

This information is provided for clarification purposes only and is not in substitution of any applicable City Bylaws or Provincial or Federal Codes or laws. In the case of any contradictions, legislative Codes, Bylaws, or laws take precedence. You must satisfy yourself that any existing proposed construction or other works complies with such Codes, Bylaws, or other laws.

LIEC District Energy Utility Connection – Offsite and Onsite DEU Connections

**No.: DISTRICTENERGY-01
Date: 2025-04-01**

Purpose

To provide Owners, Applicants, Developers, Contractors, and Builders with an overview of district energy requirements for buildings located in the Alexandra, Oval Village, and City Centre district energy utility (DEU) service areas. These are general DEU requirements and there may be additional requirements needed to address development-specific needs.

Richmond City Bylaws mandate that developments located in DEU service areas must connect to and use the DEU for space heating and cooling, and domestic hot water heating, as per applicable bylaws: *Alexandra District Energy Utility Bylaw 8641, Oval Village District Energy Utility Bylaw 9134 and City Centre District Energy Utility 9895.*

Site-specific district energy requirements must be satisfied during the City of Richmond's development processes.

Depending on the development site and timing, there are several potential connection types, which include:

- Offsite District Heating and Cooling Connection;
- Offsite District Heating Connection;
- Offsite District Heating Connection and Onsite Cooling Plant;
- Onsite Heating and Cooling Low Carbon Energy Plant.

Background

Richmond's 2041 Official Community Plan established a target to reduce greenhouse gas (GHG) emissions 50% below 2007 by 2030 and 100% by 2050. The City identified its district energy utilities as a leading strategy to achieve the City's GHG reduction goals.

Lulu Island Energy Company (LIEC) provides efficient energy to customers by utilizing low-carbon systems for space heating, cooling, and domestic hot water. Richmond City Council approves rates annually with the objective to be competitive with conventional energy costs.

Rezoning Application Stage – DEU Requirements

Rezoning Application

As part of the Rezoning Application process, staff will review the application for compatibility and provide any DEU-specific comments.

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Development Permit Stage – DEU Requirements

Development Permit Application

The applicant must satisfy the following district energy requirements prior to Development Permit issuance:

	Development Permit Stage Requirements			
	DEU Ready	Offsite Heating / Heating + Cooling Connection Only (No onsite plant)	Offsite Heating Connection and Onsite Cooling Plant	Onsite Heating and Cooling Plant
Submit architectural drawings showing mechanical rooms/areas which will house Energy Transfer Station	✓	✓	✓	✓
Submit drawings indicating the sizing and location(s) of mechanical rooms/areas which will house all heating, cooling and DHW heating generation equipment	–	–	✓	✓
Submit schematics showing system design intent and configuration	✓	✓	✓	✓
Submit overall narrative outlining the technical approach and design intent for the systems providing space heating, cooling, and domestic hot water heating	–	–	✓	✓
Submit schematics showing system design intent and configuration	–	–	✓	✓
Indicate technology and equipment type to be utilized	–	–	✓	✓
Submit Initial Energy Modelling figures	✓	✓	✓	✓

Building Permit Stage – DEU Requirements

Building Permit Application

The applicant must satisfy the following district energy requirements prior to Building Permit issuance:

	Building Permit Stage Requirements			
	DEU Ready	Offsite Heating / Heating + Cooling Connection Only (No onsite plant)	Offsite Heating Connection and Onsite Cooling Plant	Onsite Heating and Cooling Plant
Submit design of the building's mechanical system (this includes, but is not limited to Architectural, Structural, Civil, Mechanical, Electrical, Geotechnical, Arborist, Landscape drawings)	✓	✓	✓	✓
Submit development schedule, capital class C cost estimate and operational cost estimate	–	–	✓	✓
Submit Energy Modelling Report, signed by the registered professional responsible for the design of the building's mechanical system (incl. peak energy demand for space heating and cooling, peak heat energy demand for domestic hot water, combined peak heat energy demand for any uses other than space heating and domestic hot water and hour-by-hour consumption of energy for space heating, cooling, and domestic hot water)	✓	✓	✓	✓
Submit sealed Letter of Assurance, provided by the Engineer on Record, confirming to LIEC that the energy transfer station and/or onsite energy plant has been designed in accordance with LIEC's requirements	✓	✓	✓	✓

