



To: General Purposes Committee **Date:** August 10, 2023
From: Peter Russell **File:** 01-0060-20-
 Director, Sustainability and District Energy LIEC1/2023-Vol 01
Re: City Centre DEU Bylaw No. 9895 Amendment Bylaw No. 10473




Staff Recommendation

That the City Centre District Energy Utility Bylaw No. 9895, Amendment Bylaw No. 10473 be introduced and given first, second, and third readings.



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

Att. 2

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Development Applications Law	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
REVIEWED BY SMT	INITIALS: 	APPROVED BY CAO 

Staff Report

Origin

In September 2018, City Council adopted the City Centre District Energy Utility Bylaw No. 9895 (CCDEU Bylaw). In November 2022, City Council endorsed an amendment to the CCDEU Bylaw which extended the boundaries of CCDEU service area in line with the Council-endorsed expansion plan. The CCDEU project is expected to reduce greenhouse gases (GHG) emissions by one million tonnes by 2050 (Attachment 1).

The purpose of this report is to recommend an amendment to the CCDEU Bylaw to expand the sites designated to provide onsite low carbon energy plants.

This report supports Council's Strategic Plan 2022-2026 Focus Area #3 A Safe and Prepared Community:

Community safety and preparedness through effective planning, strategic partnerships and proactive programs.

3.4 Ensure civic infrastructure, assets and resources are effectively maintained and continue to meet the needs of the community as it grows

This report supports Council's Strategic Plan 2022-2026 Focus Area #5 A Leader in Environmental Sustainability:

Leadership in environmental sustainability through innovative, sustainable and proactive solutions that mitigate climate change and other environmental impacts.

5.1 Continue to demonstrate leadership in proactive climate action and environmental sustainability.

Analysis

Several developments have committed to incorporating onsite centralized low carbon energy plants through the rezoning or OCP Amendment processes previously approved by Council.

In order to secure these developer commitments, Schedule E of Bylaw No. 9895 needs to be amended in order to denote the sites as Energy Generation Plant Designated Properties. This approach is consistent with securing onsite energy plant commitments for the first 12 developments located in the City Centre DEU service area.

Financial Impact

None.

Conclusion

Amending the CCDEU bylaw as proposed will ensure onsite energy plant commitments from developers are secured.



Peter Russell
Director, Sustainability and Dist Energy
(604-276-4130)

PR:cd

Att. 1: District Energy in Richmond
Att. 2: Sites Proposed for Bylaw No. 9895 Schedule E Expansion

District Energy in Richmond

Richmond's 2041 Official Community Plan (OCP) establishes a target to reduce GHG emissions 50 percent below 2007 levels by 2030 and 100 percent by 2050. The City identified district energy utilities (DEUs) as a leading strategy to achieve the City's GHG reduction goals and incorporated Lulu Island Energy Company Ltd. (LIEC) in 2013 for the purposes of carrying out the City's district energy initiatives on the basis of the following guiding principles:

1. The DEU will provide end users with energy costs that are competitive with conventional energy costs, based on the same level of service; and
2. Council will retain the authority of setting customer rates, fees and charges for DEU services.

The City established three DEU service areas: ADEU, OVDEU, and CCDEU. Table 1 below provides a summary of the developments connected to the DEU service areas to-date.

