The total net book value of OVDEU capital assets as at December 31, 2021 is \$15.4 million. Revenue from OVDEU customers has been increasing in pace with the occupancy of serviced buildings and new connected buildings. Revenue from operations for 2021 is \$2,705,979 (2020-\$2,190,063). Revenue increased by \$515,916 compared to 2020. The increase was mainly due to additional energy delivered as a result of a new building connection.

The total estimated concession liability to finance the construction of the Oval Village District Energy Utility at full build-out is \$38,843,000, based on the 2021 capital plan. The concession liability will be accrued over time. The total concession liability balance outstanding as at December 31, 2021 is \$12,264,387.

In the context of a growing customer base, OVDEU financial, operational and environmental results show the DEU is progressing as planned.

### Did you know?

The reduction of GHG emissions at the end of 2020 translated into 6,700 tonnes of CO<sub>2</sub>e avoided, equal to removing 2,000 cars from Richmond roads for one year!



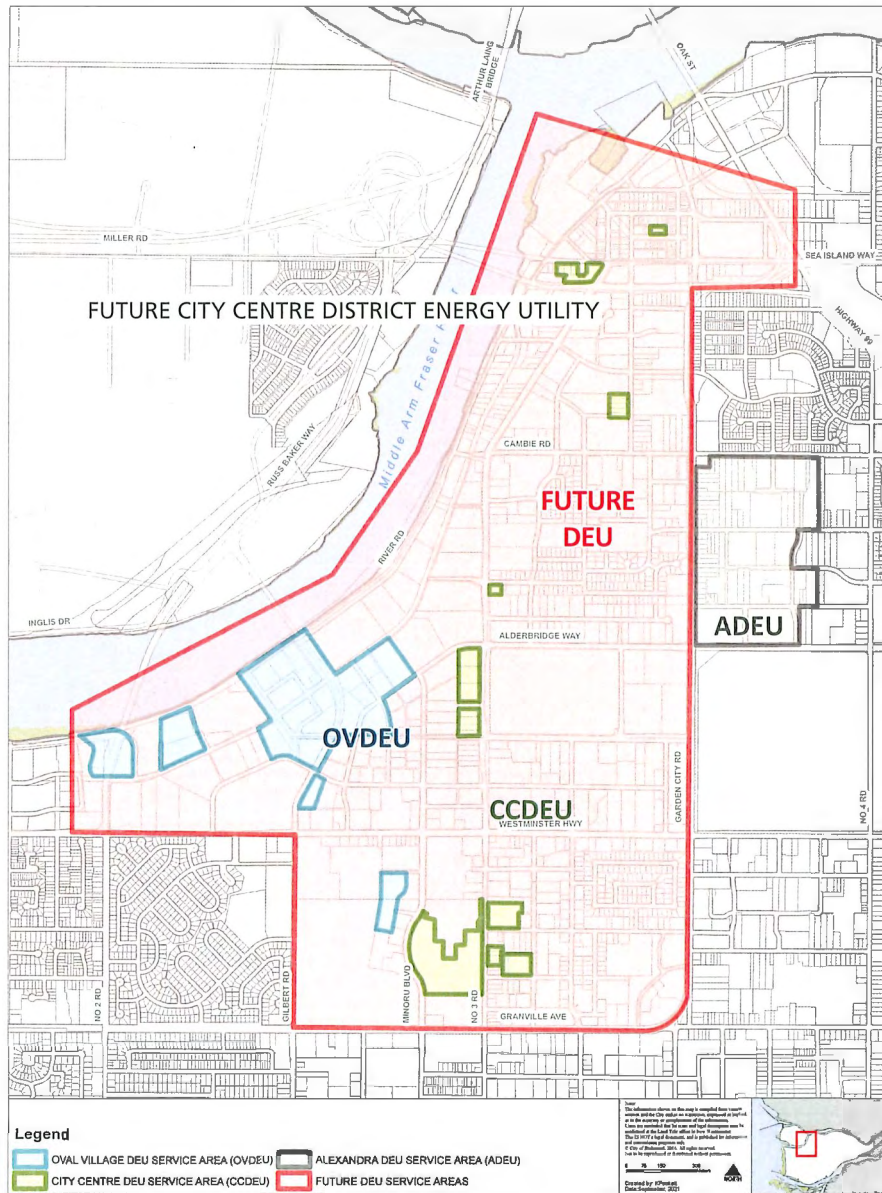
A development in the Oval Village nearly ready to connect to the DEU.



## CITY CENTRE DISTRICT ENERGY UTILITY

While the City Centre DEU (CCDEU) due diligence process is being finalized, Richmond established the City Centre DEU service area to expand LIEC's customer base and enable immediate GHG emissions reductions. These new developments are building onsite low-carbon energy plants. To-date, 11 developments have been incorporated into the service area, amounting to approximately 5 million ft<sup>2</sup>. It is anticipated that operation of the first low carbon energy plants under this servicing strategy will begin in 2022.

### City Centre District Energy Utility Service Area Map



## ■ APPENDIX A: AWARDS & RECOGNITION

EuroHeat and Power	<b>2021 Emerging Market Award</b>	2021	The Emerging Market Award, which has recognized the ADEU, provides global recognition to organizations that excel in demonstrating the overall importance of district energy systems in providing sustainable energy solutions in countries without a fully established district energy market.
Community Energy Association	<b>2021 Climate &amp; Energy Action Award</b>	2021	The Climate and Energy Action Award, in the Community Planning and Development category, acknowledges Richmond's successful District Energy Implementation Program. The City's leadership and implementation of the program shows best practices in technology, impact and economics.
International District Energy Association	<b>IDEA Innovation Award</b>	2020	IDEA presents this award to the company whose project displays technological, engineering and operational innovations within the district utility energy industry.
Energy Globe Foundation	<b>Canadian Energy Globe National Award</b>	2020	The National Energy Globe Award recognizes projects that conserve energy and use renewable or emission-free sources. The national award is presented annually to projects saving the environment through personal action, sustainable projects or campaigns for raising awareness in sustainability.
Association of Energy Engineers	<b>Canada Region Energy Project of the Year Award</b>	2019	The Association of Energy Engineers awards this to a project that takes a first-of-a-kind approach wherever it has been implemented.



The 2021 Emerging Market Award recognizing excellence at the ADEU.