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	Building Permit Stage Requirements			
	DEU Ready	Offsite Heating / Heating + Cooling Connection Only (No onsite plant)	Offsite Heating Connection and Onsite Cooling Plant	Onsite Heating and Cooling Plant
Execute an Energy Services Agreement with the Service Provider (LIEC), outlining the responsibilities of both parties	–	✓	✓	✓
Execute an Asset Transfer Agreement with the Service Provider (LIEC) for onsite infrastructure	–	–	✓	✓
Submit Payment of Building Permit Application Fee	✓	✓	✓	✓
Submit Payment of Connection Fee for onsite infrastructure (piping and ETS) to connect to offsite system	–	✓	✓	–

Occupancy Stage – DEU Requirements

Granting Occupancy

The following requirements must be satisfied before occupancy can be granted:

	Occupancy Stage Requirements			
	DEU Ready	Offsite Heating / Heating + Cooling Connection Only (No onsite plant)	Offsite Heating Connection and Onsite Cooling Plant	Onsite Heating and Cooling Plant
Commission DEU mechanical system	–	✓	✓	✓
Provide access and keys to the Applicant's building and mechanical/DEU room	✓	✓	✓	✓
Submit owner's manual containing, but not limited to, record drawings, constructions specifications, approved shop drawings, field review reports, material testing reports, equipment test reports, warranties, commissioning reports, balancing reports, performance validation plan, and copies of the BC Building Code Letters of Assurance for everything related to the onsite plant (Heating or Cooling)	–	–	✓	✓
Provide signoff from engineer that all required Technical Safety BC inspections and operational checks have been completed	–	–	✓	✓
Provide Installation Permits issued by Technical Safety BC	–	–	✓	✓
Transfer Operating Permits issued by Technical Safety BC	–	–	✓	✓
Provide substantial completion documentation related to the development indicating that all contractors and sub-contractors have been paid and confirmation from the Land Title Office that no liens have been placed on the work	–	–	✓	✓
Provide letter(s) of credit pursuant to the bylaw and/or any covenant registered on land title	–	–	✓	✓
Provide a sealed letter of Certification from the Applicant's Engineer on Record confirming that the connected Building (or Strata) mechanical systems have been designed, constructed, and installed in full compliance with the drawings and specifications approve and agreed to in the Development Permit and subsequent building review stages	✓	✓	✓	✓
Submit Executed Asset Transfer Agreement's Schedule A: General Conveyance, and associated Sub Schedules	–	–	✓	✓

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	Occupancy Stage Requirements			
	DEU Ready	Offsite Heating / Heating + Cooling Connection Only (No onsite plant)	Offsite Heating Connection and Onsite Cooling Plant	Onsite Heating and Cooling Plant
Submit Executed Energy Services Agreement Schedules: Schedule B (Assignment and Assumption Agreements) and Schedule C (Thermal Energy Delivery Parameters)	–	✓	✓	✓
Transfer of all associated utility accounts (Fortis BC, BC Hydro, internet) to LIEC. Note: Dedicated BC Hydro and Fortis meters for the onsite energy plant are required	–	–	✓	✓
Address all outstanding deficiencies to the satisfaction of the Engineer on Record	–	✓	✓	✓
Address all outstanding items identified by and to the satisfaction of LIEC	✓	✓	✓	✓

Upon satisfying the pre-occupancy requirements, LIEC will grant departmental approval for occupancy.

References

- richmond.ca – District Energy
 - [District Energy General Information](#)
 - [Lulu Island Energy Company General Information](#)
- LuluIslandEnergy.ca
 - Service Area Bylaw Information:
 - [Alexandra DEU Bylaw No. 8641](#)
 - [City Centre DEU Bylaw No. 9895](#)
 - [Oval Village DEU Bylaw No. 9134](#)
 - [Off-site Connection Guidelines & Technical Requirements](#)
 - Alexandra DEU Connection Guidelines
 - City Centre DEU Connection Guidelines
 - Oval Village DEU Connection Guidelines
 - [On-site Connection Guidelines & Technical Requirements](#)
 - City Centre DEU Heating Plant Guidelines
 - City Centre DEU Heating Plant Technical Requirements
 - City Centre DEU Cooling Plant Guidelines
 - City Centre DEU Cooling Plant Technical Requirements

For further information or clarification, contact District Energy at info@LuluIslandEnergy.ca.