



Corporation of the City of
NEW WESTMINSTER

EXPRESSION OF INTEREST

NWEOI-20-01

Sapperton District Energy

Closing Time:

Thursday, February, 06, 2020
3:00 PM, Local Time, Vancouver BC

Closing Location:

Main Information Desk
City of New Westminster
511 Royal Avenue,
New Westminster, BC, V3L 1H9

PROPONENT NAME		
Street Address:		
City Province Postal Code		
Contact Name:		
Telephone number:		Fax:
Email		Date:
Signature: by authorized signatory		

By my signature above, it shall be understood that I have read, understood and accept the requirements outlined in the Request for Proposal, we hereby propose to supply the Services in accordance with the Request for Proposal and as outlined in this Form of Proposal.

CORPORATION OF THE CITY OF NEW WESTMINSTER

EOI PROCESS & GENERAL REQUIREMENTS

1.0 GENERAL INFORMATION

- 1.1** Through this Expression Of Interest (EOI) The City of New Westminister is currently reviewing the feasibility of building a district and we are seeking information from potential suppliers. Enclosed with this EOI in Appendix A is an overview of the potential project with technical information, usage and other data.
- 1.2** In Section 4.0, the City is requesting information that the City will use to determine the viability of the project and to decide on next steps.
- 1.3** The City may share any information provided under this EOI with an advisory group that may contain consulting firms or different levels of government.
- 1.4** The City of New Westminister is the first city in Western Canada and is located at the centre of Metro Vancouver. Just 20 km from downtown Vancouver, the City has both major transportation routes and railways running through its boundaries.
- 1.5** This is an Expression Of Interest, and not a call for tenders or request for offers and no contractual obligations shall arise between the City and a Proponent upon the Proponent's submission of a Proposal to the City.
- 1.6** The City is expecting to proceed with a Request for Proposal at a future date.
- 1.7** The city, at its discretion, reserves the right to;
- a) Use this EOI to shortlist suppliers to proceed with a future Request For Proposal;
 - b) Directly award a contract to a supplier who demonstrates that they are able to provide all the requirements under this EOI;
 - c) Modify this EOI at any time.
- 1.8** Proponents will be solely responsible for their own expenses incurred in connection with this EOI, including in preparing and submitting a Proposal and in any subsequent negotiations with the City.
- 1.9** This EOI shall be governed by and construed in accordance with the laws of the Province of British Columbia.
- 1.10** By submitting a response, the Respondent confirms that neither it nor any of its officers, directors, employees or subcontractors, has any financial or personal relationship or affiliation with any elected official or employee of the City of New Westminister or their immediate families which might in any way be seen or perceived to create a conflict of interest.
- 1.11** All documents submitted to the City in response to this EOI or as part of any subsequent negotiation will become the property of the City, and will not be returned.
- 1.12** Proponents should be aware that the City is subject to the provisions of the Freedom of Information and Protection of Privacy Act (FOIPPA) ("Act"). A Proponent may stipulate in their Proposal that a portion(s) of their Proposal that contains confidential information and is

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supplied to the City in confidence. However, under FOIPPA, the City may nevertheless be obligated to disclose all or part of a Proposal in response to a request made under the Act, even if the Proponent has stipulated that part of their Proposal is supplied in confidence. The Proponent should review Section 21 and other provisions of FOIPPA in order to gain a better understanding of the City's disclosure responsibilities under the Act.

- 1.13 The City reserves the right to share information submitted under this EOI with an advisory group that may contain consulting firms or different levels of government.
- 1.14 All information provided by the City to a Proponent in connection with this EOI is provided on a confidential basis, and Proponents will not disclose any such information to any person (other than the Proponent's legal advisers or consultants) without the City's prior written consent, nor may any Proponent publicize or advertise its involvement with this EOI process without the prior written consent of the City.
- 1.15 Proponents shall not contact City elected officials, officers or employees directly or indirectly regarding this EOI, except as indicated in this EOI.

