

Jurisdictional Scan: Case Studies

Jurisdiction	System	Model	Summary
Calgary, AB	Calgary District Heating Inc. (Atlantica)	Private (Investor owned)	<p>About the System: Established in 2010 and initially owned by ENMAX, a municipally owned corporation, this district energy system provides heating only in Calgary's East Village. In 2021, Enmax sold the system to Atlantica Sustainable Infrastructure (i.e., investor) which rebranded the system Calgary District Heating Inc (CDHI). This is Alberta's first privately owned district energy system.</p> <p>Energy Supply and Decarbonization: Heating is currently supplied by gas-fired reciprocating engine combined heat and power and gas boilers. CDHI is currently running a hydrogen pilot to test up to 20 per cent hydrogen supply and is investigating the integration of an electric boiler supplied with clean electricity through a power purchase agreement with a solar power project.</p> <p>Connection Incentives: Density bonus incentive for district energy-ready buildings in the East Village.</p> <p>Governance: CDHI is owned by Atlantica Sustainable Infrastructure, and regulated by the Alberta Utilities Commission.</p>
Ottawa, ON and Gatineau, QUE	Zibi Community Utility	Equal Partnership (Developer and Municipal Corporation)	<p>About the System: Established in 2021, this district energy system provides heating and cooling shared between the downtown cores of both Ottawa and Gatineau .</p> <p>Energy Supply and Decarbonization: The system uses industrial waste heat recovery and river water heat exchange and was designed to be low carbon from the first day of operations.</p> <p>Connection Incentives: Utility is 50 per cent owned by developer and has an incentive to connect buildings and maintain competitive rates.</p> <p>Governance: Governed by a board of directors, and, as the Zibi Community Utility (ZCU) crosses provincial lines, it is regulated by the Canada Energy Regulator (CER). Otherwise, thermal energy utilities are not economically regulated by the Ontario Energy Board or Régie de L'énergie in Quebec, therefore the ZCU is not economically regulated in either province.</p>
Burnaby, BC and Vancouver, BC	River District Energy and Metro Vancouver Waste-to-Energy District Energy System	Public/Private Split Asset	<p>About the System: This project is a collaboration between the public and private sectors to deliver a regional-scale district heating utility with low-carbon waste heat supplied from Metro Vancouver's waste-to-energy facility. Established in 2011, River District Energy (RDE) currently provides heating only within the River District development site. The City of Burnaby has established two district energy service areas that will connect to the waste heat supply, however, the Burnaby systems are still in the development phase.</p>

			<p>Energy Supply and Decarbonization: RDE currently supplies heat to River District from two temporary gas boiler plants, however, a low-carbon fuel switch has always been part of the long-term vision for River District. Future connection to waste heat from the existing Metro Vancouver Regional District (MVRD) owned waste-to-energy facility is expected to reduce RDE emissions by approximately 80 per cent.</p> <p>Connection Incentives: Rezoning of the River District area includes a requirement to connect to RDE. Further, the City of Burnaby has passed a connection bylaw for new buildings in Metrotown and Edmonds.</p> <p>Governance: Governed by thermal energy supply agreements, the MVRD board, RDE Ownership, and Burnaby City Council. RDE is regulated by the BC Utilities Commission, however, both Metro Vancouver and City of Burnaby are exempt.</p>
Markham, ON	Markham District Energy	Municipal Corporation	<p>About the System: Established in 2000, Markham District Energy (MDE) provides heating and cooling through the operation of two geographically independent district energy systems — one in Markham Centre and the other in Cornell Centre.</p> <p>Energy Supply and Decarbonization: In total, MDE operates four energy plants within Markham, providing hot and chilled water. Heat is generated from a combination of combined heat and power and natural-gas fired boilers, while cooling is facilitated by chiller plants. Future connection to sewer heat recovery, biomass and cooling waste heat recovery is expected to reduce emissions by approximately 80 per cent.</p> <p>Connection Incentives: No mandatory connection bylaw in place, however, connection to MDE is encouraged in the planning process. MDE does not charge developers to connect to the system, reducing the cost of construction and incentivizing connection relative to business as usual.</p> <p>Governance: The MDE board of directors is made up of four seats represented by the City Council (one of which is the mayor), as well as five independent seats. Thermal energy utilities are not economically regulated by the Ontario Energy Board.</p>
Bristol, UK	Bristol Heat Network	Vattenfall UK / City Leap Joint Venture	<p>About the System: In the City of Bristol, UK, there are currently two city centre heat networks in operation, with a third under construction. The Bristol Heat Network began as a municipal energy company in 2015, and in 2023 the heat network was folded into the Bristol City Leap partnership, a 20-year concession agreement with Ameresco and Vattenfall Heat UK as an essential subcontractor.</p> <p>Energy Supply and Decarbonization: Supplied by water source heat pumps (river water heat recovery), biomass and combined heat and power. The City Leap partnership agreement sets key performance indicators, and requires Ameresco to expand and decarbonize the system.</p> <p>Connection Incentives: Local regulation states that new developments in the predefined heat priority area are expected to connect to a heat network where technically and financially</p>