Canadian Association of Municipal Administrators	<b>CAMA Awards of Excellence – Environment Award</b>	2019	This award recognizes the commitment of a municipality to environmentally sustainable governance, to protecting the environment and to combating climate change. Awards are granted to programs, projects or services that have made a significant and positive impact on the environment.
International District Energy Association	<b>Public Sector District Energy Leadership Award</b>	2018	This award recognized the commitment and vision shown by the City of Richmond's Council for its ongoing support for district energy in Richmond.
Association of Energy Engineers	<b>Canada Region Innovative Energy Project of the Year Award</b>	2018	This award recognized the ADEU Phase 4 expansion project for its innovative approach to service the Central at Garden City development using renewables and making a significant impact on climate change.
Association of Consulting Engineering Companies	<b>Canadian Consulting Engineering Award of Excellence</b>	2017	This award is the most prestigious mark of recognition in Canadian engineering and was given to the Alexandra District Energy Utility expansion project to connect the Central at Garden City development for its high quality of engineering, imagination and innovation.
Association of Energy Engineers	<b>Canada Region Institutional Energy Management Award</b>	2017	The Canada Region Institutional Energy Management Award recognizes organizations and companies for their dedication and performance in the energy efficiency and renewable energy industry. This prestigious award recognizes the City for leading the way with its District Energy implementation program.

Canadian Wood Council	<b>UBCM Community Recognition Award</b>	2017	This award recognized the leadership in the use of wood, both architecturally and structurally, in the City's Alexandra District Energy Utility building constructed during the Phase 3 expansion. The building construction used local, innovative low carbon wood for structural elements as well as interior and exterior cladding.
International District Energy Association	<b>System of the Year</b>	2016	IDEA System of the Year is the highest honour IDEA can confer on a district energy system. It recognized the Alexandra District Energy Utility as an exemplary district energy system that provides high-level performance and service that furthers the goals of the district energy industry.
Union of British Columbia Municipalities	<b>Community Excellence Award</b>	2016	The Community Excellence Award recognized the City's district energy program for its exemplary leadership through policies, decision-making and actions that have made a difference for its residents.
Canadian Geo-Exchange Coalition	<b>Excellence Award</b>	2014	The Canadian Geo-exchange Coalition Excellence Award recognized the Alexandra District Energy Utility geothermal/geo-exchange system for its quality of installation and design.
Association of Professional Engineers and Geoscientists of British Columbia (APEGBC)	<b>Sustainability Award</b>	2014	APEGBC's Sustainability Award was created to recognize the important contribution that engineering and geoscience makes to the well-being of human life and ecosystems on which we all depend, and was awarded in recognition of the Alexandra District Energy system.

Canadian Consulting Engineer Magazine & the Association of Consulting Engineering Companies – Canada	<b>Award of Excellence</b> (Natural Resources, Mining, Industry and Energy Category)	2013	This award is the most prestigious mark of recognition in Canadian engineering and was given to the Alexandra District Energy Utility project for its high quality of engineering, imagination and innovation.
Public Works Association of British Columbia	<b>Project of the Year</b>	2013	This award is given to a municipality that constructs a major and complex public works or utilities project that meets specific criteria including innovative design with project benefits for the community and environment. It was awarded to the City in recognition of the Alexandra District Energy system
International District Energy Association	<b>Certificate of Recognition– Innovation Awards</b>	2013	This program highlighted the Alexandra District Energy System as an example of engineering, technology and operational innovation within the district energy industry.
ENERGY GLOBE Foundation	<b>Canadian Energy Globe National Award</b>	2013	The national ENERGY GLOBE Award distinguished the Alexandra District Energy Utility as the best national project for its focus on energy efficiency, renewable energy and the conservation of resources.



## ■ APPENDIX B: MANAGEMENT'S DISCUSSION AND ANALYSIS

### About the Company

LIEC, a corporation wholly-owned by the City of Richmond, was established to provide district energy services on behalf of the City to reduce community GHG emissions in Richmond. 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. LIEC currently owns and operates the Alexandra District Energy Utility (ADEU), Oval Village District Energy Utility (OVDEU), and continues to advance new district energy opportunities such as the City Centre District Energy Utility (CCDEU). All capital and operating costs are recovered through revenue from meter billings, ensuring that the business is financially self-sustaining.

ADEU provides heating and cooling services to residential and commercial buildings in the ADEU service area, comprising over 2,200 residential units and over 2.4 million ft<sup>2</sup> of serviced floor area. While some electricity is consumed for pumping and equipment operations, nearly 100% of this energy is renewable. This energy is produced locally from geo-exchange fields in the greenway corridor and West Cambie Park, as well as highly efficient air-source heat pumps.

The OVDEU system is managed through a 30-year concession agreement where Corix Utilities Inc. (Corix) designs, builds, finances, and maintains infrastructure with LIEC maintaining the ownership of the utility. There are 11 residential buildings connected to the OVDEU system with 2,541 residential units and over 2.9 million ft<sup>2</sup> of floor area receiving energy from the utility. Energy is currently supplied from the two interim energy centres with natural gas boilers, which combined, provide 15 MW of heating capacity. LIEC is currently designing an energy centre that utilizes sewer heat recovery technology and will become the permanent energy centre for OVDEU. Once completed (estimated 2025), the system will be able to produce up to 80% of low-carbon energy from the Gilbert Trunk sanitary sewer force main.

While the City Centre District Energy Utility (CCDEU) due diligence process has been finalized, LIEC and City staff collaborated to develop the CCDEU service area to expand LIEC's customer base and enable immediate GHG emissions reductions in the City Centre area. To-date, 11 developments have been incorporated into the CCDEU bylaw service area, amounting to approximately 5 million ft<sup>2</sup>. It is anticipated that servicing of the first development under this servicing strategy will begin in 2022.

## Financial Summary

As a Government Business Enterprise (GBE), LIEC is a financially self-sustaining entity and its financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS).

LIEC's overall financial position improved by \$3,323,686 in 2021 with total assets of \$56,336,881 (2020-\$53,013,195). Total assets are comprised of current assets (cash, investments, and receivables) totaling \$17,431,735 (2020-\$15,653,350) and non-current assets (plant and equipment) of \$38,905,146 (2020-\$37,359,845). The current assets increased by \$1,778,385 mainly due to income generated from operations and advanced payments from developers for future building connections.

LIEC's liabilities consist of accounts payables, deferred contributions and concession liabilities. The deferred developers' contributions are recovering the cost of the service connection, including installation of the energy transfer station infrastructure. The concession liabilities are linked to the 30 year concession agreement, which represents the anticipated cash outflow for future obligations under the agreement for the capital and operating costs of the assets.

The shareholder's equity represents the net worth of the company. As at December 31, 2021, LIEC's shareholder equity is \$33,647,540 (2020-\$32,736,500), which indicates that the company's value has increased by \$911,040.

The revenue consists of district energy services and metered billings which reflect the full year energy sales based on the actual customers' energy usage and consumption. The revenue increased by \$840,573 to \$6,431,201 (2020-\$5,590,628), mainly due to new building connections. The 2021 revenue is in line with the Company's projections.