2.0 **BUSINESS REQUIREMENTS & SCOPE OF WORK**

- 2.1 See Appendix A for an outline of the project requirements

3.0 **Other Reference Material**

- 3.1 Enclosed are links to other reference material that pertains to this project. This information is to be used for reference only and subject to change.

[https://www.newwestcity.ca/database/files/library/Official_Community_Plan_\(Consolidated_Dec_2019\).pdf](https://www.newwestcity.ca/database/files/library/Official_Community_Plan_(Consolidated_Dec_2019).pdf)

[https://www.newwestcity.ca/database/files/library/CNW_EDP_FINAL\(2\).pdf](https://www.newwestcity.ca/database/files/library/CNW_EDP_FINAL(2).pdf)

https://www.newwestcity.ca/database/files/library/Sapperton_Renewable_District_Energy_System_Public_Document_reduced.pdf

https://www.newwestcity.ca/database/files/library/Sapperton_District_Energy_Service_Area_11_x_17_version.pdf

4.0 **PROPOSAL INSTRUCTIONS**

- 4.1 One (1) electronic copy and five (5) hard copies (one to be unbound, electronic copy to be single PDF) of the Proposal, should be submitted and clearly marked on the outside envelope or box as follows:

NWEOI-20-01
Sapperton District Energy
 Attention: Purchasing Manager

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- 4.2 The City will receive Proposals at the location and time indicated on the title page of this Request for Proposal.
- 4.3 It is the Proponent's responsibility to ensure that the City receives its Proposal prior to the closing time indicated on the title page of this Request for Proposal. The City does not accept facsimile, electronic mail, or other unsealed Proposals.
- 4.4 Requests for clarification or further information should be made in writing only to the individual from the City identified on the first page of this EOI. The City may respond to enquiries that it, in its sole discretion, considers relevant to this EOI. The City intends to respond only to those relevant written enquiries received at least ninety-six (96) hours prior to the closing time indicated on the title page of this EOI. The City may record enquiries and post written responses on its website at <https://www.newwestcity.ca/business-and-economy/doing-business-with-the-city/request-for-bids-and-proposals-open>

5.0 **SUBMISSION REQUIREMENTS**

- 5.1 Proposals should be provided double-sided on 8 ½” white paper, in a font colour of black and not less than 11 point. **NOTE – many of the topics noted below are noted in Appendix A as to what the City is interesting in.** All proposals must include and clearly identify:

- a) **Cover Page:** Front page of this EOI with the required Proponent information filled out and signed.
- b) **Project Understanding:** (5 pages max) provide an overall understanding of the project as noted in Appendix and your organization experience in delivering a similar project.
- c) **Methodology and Approach:** (20 pages max) Provide how you would approach a District Energy project as outlined in **Appendix A**, include at minimum the following:
 - 1) Your understanding the New Westminster or other local municipalities
 - 2) How will the project be delivered?
 - 3) Alternative approaches
 - 4) Risks – identify and characterize project risks
 - 5) What is the overall project requirements
 - 6) High level sequence of work
 - 7) Resource requirements
 - 8) Delivery model
 - 9) Your approach to sustainability
 - 10) Operations and Management
 - 11) Risk and Resilience
 - 12) Other
- d) **Project Team/Experience:** (10 pages max) Provide one (1) example of where you managed a similar project and include at minimum the following:
 - 1) A description of the project, where, when and how