Table 1 – DEU Service Areas - Current and Projected Connected Space

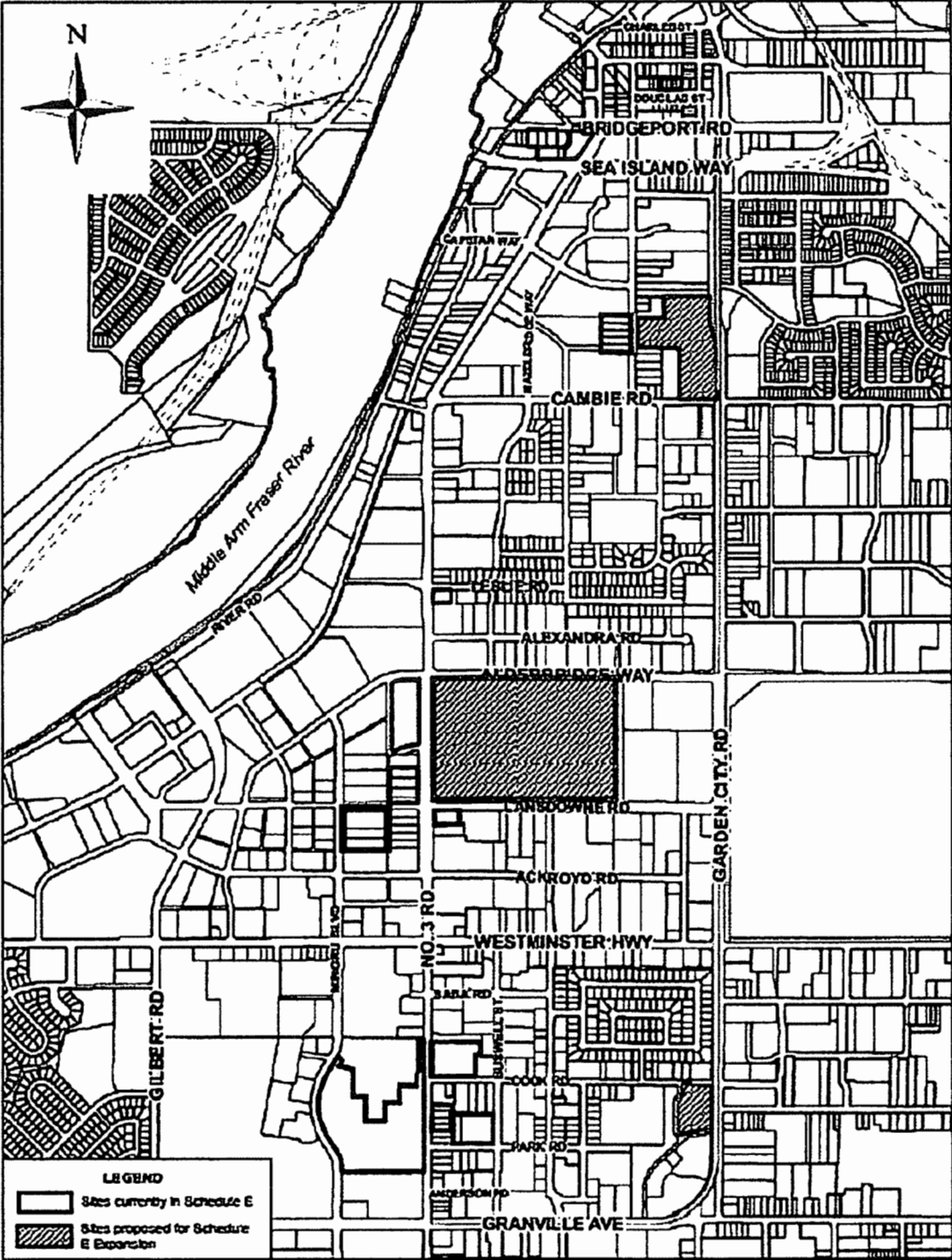
	Buildings To-Date	Residential Units To-Date	Floor Area	
			To-Date	Build-out
Alexandra DEU	13	2,200	2.4M ft ²	4.4M ft ²
Oval Village DEU	14	3,174	3.7M ft ²	6.4M ft ²
City Centre DEU	2	728	0.8M ft ²	48.0M ft ²
Total	29	6,102	6.9M ft²	58.8M ft²

The ADEU provides heating and cooling services to ten residential buildings, the large commercial development at "Central at Garden City", the Richmond Jamatkhana temple, and Fire Hall No. 3, comprising of over 2,200 residential units and over 2.4 million square feet of floor area. While some electricity is consumed for pumping and equipment operations, most of this energy is currently produced locally from the geo-exchange fields in the greenway corridor and West Cambie Park, and highly efficient air source heat pumps.

The OVDEU services 14 buildings, containing over 3,100 residential units. Energy is currently supplied from the three interim energy centres with natural gas boilers which provide 16 MW of heating capacity. LIEC received a \$6.2 million grant from the CleanBC Communities Fund for the design and construction of the sewer heat recovery technology and a permanent energy centre for the area. Once completed, the system will be able to produce up to 80% of low-carbon energy from the Gilbert Trunk sanitary force main sewer.

The CCDEU currently services two buildings, comprised of 728 residential units and approximately 800,000 ft² of floor area. To-date, future developments in the City Centre service area have already committed 5.5M ft² of building floor area for future connection. As permanent energy centres progress through development, CCDEU utilizes on-site low carbon energy plants as a source of energy production. At full build-out, 176 developments, 28,000 residential units and approximately 48M ft² of floor space will be serviced by 5 permanent energy centres with over 130 MW of heating and 115 MW of cooling capacity. The built out system is estimated to reduce over 1,000,000 tonnes of GHG emissions compared to conventional service.

Sites Proposed for Bylaw No. 9895 Schedule E Expansion





City Centre District Energy Utility Bylaw No. 9895
Amendment Bylaw No. 10473

The Council of the City of Richmond enacts as follows:

- 1. City Centre District Energy Utility Bylaw No. 9895, as amended, is further amended by deleting Schedule E (Energy Generation Plant Designated Properties) in its entirety and replacing it with a new Schedule E attached as Schedule A to this Amendment Bylaw.
2. This Bylaw is cited as "City Centre District Energy Utility Bylaw No. 9895, Amendment Bylaw No. 10473".

FIRST READING

SECOND READING

THIRD READING

ADOPTED

Four horizontal lines for signatures or initials.

CITY OF RICHMOND
APPROVED for content by originating dept.
APPROVED for legality by Solicitor

MAYOR

CORPORATE OFFICER

Schedule A to Amendment Bylaw No. 10473

SCHEDULE E to BYLAW NO. 9895

Energy Generation Plant Designated Properties