The cost of sales includes contract services, utilities (electricity and natural gas) and amortization expenses. The total cost of sales increased by \$527,166 to \$3,123,879 (2020-\$2,596,713) due to more energy sales to customers. In comparison with the 2021 operating budget, the contract expense is below the budget by 18% mainly due to less unscheduled repairs and maintenance. The utility expenses are below budget by 19%, mainly due to timing of new building connections and moderate weather conditions.

The general and administration expenses are expenditures that LIEC incurs to engage in business development activities and includes salaries and benefits, administration expenses, insurance and professional fees. The administration expense includes a fee of \$129,412 (2020-\$67,863), paid by LIEC to the City of Richmond for the support provided by the City. The increase of salaries and benefits to \$841,736 (2020-\$697,113) is mainly due to ensuring that LIEC follows the principles to maintain its GBE status by ensuring that management time is recorded in the appropriate corporation. The insurance premiums are higher due to a general insurance rate increase and the additional capital assets being insured. Overall, general and administration expenses as a percentage of revenues are below budget.

Overall, LIEC's 2021 net income was \$911,040 (2020—\$1,322,336). The net income as percentage of revenue is 14% (2020—24%). Compared to 2020, net income decreased by \$411,296 due to the unplanned and non-recurring expenses related to the pipe construction defect that resulted in a leak and related clean up of the released heat transfer fluid in the Alexandra DEU service area. However, net income exceeded the Company's forecast by 130%. Due to the prompt response and excellent spill management procedures, the leak was repaired immediately and the spill was remediated expeditiously; however, area monitoring needs to continue pursuant to provincial regulatory requirements. LIEC staff are assessing options for cost recovery from the external parties at fault.

LIEC's financial sustainability and future growth must be taken into consideration when reviewing its financial results. LIEC's success is dependent upon developing in-house expertise and securing funds for future capital replacements as existing infrastructure components reach their end of life, as well as to cover expenses of unexpected and rare events such as the recent Alexandra District Energy Utility pipe leak. Other important events include the planning of future projects, which consists of research and development, and exploratory reviews of future technology and opportunities. LIEC has retained earnings that will be utilized to build a reserve fund for future capital replacement and to ensure long-term rate stability for ratepayers.







### ***Responsibilities of Management and Those Charged with Governance for the Financial Statements***

Management is responsible for the preparation and fair presentation of the financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

### ***Auditors' Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.



- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Entity to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

A handwritten signature in black ink that reads 'KPMG LLP' in a cursive, slightly slanted font. A horizontal line is drawn underneath the signature.

Chartered Professional Accountants

Vancouver, Canada  
April 12, 2022

**LULU ISLAND ENERGY COMPANY LTD.**

## Statement of Financial Position

December 31, 2021, with comparative information for 2020

	2021	2020
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 11,707,794	\$ 8,604,504
Accounts receivable (note 6)	1,676,423	3,034,510
Investments (note 7)	4,047,518	4,014,336
	<u>17,431,735</u>	<u>15,653,350</u>
Non-current assets:		
Plant and equipment (note 9)	38,905,146	37,359,845
	<u>\$ 56,336,881</u>	<u>\$ 53,013,195</u>
<b>Liabilities and Shareholder's Equity</b>		
Current liabilities:		
Accounts payable and accrued liabilities (note 8)	\$ 2,671,416	\$ 1,790,919
Current portion of deferred contributions (note 10)	337,732	522,932
Current portion of concession liability (note 11)	3,312,613	2,635,727
	<u>6,321,761</u>	<u>4,949,578</u>
Non-current liabilities:		
Deferred developer contributions (note 10)	7,415,806	6,829,428
Concession liability (note 11)	8,951,774	8,497,689
	<u>16,367,580</u>	<u>15,327,117</u>
Shareholder's equity:		
Share capital and contributed surplus (note 15)	27,397,115	27,397,115
Retained earnings	6,250,425	5,339,385
	<u>33,647,540</u>	<u>32,736,500</u>
Commitments and contingencies (note 13)		
	<u>\$ 56,336,881</u>	<u>\$ 53,013,195</u>

See accompanying notes to financial statements.

Approved on behalf of the Board:



Director



Director



**LULU ISLAND ENERGY COMPANY LTD.**

## Statement of Net Income and Other Comprehensive Income

Year ended December 31, 2021, with comparative information for 2020

	2021	2020
Revenue (note 14)	\$ 6,431,201	\$ 5,590,628
Cost of sales:		
Operating expenses	1,788,480	1,447,955
Depreciation	1,335,399	1,148,758
	<u>3,123,879</u>	<u>2,596,713</u>
Gross profit	3,307,322	2,993,915
General and administrative expenses	<u>1,043,129</u>	<u>895,148</u>
Income before undernoted items	2,264,193	2,098,767
Developer contributions, other income (expenses) and net finance cost:		
Developer contributions (note 10)	237,347	178,502
Other income (note 14)	49,521	24,628
Other expenses (note 8)	(1,084,975)	(723,000)
Net finance cost (note 5)	(555,046)	(256,561)
	<u>(1,353,153)</u>	<u>(776,431)</u>
Net income and other comprehensive income	<u>\$ 911,040</u>	<u>\$ 1,322,336</u>

See accompanying notes to financial statements.

**LULU ISLAND ENERGY COMPANY LTD.**

## Statement of Changes in Equity

Year ended December 31, 2021, with comparative information for 2020

	Share capital (note 15)	Contributed surplus (note 15)	Retained earnings	Shareholder's equity
Balance, January 1, 2020	\$ 5	\$ 27,397,110	\$ 4,017,049	\$ 31,414,164
Net income and other comprehensive income	-	-	1,322,336	1,322,336
Balance, December 31, 2020	5	27,397,110	5,339,385	32,736,500
Net income and other comprehensive income	-	-	911,040	911,040
Balance, December 31, 2021	\$ 5	\$ 27,397,110	\$ 6,250,425	\$ 33,647,540

See accompanying notes to financial statements.

**LULU ISLAND ENERGY COMPANY LTD.**

## Statement of Cash Flows

Year ended December 31, 2021, with comparative information for 2020

	2021	2020
Cash provided by (used in):		
Cash flows provided by (used in) operating activities:		
Net income and other comprehensive income	\$ 911,040	\$ 1,322,336
Adjustments for:		
Depreciation	1,335,399	1,148,758
Recognition of deferred contributions	(237,347)	(178,502)
Other income	(12,978)	-
Finance expense on concession liability	672,135	426,147
Changes in non-cash operating working capital:		
Accounts receivable	1,358,087	(1,731,813)
Accounts payable and accrued liabilities	880,497	1,013,427
Net cash provided by operating activities	4,906,833	2,000,353
Cash flows provided by (used in) investing activities:		
Additions to plant and equipment	(1,460,215)	(1,858,630)
Deferred developer contributions	638,525	1,347,638
Cash receipts from sales of investments	4,014,336	5,592,923
Cash payments to acquire investments	(4,047,518)	(4,014,336)
Net cash provided by (used in) investing activities	(854,872)	1,067,595
Cash flows provided by (used in) financing activities:		
Concession liability (note 11)	(948,671)	(696,546)
Net cash used in financing activities	(948,671)	(696,546)
Increase in cash and cash equivalents	3,103,290	2,371,402
Cash and cash equivalents, beginning of year	8,604,504	6,233,102
Cash and cash equivalents, end of year	\$ 11,707,794	\$ 8,604,504
Non-cash transactions:		
Additions to plant and equipment	\$ (1,370,459)	\$ (3,115,250)
Concession liability	1,370,459	3,115,250

See accompanying notes to financial statements.