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- 2) Who from your organization was involved, their roles and responsibilities
 - 3) A summary of technologies and system configuration used
 - 4) Approximate construction value
 - 5) Cost of energy delivered (\$/MWh or \$/m2)
 - 6) Any regulation environment requirements
 - 7) What worked what didn't
 - 8) Was the project completed on schedule, why?
 - 9) Financial costs, include benefits and risks
 - 10) Other
- e) **Organizations Capacity:** Provide an overview of how your organization would be able to provide sufficient resources to manage the end to end project. Include at minimum:
- 1) Organization chart
 - 2) Leadership team
 - 3) Partnerships (if required) and their role/responsibility
- f) **Financial Review:** Based upon all the information provided in this EOI and **Appendix A** please provide an overall of a financial model you would propose. The City understands there are many different potential financial models and we are open to innovative ideas. Include at minimum:
- 1) City costs
 - 2) Projected financial benefits to the City
 - 3) Partnership models and benefits or risks
 - 4) Using the load forecast project future earnings
 - 5) Financial risks to the City and mitigation options
 - 6) Examples of other projects, include actual benefits/costs etc.
 - 7) ROI
 - 8) Other
- g) **Other Factors:** (10 pages max) Provide any additional information about your organization, the industry or anything that the City should be aware of for a similar project as outlined in **Appendix A**. Feel free to be innovative and outline any pros/cons that the City may not have anticipated.

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Appendix A

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1. Introduction

1.1 Objective of This Document

The City is investigating the possibility of building a District Energy System and we are looking to obtain information on several aspects of the potential project. The following document contains at a high level overview of what the City would be looking for. In your response to the questions outlined in **Section 4.0 Submission Requirement** the City is requesting that you take this information into consideration when responding.

1.2 Expressions of Interest (EOI)

The City of New Westminister (“the City”) is seeking a district energy utility business partner with the desire, expertise and capability to design, build, finance, operate and maintain a low-carbon, cost-effective district energy system (DES) in the Sapperton neighbourhood. The City is open to a range of potential ownership and operating models, with the understanding that DES proponents would be tasked with sourcing capital funding for the project.

The City of New Westminister is unique in that it has its own Electrical Utility that is regulated by an Electrical Utility Commission. Proponents are encouraged to provide solutions that take advantage of this capability.

This EOI is the first stage in selecting a preferred proponent for this project. The City anticipates issuing a Request for Proposals (RFP) in 2020.

1.3 Project Overview

The proposed Sapperton District Energy System (SDES) is intended to provide low carbon energy to Royal Columbian Hospital (RCH), the Sapperton Green redevelopment project and other buildings in the Sapperton neighbourhood. The City has conducted ongoing feasibility work for several years and has determined that a sewer heat recovery-based DES is preferred for this project.

The Sapperton neighbourhood is located in the northeastern corner of New Westminister, roughly bounded by Braid Street, Brunette Avenue and E Columbia Street. This area has undergone significant change in the past decade, with the near-completion of the Brewery District development, and recent expansion of RCH. Sapperton Green is a major proposed redevelopment project of an existing warehouse site at the intersection of Braid St and Brunette Ave, with an expected buildout of over 6.5 million square feet of mixed use residential and commercial.

Metro Vancouver owns a large trunk sewer that runs north-to-south on the southeast side of Brunette Avenue. This sewer has more than enough available energy to supply the long-range needs of the SDES, and is the intended primary energy source for the SDES. The City has previously discussed the project with Fraser Health and Metro Vancouver. The new energy centre at RCH has provision for a 3 MW DES connection.

For project background details, please visit the following link:

<https://www.newwestcity.ca/planning-building-and-development/projects-on-the-go/articles/2910.php>

1.4 Project Scope

The scope of the project will be specified in detail at the RFP stage. For the purpose of the EOI, Proponents should assume the following:

- The City will enter into an agreement with a qualified and experienced partner to implement the SDES. The specific business model to be used will be determined

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based on responses from Proponents and will be stated in the RFP, with consideration of alternative business models if necessary.