Attachment 2

			<p>feasible or where a heat network is not being installed to be 'District Heating ready' to enable connection at a later date.</p> <p>Governance: Governed by 20-year concession agreement in "City Leap Partnership". Great Britain's independent energy regulator, the Office of Gas and Electricity Markets, formally began regulating heat networks in 2024.</p>
Toronto, ON	City of Toronto / Enwave Joint Development Agreement	Strategic Partnership	<p>About the System: Established in 2023, the district energy system at at Etobicoke Civic Centre will serve a 17-acre City-owned site, comprising seven development blocks and five blocks of residential development as part of the City's Housing Now Initiative (affordable housing).</p> <p>Energy Supply and Decarbonization: The system will be low-carbon from day one of operation, with energy supplied by geexchange fields located beneath buildings on the site.</p> <p>Connection Incentives: Not required; City-owned buildings provide anchor load.</p> <p>Governance: Joint development agreement process is governed by City Council and board of directors. Thermal energy utilities are not economically regulated by the Ontario Energy Board.</p>
City of Richmond, BC	Lulu Island Energy Company (LIEC)	Municipal Corporation with a Service Contract	<p>About the System: Established in 2013, this district energy system provides heating and cooling in two neighborhoods (Alexandra and City Centre) with further plans to expand in City Centre.</p> <p>Energy Supply and Decarbonization: In the Alexandra neighbourhood, the system uses a combination of geexchange, an air source heat pump, evaporative fluid coolers, condensing boilers and renewable natural gas. In City Centre, the system uses condensing boilers, chillers, sewer heat recovery (future) and renewable natural gas.</p> <p>Connection Incentives: A service area bylaw with mandatory connection is in place.</p> <p>Governance: LIEC is a wholly owned municipal corporation. As a municipal utility, it is excluded from regulation by the BC Utilities Commission. LIEC is governed by a board of directors composed of City managers. Council determines and enforces connection requirements via Service Area Bylaws and establishes retail rates, with regard to LIEC costs, contributions/grants and conditions of any LIEC financing.</p>
St. Paul Minnesota, USA	District Energy St. Paul (DESP)	Non-Profit	<p>About the System: Established in 1983, the district energy system provides heating and cooling to the majority of the buildings in the downtown core and some properties in West St. Paul.</p> <p>Energy Supply and Decarbonization: The system uses biomass combined heat and power, thermal storage and renewable energy credits for cooling electricity. District Energy St. Paul has adopted its own target to be carbon neutral by 2050 with a rate of 7 per cent emissions reductions per year. City regulations have not required the decarbonization of the DES.</p> <p>Connection Incentives: No mandatory connection requirement.</p>

			<p>Governance: As a non-profit, DESP has no owner or shareholder. DESP is governed by a board of directors, which is required to include representatives from small, medium and large customers. Thermal energy rates are not regulated by the State of Minnesota.</p>
Edmonton, AB	Blatchford District Energy	Fully Public (Municipal)	<p>About the System: The Blatchford Renewable Energy Utility has been in operation since 2019 and currently provides heating, cooling and domestic hot water to connected buildings within the Blatchford community.</p> <p>Energy Supply and Decarbonization: The Blatchford District Energy Sharing System (DESS) currently uses geoexchange. Future integration of other renewable sources, such as sewer heat exchange, are expected.</p> <p>Connection Incentives: Service area Bylaw 17943 with mandatory connection is in place. Buildings may be exempt from being required to connect to the DESS if it can be demonstrated that the building or group of buildings will be built to at least a net-zero carbon standard.</p> <p>Governance: The Blatchford District Energy Sharing System is owned and operated by the City of Edmonton. As a municipal utility, it is excluded from regulation by the Alberta Utilities Commission. Council determines and enforces connection requirements via service area bylaw(s) and establishes retail rates.</p>