## LULU ISLAND ENERGY COMPANY LTD.

Notes to Financial Statements

Year ended December 31, 2021

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### 1. Incorporation and nature of business:

The Lulu Island Energy Company Ltd. (the "Company") was incorporated on August 19, 2013 under the Business Corporations Act of British Columbia as a municipal corporation wholly-owned by the City of Richmond (the "City"). The address of the Company's registered office is 6911 No. 3 Road, Richmond, British Columbia, V6Y 2C1.

The business of the Company is to develop, manage and operate district energy utilities in the City, including, but not limited to, energy production, generation or exchange, transmission, distribution, maintenance, marketing and sale to customers, customer service, profit generation and financial management. The Company also provides advisory services for energy and infrastructure.

### 2. Basis of presentation:

#### (a) Statement of compliance:

These financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRSs") as issued by the International Accounting Standards Board ("IASB").

These financial statements were approved and authorized for issue by the Board of Directors April 12, 2022.

#### (b) Basis of measurement:

These financial statements have been prepared on the historical cost basis and on a going concern basis.

#### (c) Functional and presentation currency:

These financial statements are presented in Canadian dollars, which is the Company's functional currency.

#### (d) Use of estimates and judgments:

The preparation of financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

**LULU ISLAND ENERGY COMPANY LTD.**

Notes to Financial Statements (continued)

Year ended December 31, 2021

**2. Basis of presentation (continued):**

## (d) Use of estimates and judgments (continued):

Information about critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements is included in the following notes:

Note 10 - recognition of deferred developer contributions.

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next financial year are included in the following notes:

Note 8 - accrued liabilities for distribution pipe leak; and

Note 9 - useful lives of plant and equipment.

**3. Significant accounting policies:**

The accounting policies set out below have been applied consistently to all years presented in these financial statements, unless otherwise indicated.

## (a) Plant and equipment:

## (i) Recognition and measurement:

Plant and equipment are measured at cost less accumulated depreciation and accumulated impairment losses.

Cost includes amounts that are directly attributable to acquisition, construction, development, or betterment of the asset, after deducting trade discounts and rebates. The cost of self-constructed assets includes the cost of materials and direct labor, any other costs directly attributable to bringing the assets to a working condition for their intended use and borrowing costs on qualifying assets.

Purchased software that is integral to the functionality of the related equipment is capitalized as part of that equipment.

When parts of an item of plant and equipment have different useful lives, they are accounted for as separate items (major components) of plant and equipment.

Gains and losses on disposal of an item of plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of plant and equipment, and are recognized net within other income in profit and loss.

**LULU ISLAND ENERGY COMPANY LTD.**

Notes to Financial Statements (continued)

Year ended December 31, 2021

**3. Significant accounting policies (continued):**

## (a) Plant and equipment (continued):

## (ii) Subsequent costs:

The cost of replacing a part of an item of plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Company, and its cost can be measured reliably. The carrying amount of the replaced part is derecognized. The cost of the day-to-day servicing of plant and equipment are recognized in profit or loss as incurred.

## (iii) Depreciation:

Depreciation is calculated over the depreciable amount, which is the cost of an asset less its residual value.

Depreciation of plant and equipment commences when the asset is deemed available for use and is recognized in profit and loss on a straight-line basis over the estimated useful lives of each part of an item of plant and equipment as follows:

Asset	Useful life - years
Energy plant center	75
Distribution piping	50
General equipment	25

Depreciation methods, useful lives and residual values are reviewed at each financial year end and adjusted if appropriate.

## (b) Revenue recognition:

The Company recognizes revenue for the provision of energy and supply of other services. Revenue for the provision of energy is based on meter readings and is billed on a cyclical basis. Revenue is accrued for energy delivered but not yet billed. Revenue for other services is recognized upon completion of service. Revenue is recognized to the extent that it is probable that the economic benefits will flow to the Company and the revenue can be reliably measured, regardless of when payment is made. Revenue is measured at the fair value of the consideration received or receivable.

## (c) Concession projects:

Concession projects are delivered by partners selected to design, build, finance, and maintain the assets which are owned by the Company. The cost of the assets under construction are recorded at cost, based on construction progress billings and also includes other costs, if any, incurred directly by the Company.

## LULU ISLAND ENERGY COMPANY LTD.

Notes to Financial Statements (continued)

Year ended December 31, 2021

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### 3. Significant accounting policies (continued):

(c) Concession projects (continued):

When deemed available for use, the project assets are amortized over their estimated useful lives. An obligation for the cost of capital and financing received to date, net of repayments, is recorded under concession liabilities (note 11).

(d) Income taxes:

Under Section 149(1)(d) of the Income Tax Act, the Company is exempt from income and capital taxes by virtue of the fact that it is a wholly owned subsidiary of the City. Accordingly, no provision for such taxes has been made in financial statements.

(e) Cash and cash equivalents:

Cash and cash equivalents comprise cash balances and call deposits with original maturities of three months or less. At December 31, 2021 and 2020, all cash and cash equivalents related to cash balances.

(f) Finance income and finance cost:

Finance income comprises interest on funds invested. Interest income is recognized as it accrues in profit or loss, using the effective interest method.

Finance costs comprise interest expense on the concession liability. Finance costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are recognized in profit or loss using the effective interest method.

(g) Financial instruments:

(i) Classification and measurement of financial assets and financial liabilities:

Under IFRS 9, *Financial Instruments* ("IFRS 9"), on initial recognition, a financial asset is classified as measured at: amortized cost, fair value through other comprehensive income ("FVOCI") - debt instrument, FVOCI - equity instrument, or fair value through profit or loss ("FVTPL"). The classification of financial assets under IFRS 9 is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics.

A financial asset is measured at amortized cost if it meets both of the following conditions and is not designated as FVTPL: it is held within a business model whose objective is to hold assets to collect contractual cash flows; and its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

## LULU ISLAND ENERGY COMPANY LTD.

Notes to Financial Statements (continued)

Year ended December 31, 2021

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### 3. Significant accounting policies (continued):

#### (g) Financial instruments (continued):

##### (i) Classification and measurement of financial assets and financial liabilities (continued):

A debt investment is measured at FVOCI if it meets both of the following conditions and is not designated as FVTPL:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition of an equity investment that is not held for trading, the Company may irrevocably elect to present subsequent changes in the investment's fair value in OCI. This election is made on an investment-by-investment basis.