- The SDES may end up being regulated by the BC Utilities Commission depending on the agreed business model. Proponents should be prepared to lead a regulatory filing process to obtain approvals if necessary.
- The final SDES system concept has not been determined, although sewer heat recovery is the preferred energy source. Proponents may propose alternative arrangements and will be required to provide a due diligence study and investment-grade business case analysis to support any proposed system concept, including sewer heat recovery.
- The SDES should provide immediate low-carbon energy supplies to RCH and other customers. Temporary servicing using fossil fuels as a primary energy source is not considered favourable, although natural gas used for peaking and backup may be acceptable if the project meets the stated GHG targets.
- The reliability and cost of thermal energy provided by the SDES shall be competitive with other low-carbon energy supply alternatives.
- It is the City's goal to have the project in-service by 2023 to coincide with the completion of the first phase of Sapperton Green. If the Proponent determines this is not possible then alternative solutions that preserve servicing to Sapperton Green should be developed.

1.5 **Supportive Policy**

The City is prepared to implement supportive policies to incent and/or require connection of new buildings within specified zones in the Sapperton neighbourhood. This may include requirements of rezoning, service area bylaw and relaxation of Step Code requirements.

2. **District Energy Opportunity**

2.1 **General System Description**

The proposed Sapperton DES is envisioned as a centralized plant system with most or all of the thermal energy generating capacity within a central plant. The SDES is expected to provide higher temperature hot water to RCH, and may provide lower temperature hot water to other buildings. Cooling should be considered, particularly for the Sapperton Green development.

The City is considering a seasonal bi-temperature concept that provides low-temperature (45 °C) heating in the winter, which would be reduced to 25-30 °C in the summer to receive rejected cooling energy. Each building would have a dedicated domestic hot water heat pump to boost the service temperature using the district energy loop as its source. Buildings would also be expected to have in-suite heat pumps (e.g. hybrid heat pumps) to provide cooling. This arrangement allows for a two-pipe heating and cooling system while retaining the advantages of centralized energy generation.

Energy Centre / Central Plant

The Energy Centre is intended to be located at 151 Spruce Street, which the City has recently acquired. The Energy Centre will include all primary thermal energy generation equipment, water pumps and would include a tie-in with the Metro Vancouver New Westminister Interceptor Sewer.

- The primary source of energy will be screened raw sewage. Design temperatures of 15 °C in the winter and 22 °C in the summer are assumed based on previously-available information. Sufficient flow is assumed to be available in the interceptor sewer at all

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times. The City will work with Metro Vancouver to obtain updated flow and temperature data during the RFP stage.

- Several technologies are available to exchange heat with raw sewage. Approximately 300-400 L/s of sewage is anticipated to be diverted for heat exchange to produce 9 MW of heating capacity.
- The Energy Centre will include heat pumps to upgrade the sewage heat for service temperatures. RCH requires a minimum supply temperature of 75 °C, which is at the upper end of the available condenser temperature range for heat pumps.
- The Energy Centre will include condensing boilers to provide peak heating capacity. If cooling is provided, the Energy Centre may also need cooling towers for peak cooling.

Distribution Piping System (DPS)

The DPS will extend from the central plant to the customer buildings. The current concept envisions separate DPS loops for the RCH/Columbia Street area and Sapperton Green/Braid Street area. One loop will operate at a lower temperature, which will serve Sapperton Green and the surrounding area, and the other will operate at a higher temperature serve RCH and the Columbia Street area including any remaining buildings at the Brewery District.

- The lower-temperature loop is proposed to operate at a minimum temperature of 45 °C in the winter, which is sufficient to provide space heating for newer buildings, but not high enough for domestic hot water (DHW). DHW top-up will be provided at the buildings using additional modular heat pumps. The lower-temperature loop will operate at a maximum supply temperature of 30 °C in the summer to allow for recovery of cooling energy from buildings.
- The higher-temperature loop will operate at a consistent supply temperature of 75 °C year-round and will not absorb cooling energy from buildings.
- Both loops will be constructed of pre-insulated steel piping (i.e. Logstor or equivalent).

Energy Transfer Stations (ETS)

ETS will be configured to provide heating and potentially cooling energy transfer for the lower-temperature loop and heating only for the higher temperature loop.

- The heating/cooling ETS will include a single heat exchanger to provide space heating or cooling; and a bank of DHW heat pumps with double-walled condensers to provide all DHW, with the capability to recover cooling energy rejected by the buildings.
- The heating-only ETS will include a heat exchanger for space heating and a double-walled heat exchanger for DHW.

Building Systems

All buildings connecting will be required to have hydronic systems. The City has investigated regulatory mechanisms for requiring DES connection and will assist the Proponent in this capacity. Proponents should explain their experience in working with municipalities, customers and developers to ensure building systems are designed to achieve maximum efficiency and reliability in the DES.

- Buildings on the lower-temperature loop are assumed to use hybrid heat pumps, which have a fan-coil for heating mode, and a refrigerant-to-air system for cooling mode. The cooling energy would be rejected to the two-pipe building piping loop, and the net amount of heating and cooling would be provided by the DES.
- Buildings on the higher temperature loop could use a range of terminal unit systems.

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2.2 Servicing Plan

The overall servicing plan developed from the City’s feasibility work is attached as Figure 1. The map shows two nearly-separate service areas: the “Braid Node”, which is primarily Sapperton Green, and the “Columbia Node”, which includes RCH as well as allowance for additional extensions in the area. It is not expected that all of the properties shown in the service areas will be available for connection to the SDES. The area west of Columbia Street includes mostly older low-rise apartments, many of which have existing hydronic systems. The Brewery District development has two remaining phases and may be available, and several other infill developments are projected for Columbia Street.

The pipe routing as shown is conceptual. Proponents will need to work with the City to establish suitable piping corridors. As the 151 Spruce Street site is across the BNSF Railway ROW, suitable crossing methods will need to be determined, which will likely involve trenchless construction.

2.3 Load Forecast

The most recent load forecast was developed using a building and development forecast report prepared for the City. **A summary of the building information will be provided at a later date.**

The following design criteria for the year 2040 were developed based to provide a general understanding of the system capacity requirements.

Floor Area (m²)	625,000 (excl. RCH)
Peak Heating Demand (MW)	22.5
Peak Cooling Demand (MW)	18.8 (building) / 24.5 (incl. heat pumps)
Annual Heating Demand (MWh)	63,900
Annual Cooling Demand (MWh)	19,000

The load forecast is provided for contextual purposes and is subject to change. Proponents should not need to conduct any engineering analysis using the load forecast for the Response. Current assumptions for the load forecast include:

- RCH will utilize 3 MW of renewable heating base load, and is included in the peak heating demand.
- Peak heating and cooling demands as shown are diversified.
- Residential and commercial annual energy demands assume implementation of the Step Code as follows:
 - Step 2 applies to buildings occupied during or after 2025;
 - Step 3 applies to buildings occupied during or after 2029; and
 - Step 4 applies to buildings occupied during or after 2034.

3. Background

3.1 Community Energy and Emissions Plan

The City developed its Community Energy and Emissions Plan (CEEP) in 2011. The City adopted a plan to reduce community-wide emissions 15% below 2007 levels by 2030 as a result of the CEEP. Implementing low-carbon district energy is an important component in reaching the City’s climate goals, and the SDES project could offset between 6,000 and 10,000 t CO₂e/year. The City’s total goal is roughly 55,000 t CO₂e/year.

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3.2 Step Code

The City is in the process of implementing its new Step Code policy for Part 3 buildings. At minimum, Part 3 buildings will be required to follow the Step Code as of January 1, 2020, **this information will be provided at a later date.**

3.3 Low-Carbon Resource Availability

A detailed feasibility study completed in 2014 identified biomass and sewer heat recovery as preferred options for the district energy system. The original 2014 feasibility study targeted 8 MW of low-carbon energy capacity with the ability to supply 70-80% of the annual heating energy of the district.