All financial assets not classified as measured at amortized cost or FVOCI as described above are measured at FVTPL. On initial recognition, the Company may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at FVOCI as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

A financial asset (unless it is a trade receivable without a significant financing component that is initially measured at the transaction price) is initially measured at fair value plus, for an item not at FVTPL, transaction costs that are directly attributable to its acquisition.

The following accounting policies apply to subsequent measurement of financial assets:

- Financial assets at FVTPL: these assets are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognized in profit or loss.
- Financial assets at amortized cost: these assets are subsequently measured at amortized costs using the effective interest method. The amortized cost is reduced by impairment losses (see note 3(h)(i)). Interest income and impairment are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.
- Debt investments at FVOCI: these assets are subsequently measured at fair value. Interest income calculated using the effective interest method and impairment are recognized in profit or loss. Other net gains are recognized in OCI. On derecognition, gains and losses accumulated in OCI are reclassified to profit or loss.



**LULU ISLAND ENERGY COMPANY LTD.**

Notes to Financial Statements (continued)

Year ended December 31, 2021

**3. Significant accounting policies (continued):**

## (g) Financial instruments (continued):

## (i) Classification and measurement of financial assets and financial liabilities (continued):

The following accounting policies apply to subsequent measurement of financial assets (continued):

- Equity investments at FVOCI: these assets are subsequently measured at fair value. Dividends are recognized as income in profit or loss unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognized in OCI and are never reclassified to profit or loss.

Financial liabilities are initially recognized at amortized cost. Subsequent to initial recognition financial liabilities are measured at amortized cost using the effective interest method.

The following table shows the measurement categories for each class of the Company's financial assets and financial liabilities:

<b>Financial assets:</b>	
Cash and cash equivalents	Amortized cost
Accounts receivable	Amortized cost
Investments	Amortized cost
<b>Financial liabilities:</b>	
Accounts payable and accrued liabilities	Amortized cost
Concession liability	Amortized cost

## (ii) Measurement categories:

The following table shows the carrying values of assets and liabilities for each of these categories at December 31, 2021 and 2020. Unless otherwise noted, the fair values on the instruments approximate their carrying amount due to their short-term nature and/or due to application of market rates of interest.

	2021	2020
<b>Financial assets:</b>		
Financial assets at amortized cost:		
Cash and cash equivalents	\$ 11,707,794	\$ 8,604,504
Accounts receivable	1,676,423	3,034,510
Investments	4,047,518	4,014,336
	<b>\$ 17,431,735</b>	<b>\$ 15,653,350</b>
<b>Financial liabilities:</b>		
Financial liabilities at amortized cost:		
Accounts payable and accrued liabilities	\$ 2,671,416	\$ 1,790,919
Concession liability	12,264,387	11,133,416
	<b>\$ 14,935,803</b>	<b>\$ 12,924,335</b>

## LULU ISLAND ENERGY COMPANY LTD.

Notes to Financial Statements (continued)

Year ended December 31, 2021

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### 3. Significant accounting policies (continued):

(h) Impairment:

(i) Financial assets:

The 'expected credit loss' ("ECL") impairment model applies to financial assets measured at amortized cost, contract assets and debt investments at FVOCI, but not to investments in equity instruments.

The financial assets at amortized cost consist of cash and cash equivalents, accounts receivable and investments.

Under IFRS 9, loss allowances are measured on either of the following bases:

- 12-month ECLs: these are ECLs that result from possible default events within the 12-months after the reporting date; and
- Lifetime ECLs: these are ECLs that result from all possible default events over the expected life of a financial instrument.

The Company measures loss allowances at an amount equal to lifetime ECLs. The Company has elected to measure loss allowances for trade receivables, including amounts due from the City, at an amount equal to lifetime ECLs.

Measurement of ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Company expects to receive).

(ii) Non-financial assets:

The carrying amounts of the Company's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated.

The recoverable amount of an asset or cash-generating unit is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the "cash-generating unit" or "CGU").

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in profit or loss.

**LULU ISLAND ENERGY COMPANY LTD.**

Notes to Financial Statements (continued)

Year ended December 31, 2021

**3. Significant accounting policies (continued):**

## (h) Impairment (continued):

## (ii) Non-financial assets (continued):

An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

## (i) Pension benefits:

The Company and its employees participate in the Municipal Pension Plan, a multi-employer defined benefit plan. Defined contribution plan accounting is applied to this plan because separate information for the Company is unable to be provided to apply defined benefit accounting. The expenses associated with this plan are equal to the actual contributions required by the Company during the reporting period.

## (j) Standards issued but not yet effective:

A number of new standards are effective for annual periods beginning after January 1, 2022 and earlier application is permitted; however, the Company has not early adopted the new or amended standards in preparing these financial statements.

The following amended standards and interpretations are not expected to have a significant impact on the financial statements;

- Amendments to IAS 1, *Classification of Liabilities as Current or Non-Current*, effective periods beginning on or after January 1, 2023.
- Amendments to IAS 16, *Property, Plant and Equipment*, effective periods beginning on or after January 1, 2022.
- Amendments to IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*, on onerous contracts effective periods beginning on or after January 1, 2022.

**4. Personnel expenses:**

	2021	2020
Wages and salaries	\$ 834,736	\$ 666,115
Other payroll expenses	7,000	31,000
	<b>\$ 841,736</b>	<b>\$ 697,115</b>

**LULU ISLAND ENERGY COMPANY LTD.**

Notes to Financial Statements (continued)

Year ended December 31, 2021

**5. Net finance cost:**

	2021	2020
Finance income:		
Investment interest	\$ 51,182	\$ 105,529
Bank interest	63,729	62,676
Other	2,178	1,381
	117,089	169,586
Finance cost:		
Finance expense on concession liability (note 11)	(709,183)	(548,486)
Less: Finance cost capitalized to plant and equipment (note 9)	37,048	122,339
	(672,135)	(426,147)
<b>Net finance cost</b>	<b>\$ (555,046)</b>	<b>\$ (256,561)</b>

**6. Accounts receivable:**

	2021	2020
Trade receivables	\$ 184,909	\$ 1,703,753
Unbilled trade receivables	1,491,514	1,330,757
	\$ 1,676,423	\$ 3,034,510

**7. Investments:**

Investments represent cash term deposits as follows:

Purchase date	Maturity date	Interest rate	2021	2020
July 15, 2021	July 15, 2022	1.50%	\$ 2,033,628	\$ -
October 28, 2021	October 28, 2022	1.50%	2,013,890	-
June 29, 2020	June 29, 2021	0.90%	-	2,005,213
October 28, 2020	October 28, 2021	1.40%	-	2,009,123
			\$ 4,047,518	\$ 4,014,336

**LULU ISLAND ENERGY COMPANY LTD.**

Notes to Financial Statements (continued)

Year ended December 31, 2021

**8. Accounts payable and accrued liabilities:**

In 2020, the Company identified a distribution pipe leakage of heat transfer fluid at one of the Company's service areas. During the year ended December 31, 2021, the Company continued to repair, remediate and monitor the service area and recognized expenses, including legal expenses, of \$1,084,975 (2020 - \$723,000) in other expenses, of which \$596,585 (2020 - \$723,000) is included in accounts payable and accrued liabilities. Management believes the Company has adequately provided for the remediation costs and intends to seek compensation for such costs from the third parties involved.