Biomass feedstock could be available from one or more regional wood recyclers and fuel suppliers. Notably, one recycling operation is in the Brunette Industrial Area. A range of biomass technologies and configurations were considered. While cost-effective, the City preferred not to use biomass due to concerns over air emissions.

Sewer heat recovery was identified as an alternative due to the close proximity of a major trunk sewer that could provide a sufficient source of low carbon energy. With a flow of about 1,900 L/s and estimated winter temperatures from 12 °C to 15 °C for sewage at the Sapperton Pump Station, this would meet the demand for the proposed DES.

Alternative options for low carbon resources could include air-source or ground source heat pumps. These options would be unlikely to work for RCH, but could be suitable alternatives if the scope of the system were to be reduced to just focus on the Sapperton Green development.

3.4 Rationale for Sewer Heat Recovery

Sewer heat recovery has been determined to be economically feasible relative to projected costs for residential electricity. As the City has its own electrical utility, providing heat from an electrified source such as heat pumps allows for project synergies. Sewer heat recovery does not produce any direct emissions and uses a carbon-free resource. Metro Vancouver has an interim policy that supports development of wastewater energy projects and has previously discussed this project with the City.

The Electrical Utilities Commission provided a report to council in 2016, which recommended the following:

- Direct staff to proceed with next steps on project implementation, including the adoption of a building connection bylaw, for a district energy system in the Sapperton and Brunette Industrial Area that is based on a renewable, low-carbon energy source;
- 2. Endorse Sewer Heat Recovery (SHR) as the energy source for the system;
- 3. Direct staff to consult with the community and stakeholders on the proposed renewable district heating system and connection bylaw;
- 4. Direct staff to proceed with preliminary design and Class B (+/- 15%) cost estimate to finalize the business case for the system, with a target In-Service Date of June 2019 to coincide with the commissioning of the new RCH energy centre.

https://www.newwestcity.ca/database/files/library/November_7_2016_Council_Report_Sapperton_District_Energy_System_Recommendations.pdf

3.5 151 Spruce Street

The 151 Spruce Street site was recently acquired by the City to facilitate this project and others. The site is contaminated from past industrial activity and will require remediation. The

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site is also bounded by the Brunette River, BNSF Railway and SRY Railway. Metro Vancouver's trunk sewer runs along the northwest edge of the property.

This site is also located in the Fraser/Brunette River floodplain, has liquefiable soil and will need to be raised above flood elevation. Engineering teams will require competent geotechnical engineers to ensure any buildings and infrastructure are designed for the soil conditions.

Site contamination does not need to be addressed in the Response, but Proponents should be aware of the need for remediation and ground improvements in considering the project schedule.

Proponents should identify any limits on responsibility for site conditions, as well as any opportunities for the City to receive revenue.

4. **Performance Goals**

This project should emphasize sustainability in design and performance while providing low-cost, low-carbon energy. Proponents should highlight how the system will implement cost-effective, resource-efficient and adaptable long-term infrastructure in a sustainable manner.

4.1 **Project Delivery Schedule**

The target in-service date is December 2023. Proponents should outline how they will maintain the construction schedule to meet the in-service date as well as provide key milestone dates.

4.2 **Temperature and Servicing Requirements**

The following servicing requirements are anticipated:

- Royal Columbian Hospital: minimum of 3 MW low-carbon capacity at a supply temperature of 75 °C;
- New Residential/Commercial Buildings: provide sufficient heating and optionally cooling capacity at appropriate temperatures for Step 2 and 3 buildings.

The current concept proposes providing service at two different temperatures, since the entire district would not require 75 °C hot water. The Proponent should explain their understanding of how reducing the operating temperature improves efficiency and the opportunities and limitations available with higher-performance buildings.

4.3 **Cost of Service**

The project should be able to provide thermal energy to new residential and commercial buildings at a local competitive price relative to other low carbon benchmarks, and considering the effects of Step Code implementation.