**9. Plant and equipment:**

	Energy plant center	General equipment	Distribution piping	Total
<b>Cost:</b>				
Balance as at January 1, 2020	\$ 5,031,915	\$ 22,419,284	\$ 9,387,971	\$ 36,839,170
Additions	-	2,266,536	2,829,683	5,096,219
Balance as at December 31, 2020	5,031,915	24,685,820	12,217,654	41,935,389
Additions	-	1,955,387	925,313	2,880,700
Balance as at December 31, 2021	\$ 5,031,915	\$ 26,641,207	\$ 13,142,967	\$ 44,816,089
<b>Accumulated depreciation:</b>				
Balance as at January 1, 2020	\$ 201,276	\$ 2,722,373	\$ 503,137	\$ 3,426,786
Depreciation	67,092	915,611	166,055	1,148,758
Balance as at December 31, 2020	268,368	3,637,984	669,192	4,575,544
Depreciation	67,092	1,045,148	223,159	1,335,399
Balance as at December 31, 2021	\$ 335,460	\$ 4,683,132	\$ 892,351	\$ 5,910,943
<b>Net book value:</b>				
At January 1, 2020	\$ 4,830,639	\$ 19,696,911	\$ 8,884,834	\$ 33,412,384
At December 31, 2020	4,763,547	21,047,836	11,548,462	37,359,845
At December 31, 2021	4,696,455	21,958,075	12,250,616	38,905,146

Included in plant and equipment is \$1,951,975 (2020 - \$3,591,015) of assets under construction being \$1,070,537 (2020 - \$449,647) general equipment and \$881,438 (2020 - \$3,141,368) distribution piping. For the year ended December 31, 2021, capitalized borrowing costs related to the construction of the general equipment and distribution system in the year amounted to \$37,048 (2020 - \$122,339).

**LULU ISLAND ENERGY COMPANY LTD.**

Notes to Financial Statements (continued)

Year ended December 31, 2021

**10. Deferred developer contributions:**

The Company defers contribution amounts received from developers related to the cost of initial connection and assets, including installation of the energy transfer station. The developer contributions are recognized over the useful life of the associated general equipment from the date the respective asset is deemed available to use.

The following table summarizes the amounts recognized as at year end:

	2021	2020
Deferred developer contributions, beginning of year	\$ 7,352,360	\$ 6,183,224
Developer contributions received (net of refunds)	638,525	1,347,638
Recognized revenue from developer contributions	(237,347)	(178,502)
	7,753,538	7,352,360
Less: current portion of deferred developer contributions	337,732	522,932
Non-current deferred developer contributions	\$ 7,415,806	\$ 6,829,428

**11. Oval Village District Energy Utility ("OVDEU") Concession Agreement:**

On October 30, 2014, the Company and the OVDEU developer (the "Concessionaire") entered into a 30-year Concession Agreement, where the Concessionaire will design, construct, finance, operate and maintain the infrastructure for the district energy utility at the Oval Village community. The total estimated concession liability to finance the construction of the OVDEU at full build out is \$41,414,000 (2020 - \$39,126,000) and will be accrued over time as the services are rendered.

The Concession Agreement is payable monthly in accordance with the Concession Agreement terms. Required concession liability payment obligations are disclosed in note 13.

OVDEU Concession Agreement liability:

	2021	2020
Concession Agreement liability - capital	\$ 10,983,397	\$ 9,884,744
Concession Agreement liability - non-capital	1,280,990	1,248,672
	12,264,387	11,133,416
Less: current capital portion of concession liability	1,965,760	1,465,969
Less: current non-capital portion of concession liability	1,346,853	1,169,758
	3,312,613	2,635,727
Non-current portion of concession liability	\$ 8,951,774	\$ 8,497,689

**LULU ISLAND ENERGY COMPANY LTD.**

Notes to Financial Statements (continued)

Year ended December 31, 2021

**11. Oval Village District Energy Utility ("OVDEU") Concession Agreement (continued):**

The average finance cost on the concession liability is 5.24% for the year ended December 31, 2021 (2020 - 5.21%).

The concession liability is repayable as follows:

2022	\$ 3,312,613
2023	1,809,353
2024	2,715,647
2025	2,824,273
2026 and thereafter	1,602,501
<b>Total</b>	<b>\$ 12,264,387</b>

The following tables summarizes the changes in the concession liability due to financing cash flows and liability related charges:

Balance January 1, 2021	\$ 11,133,416
Additions	1,370,459
Finance expense (note 5)	709,183
Net repayment	(948,671)
<b>Balance December 31, 2021</b>	<b>\$ 12,264,387</b>

**12. Limited Guarantee Agreement:**

On October 30, 2014, the Concessionaire and the City entered into a Limited Guarantee Agreement. The City is the Guarantor and guarantees the performance of some of the Company's obligations under the Concession Agreement to a maximum of \$18.2 million (2020 - \$18.2 million).

**13. Commitments and contingencies:****(a) Concession project commitments:**

Payments to the Concessionaire under the Concession Agreement are based on the Concessionaire's Annual Revenue Requirement, which is based on the utility cost of service rate-setting principles in British Columbia utilizing forward test years. The Annual Revenue Requirement is a combination of Capital and Operating charges. The Capital charge is comprised of capital expenditures and depreciation, and Operating charge is comprised of services costs, financing costs, income and other taxes and return on equity.

**LULU ISLAND ENERGY COMPANY LTD.**

Notes to Financial Statements (continued)

Year ended December 31, 2021

**13. Commitments and contingencies (continued):**

## (a) Concession project commitments (continued):

The information presented below shows the expected committed cash outflow for the next year under the Concession Agreement for the capital and operating costs of the assets. As construction progresses the asset values are recorded as plant and equipment and the corresponding liabilities are recorded as concession agreement liabilities as disclosed in note 11.

	Capital commitment	Operating commitment	Total commitment
2022	\$ 1,965,760	\$ 1,346,853	\$ 3,312,613

## (b) Distribution pipe leakage:

An accrual has been recognized in accounts payable and accrued liabilities for the damages that resulted from a distribution pipe leakage at one of the Company's service areas (note 8). Management believes the Company has adequately provided for the remediation costs and intends to seek compensation for such costs from the third parties involved. It is not permissible at this time to accrue the estimated financial effect of any recovery of expenses from the other parties involved or the Company's insurer.

**14. Related party transactions:**

Included in these financial statements are transactions with various Crown corporations, ministries, agencies, boards and commissions related to the Company by virtue of common control by the City, the Province of British Columbia or the Government of Canada. The Company has applied the modified disclosure requirements under IAS 24, *Related Party Disclosures*, which is only applicable for government-related entities.

## (a) Due from City of Richmond:

During 2021, the Company received and recognized in revenues \$981,000 (2020 - \$981,000) for its services of advancing district energy opportunities in the City. Staff and advanced design activities on low carbon district energy initiatives are covered by this fee. With or without the Company, the City would need to fund these costs in order to successfully implement district energy initiatives for the City and position itself at the forefront of tackling local and global environmental challenges our world faces.

In addition, included in revenue for 2021 is \$34,926 (2020 - \$37,294) for district energy utility services rendered by the Company to the City.

During 2021, the Company received and recognized energy model review fees into other income of \$36,543 (2020 - \$24,628) relating to district energy permit fees collected by the City for in-building district energy related equipment reviews performed by the Company.



## LULU ISLAND ENERGY COMPANY LTD.

Notes to Financial Statements (continued)

Year ended December 31, 2021

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### 14. Related party transactions (continued):

(a) Due from City of Richmond (continued):

During 2021, \$156,854 (2020 - \$165,125) of salary and benefit expenses were charged to the City for costs incurred due to Company staff being assigned to perform project management duties for the City projects. These costs have been charged to the City on a cost recovery basis and are included as a reduction to general and administrative expenses.

The total amount due from the City as a result of the above transactions as at December 31, 2021 is \$151,454 (2020 - \$323,020) and is included within accounts receivable.

These transactions are in the normal course of operations and are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. The amount is non-interest bearing and repayable on demand.

(b) Key management personnel:

A fee of \$129,412 (2020 - \$67,863), included in general and administrative expenses, was paid to the City for the day-to-day support that the Company received from City staff during the year. These costs have been charged to the Company on a cost recovery basis and include an element of re-charge for City key management personnel.

### 15. Share capital:

At December 31, 2021, the authorized share capital comprised 10,000 (2020 - 10,000) common shares without par value.

As at December 31, 2021, the Company has issued 450 common shares (2020 - 450) at \$0.01 per share totaling \$4.50 (2020 - \$4.50) and contributed surplus of \$27,397,110 (2020 - \$27,397,110).

### 16. Fair values:

The Company uses the following hierarchy to determine and disclose fair value of financial instruments:

- Level 1 - quoted prices (unadjusted) in active markets for identical assets or liabilities; and
- Level 2 - inputs other than quoted prices that are observable for asset or liability, either directly or indirectly; and
- Level 3 - inputs for the asset or liability that are not based on observable market data (unobservable inputs).

If the inputs used to measure the fair value of an asset or a liability might be categorized in different levels of fair value hierarchy, then the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

## LULU ISLAND ENERGY COMPANY LTD.

Notes to Financial Statements (continued)

Year ended December 31, 2021

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### 16. Fair values (continued):

(a) Financial assets and liabilities not measured at fair value:

The carrying amounts for cash and cash equivalents, accounts receivable, investments and accounts payable and accrued liabilities approximate their fair values due to their short-term nature.

(b) Non-current financial liabilities:

Subsequent to initial recognition the concession liability is accounted for at amortized cost using the effective interest method. The carrying amount of the concession liability approximates its fair value due to the nature of liabilities accrued and benchmark market rate of interest rate applied (Level 3 inputs).

### 17. Financial risk management and financial instruments:

(a) Overview

The Company has exposure to the following risks from its use of financial instruments:

- Credit risk;
- Liquidity risk; and
- Market risk (interest rate risk).

(b) Risk management framework:

The Board of Directors has overall responsibility for the establishment and oversight of the Company's risk management framework. The management reports regularly to the Board of Directors on its activities.

The Company's risk management policies are established to identify and analyze the risks faced by the Company, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. The Company, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

(c) Credit risk:

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations. Such risks arise principally from certain financial assets held by the Company consisting of its cash and cash equivalents, trade accounts receivables and other investments. The Company assesses these financial assets on a continuous basis for any amounts that are not collectible or realizable. It is management's opinion that the Company is not exposed to significant credit risk from its financial instruments.

## LULU ISLAND ENERGY COMPANY LTD.

Notes to Financial Statements (continued)

Year ended December 31, 2021

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### 17. Financial risk management and financial instruments (continued):

(c) Credit risk (continued):

(i) Trade and unbilled trade receivables:

The Company trades mainly with recognized and creditworthy third parties. It is the Company's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. In addition, receivable balances are monitored on an ongoing basis with the result that the Company's exposure to bad debts is not significant.

The Company establishes an allowance for doubtful accounts that represents its estimate of incurred losses in respect of trade and other receivables based upon factors surrounding the credit risk of specific accounts, historical trends and other information.

The sale of energy utilities is made to end-user customers in the City's geographic region. On the basis of the Company's collective experience, management considers the credit risk associated with trade receivables to be low.

(ii) Due from the City:

The credit risk on amounts due from the City is considered to be low as the City is a Crown entity incorporated under the Local Government Act of British Columbia.

(iii) Cash and investments:

Credit risk arising from other financial assets of the Company comprises cash and investments. The Company's exposure to credit risk arises from default of the counterparties. The Company manages credit risk through depositing cash and only investing in cash term deposits with established financial institutions which are considered to be low.

(d) Liquidity risk:

Liquidity risk is the risk that the Company will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Company's approach to managing liquidity is continually monitoring actual and forecasted cash flows from operations and anticipated investing and financing activities to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Company's reputation.

The Company's terms of business require amounts to be paid from customers within 30-days of the date of invoice. The accounts payable and accrued liabilities and due from the City are in the normal course of operations and paid within the following fiscal year. The commitments under the concession liability are disclosed in note 13.

The information presented below shows the undiscounted contractual maturities of the concession liability, including estimated interest payments.

**LULU ISLAND ENERGY COMPANY LTD.**

Notes to Financial Statements (continued)

Year ended December 31, 2021

**17. Financial risk management and financial instruments (continued):**

## (d) Liquidity risk (continued):

	Carrying amount	Contractual cash flow	Less than 1 year	1 - 2 years	2 - 5 years
December 31, 2021	\$ 12,264,387	\$ 13,821,248	\$ 3,397,805	\$ 1,952,570	\$ 8,470,873
December 31, 2020	11,133,416	12,685,549	2,703,511	1,708,510	8,273,528

## (e) Market risk:

Market risk is the risk that changes in market prices, such as interest rates and other rate risks, will affect the Company's income or the value of its holdings of financial instruments.