Fraser Health has indicated it is willing to purchase heat at the marginal cost of running its new boiler plant, which uses natural gas. The City has determined this would require some form of subsidy, with the trade-off being a large reduction in GHG emissions from RCH.

Proponents should consider what types of rate mechanisms can be used to address these benchmarks in an equitable manner and identify potential sources of grant funding to support the project goals.

4.4 **Energy Efficiency**

The proponent should highlight measures they will take to conserve and reduce energy consumption throughout the project life. Measures should include actions both during construction and operation phases. Where applicable, discuss energy use monitoring systems.

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4.5 Water Efficiency

Cooling plant components may end up consuming water (e.g. cooling towers). Proponents should demonstrate innovative ways to minimize potable water use by this facility. This should include considerations during construction and operation. Where applicable, discuss water use monitoring systems.

4.6 Greenhouse Gas Emissions

Greenhouse gas reduction can take place both during construction and operations. Proponents should outline their plan to reduce embodied energy and emissions from construction. For the operations, proponents should include their plan to minimize greenhouse gas emissions and air pollutants.

The project must achieve a maximum GHG intensity of 2.0 kg CO₂e/m²/year.

4.7 Community Integration

The DES will connect the neighbourhoods between Sapperton Green and RCH in New Westminister. The proponent should outline how the system will be integrated into the community within the following parameters.

Public Space

The long-term plan for 151 Spruce Street includes a future greenway and other public amenities. Proponents should recognize that the project is part of a connected community and provide their vision for how the energy centre will integrate into the public realm including opportunities for public interaction.

Noise and Vibration

Proponents should consider how noise and vibration will be managed at all points in the system, including selection of terminal heating and cooling units in new construction. Solutions that result in no net increase in noise are preferred, and all solutions must comply with City bylaws.

Visual

Proponents should describe their approach to minimizing visual impacts on the community. Opportunities to enhance views and local character should be described. Identify how the project will preserve or enhance the physical, natural, and community character of the project site and its surroundings.

Traffic Management

Proponents should provide a high-level strategy for reducing impacts on traffic during construction. Consider logistics for crossing the BNSF Railway, Skytrain guideway and Brunette Avenue.

4.8 Health and Safety

Health and safety refers to the overall wellbeing of the community and the impact of the project on individual comfort, and quality of life. Proponents should demonstrate how they will implement health and safety policies and procedures during design, construction, and operations and maintenance periods. Identify the impact on construction teams, operators and staff as well as the impact to the broader community.

4.9 Leadership and Innovation

The proponent should outline how their leadership will meet innovation and sustainability goals through interdisciplinary collaboration and teamwork. This should include a high-level overview of the project's sustainability strategy or sustainability management plan as well as a consultation plan for stakeholder engagement. Key project stakeholders at a minimum include:

- Fraser Health Authority

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- BNSF Railway
- SRY Railway
- Translink
- Metro Vancouver
- Vancouver Port Authority

Proponents should further provide suggestions on how the project will support economic development including job growth, capacity building, business attractiveness and livability. This will include expanding knowledge, skills and capacity of the local workforce.

4.10 Operations and Maintenance

Proponents should demonstrate their experience and ability to operate and maintain a heat pump-based DES with a focus on reliability, preventative maintenance, asset management and safe work practices.

4.11 Risk and Resilience

Proponents should provide a high-level summary on how they would conduct a comprehensive, multi-hazard risk and resilience evaluation for the development area as well as providing clear objectives and goals for the plan. Risks should include seismic events, storm surge, climate change and sea level rise.

The proposed DES building is in close proximity to the Brunette river and the floodplain of the Fraser river. Proponents should outline their plan to protect, buffer, enhance and restore the wetlands and shoreline ecosystems through natural buffer zones, vegetation and soil protection zones. This should include provisions to minimize the impact of development on stormwater runoff quality, rate and quantity.