The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return.

Interest rate risk is the risk that the fair value of future cash flow of a financial instrument will fluctuate because of changes in the market interest rate.

The Company is exposed to interest rate risk associated with the concession liability (note 11) as this is subject to an annual determination of financing interest rate for new and renewing debt portion of financing. The Company manages this risk through the annual 5-year capital plan submission provided by the Concessionaire in accordance with the Concession Agreement.

**18. Capital management:**

The Company's objective when managing capital is to maintain a strong capital base to sustain future development of the business, so that it can provide return for the shareholder and benefits for other stakeholders.

The Company considers the items included in shareholder's equity and the concession liability as capital. The Company manages the capital structure and makes adjustments to it in the light of changes in economic conditions and the risk characteristics of the underlying assets. In order to maintain or adjust the capital structure, the Company may request additional investment from its shareholder. The Company is not required to meet any debt covenants. The Company is not subject to externally imposed capital requirements.

There were no changes in the Company's approach to capital management during the year (2020 - no changes).

**19. Pension plan:**

The Company and its employees contribute to the Municipal Pension Plan (a jointly trustee pension plan). The Board of Trustees, representing plan members and employers, is responsible for administering the plan, including investment of assets and administration of benefits. The plan is a multi-employer defined benefit pension plan. Basic pension benefits are based on a formula.

## LULU ISLAND ENERGY COMPANY LTD.

Notes to Financial Statements (continued)

Year ended December 31, 2021

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### 19. Pension plan (continued):

As at December 31, 2020, the plan has about 220,000 active members and approximately 106,000 retired members. Active members include approximately 42,000 contributors from local governments.

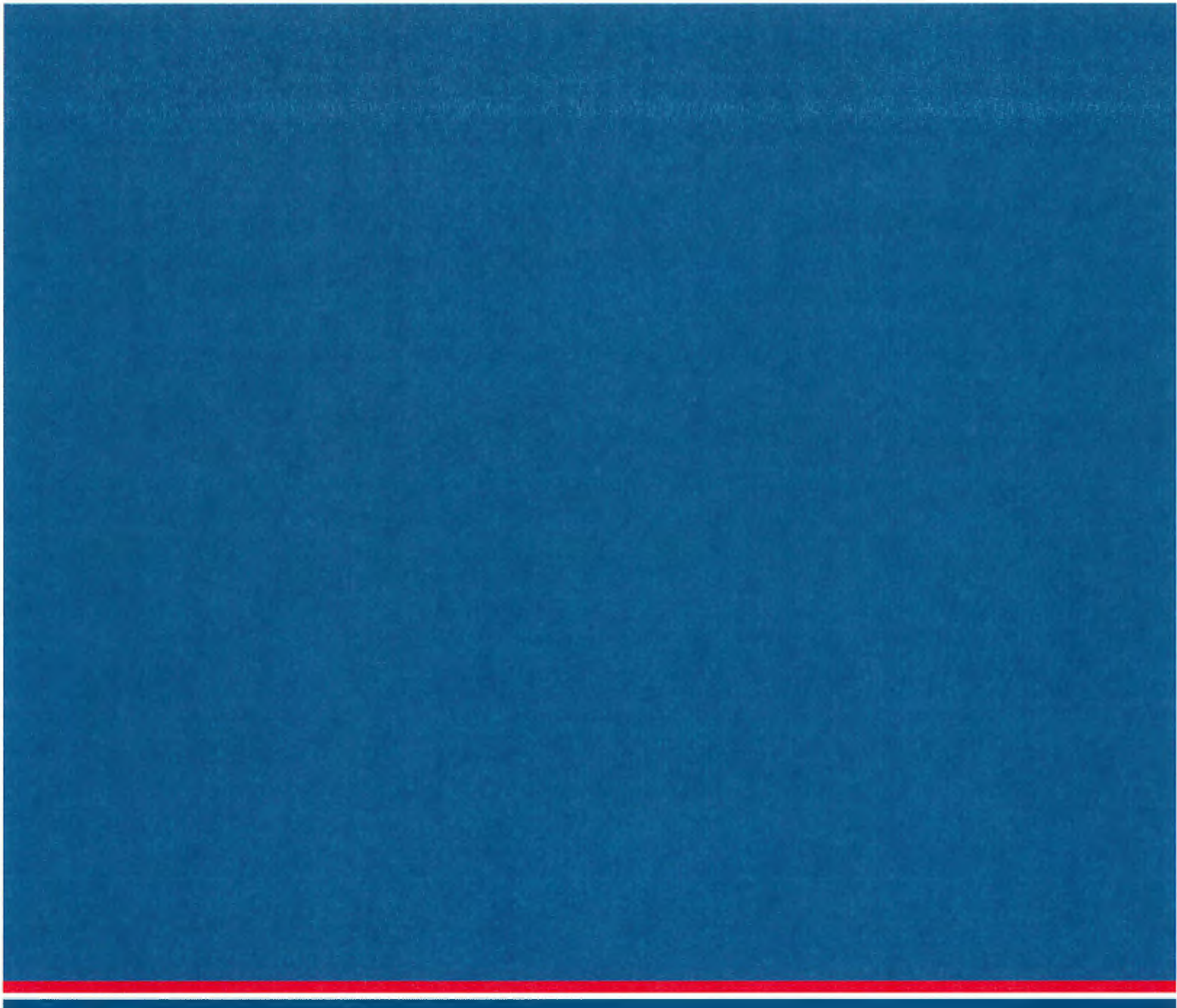
Every three years, an actuarial valuation is performed to assess the financial position of the plan and adequacy of plan funding. The actuary determines an appropriate combined employer and member contribution rate to fund the plan. The actuary's calculated contribution rate is based on the entry-age normal cost method, which produces the long-term rate of member and employer contributions sufficient to provide benefits for average future entrants to the plan. This rate may be adjusted for the amortization of any actuarial funding surplus and will be adjusted for the amortization of any unfunded actuarial liability.

The most recent valuation for the Municipal Pension Plan as at December 31, 2018, indicated a \$2,866 million funding surplus for basic pension benefits on a going concern basis. The next valuation will be at December 31, 2021, with results available in 2022.

The Company paid \$86,323 (2020 - \$84,498) for employer contributions to the Plan in 2021.

Employers participating in the plan record their pension expense as the amount of employer contributions made during the fiscal year (defined contribution pension plan accounting). This is because the plan records accrued liabilities and accrued assets for the plan in aggregate, resulting in no consistent and reliable basis for allocating the obligation, assets and cost to individual employers participating in the plan.





## Lulu Island Energy Company

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