



REQUEST FOR EXPRESSIONS OF INTEREST AND STATEMENTS OF QUALIFICATIONS

Title: Professional Services for District Energy Hydraulic Model

Reference No.: 1220-050-2023-001

FOR PROFESSIONAL SERVICES

(General Services)

Issue Date: January 10, 2023

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REQUEST FOR EXPRESSIONS OF INTEREST AND STATEMENTS OF QUALIFICATIONS

1. INTRODUCTION

1.1. Purpose

The purpose of this Request For Expressions of Interest and Statements of Qualifications (the “**RFEOI/SOQ**”) is to:

- (a) invite submissions (the “**Submission**”) from respondents (the “**Respondent**”) that describe the desire, relevant expertise, capability and resources of the Respondent to undertake the project requirements as described in Schedule A – Scope of Services; and
- (b) select a Respondent or Respondents who may be invited to participate in the next stage of the competitive solicitation process, when called.

1.2. Definitions

In this RFEOI/SOQ the following definitions shall apply:

- (a) “**BC Bid Website**” means www.bcbid.gov.bc.ca;
- (b) “**City**” means the City of Surrey;
- (c) “**City Representative**” has the meaning set out in Section 2.3;
- (d) “**City Website**” means www.surrey.ca;
- (e) “**Date**” has the meaning set out in Section 2.2;
- (f) “**Evaluation Team**” means the team appointed by the City;
- (g) “**Preferred Respondent(s)**” means the Respondent(s) selected by the Evaluation Team;
- (h) “**Respondents**” (individually the “**Respondent**”) means an entity that submits a Submission in response to the RFEOI/SOQ issued by the City;
- (i) “**RFEOI/SOQ**” means this Request for Expressions of Interest and Statements of Qualifications;
- (j) “**Services**” has the meaning set out in Schedule A; and
- (k) “**Submission**” means a submission submitted in response to this RFEOI/SOQ.

2. INSTRUCTIONS TO RESPONDENTS

2.1. Address for Submission Delivery

The Respondent should submit the Submission **electronically** in a single pdf file which must be received by the City by email at: purchasing@surrey.ca

Confirmation of receipt of email will be issued. Submissions that cannot be opened or viewed may be rejected. A Respondent bears all risk that the City's receiving computer equipment functions properly so that the City receives the Submission.

Note: The maximum file size the City can receive is 10Mb. If sending large email attachments, Respondents should phone [604-590-7274] to confirm receipt.

2.2. Date

The City would prefer to receive Submissions on or before February 1, 2023 (the "**Date**").

2.3. Inquiries

All inquiries related to this RFEOI/SOQ should be directed in writing to the person named below (the "**City Representative**"). Information obtained from any person or source other than the City Representative may not be relied upon.

Name: Sunny Kaila, Manager, Procurement Services

Email: purchasing@surrey.ca

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Inquiries should be made no later than seven (7) business days before the closing Date. The City reserves the right not to respond to inquiries made within seven (7) business days of the closing Date. Inquiries and responses will be recorded and may be distributed to all Respondents at the discretion of the City.

Respondents finding discrepancies or omissions in the RFEOI/SOQ documentation or having doubts as to the meaning or intent of any provision should immediately notify the City Representative. If the City determines that an amendment is required to this RFEOI/SOQ, the City Representative will issue an addendum in accordance with Section 2.4. No oral conversation will affect or modify the terms of this RFEOI/SOQ nor be relied upon by any Respondent.

2.4. Addenda

If the City determines that an amendment is required to this RFEOI/SOQ, the City Representative will issue a written addendum by posting it on the BC Bid Website at www.bcbid.gov.bc.ca and the City Website at www.surrey.ca (collectively, the "**Websites**"), and upon posting, any addenda will form part of this RFEOI/SOQ. It is the responsibility of Respondents to check the Websites for addenda. The only way this RFEOI/SOQ may be added to, or amended in any way, is by a formal written addendum.

No other communication, whether written or oral, from any person will affect or modify the terms of this RFEOI/SOQ or may be relied upon by any Respondent. By delivery of a Submission, the Respondent is deemed to have received, accepted and understood the entire RFEOI/SOQ, including any and all addenda.

2.5. Status Inquiries

All inquiries related to the status of this RFEOI/SOQ, including whether or not a Respondent has been selected, should be directed to the City Website and not to the City Representative.

3. SUBMISSION FORM AND CONTENT

3.1. Form of Statements of Qualifications

Respondents should include the information below in their Submission.

A. LEAD FIRM PROFILE

- Firm name & address of lead firm.
- List of relevant completed projects, including short project descriptions for the three most relevant projects, and an approximate total volume of related work for the last five years (organized by year, in Canadian dollars).
- List of similar or related projects currently underway.
- General overview of the lead firm's approach to develop hydraulic model for district energy systems.

B. PROPOSED PROJECT TEAM

- List and short profile of possible team members (role, qualifications, related experience) and other possible firms. CVs are not required. Please note the next stage of the competitive solicitation process will provide more detail about the expertise that will be expected. At this stage, the City is interested in understanding more about lead firms and their proposed partners that may be drawn upon to deliver this type of project. Recognizing that the expertise in certain specialties of hydraulic modelling for district energy systems may be limited, there may be overlap in team composition amongst project teams.
- References (project, client name and contact information only).
- List of projects completed in past the 5 years.

C. CORPORATE SUSTAINABILITY

- Overview of corporate commitment to sustainability.

D. ADDITIONAL INFORMATION

Respondents can provide other information that is not requested here but which you think the City of Surrey should consider in evaluating your firm/team.

3.2. Signature

The Submission should be signed by a person authorized to sign on behalf of the Respondent and include the following:

- (a) If the Respondent is a corporation then the full name of the corporation should be included, together with the names of authorized signatories. The Submission should be executed by all of the authorized signatories or by one or more of them provided that a copy of the corporate resolution authorizing those persons to execute the Submission on behalf of the corporation is submitted;
- (b) If the Respondent is a partnership or joint venture then the name of the partnership or joint venture and the name of each partner or joint venturer should be included, and each partner or joint venturer should sign personally (or, if one or more person(s) have signing authority for the partnership or joint venture, the partnership or joint venture should provide evidence to the satisfaction of the City that the person(s) signing have signing authority for the partnership or joint venture). If a partner or joint venturer is a corporation then such corporation should sign as indicated in subsection (a) above; or
- (c) If the Respondent is an individual, including a sole proprietorship, the name of the individual should be included.

4. EVALUATION AND SELECTION

4.1. Evaluation Team

The evaluation of Submission will be undertaken on behalf of the City by the Evaluation Team. The Evaluation Team may consult with others including City staff members, third party consultants and references, as the Evaluation Team may in its discretion decide is required. The Evaluation Team will give a written recommendation for the selection of a Preferred Respondent or Preferred Respondents to the City.

4.2. Evaluation Criteria

The Evaluation Team will compare and evaluate all Submissions to determine the Respondent's strength and ability to provide the Services in order to determine the Submission which is most advantageous to the City using the following criteria:

- Criterion 1: Respondent's business and technical reputation and capabilities and experience of its personnel and project team;
- Criterion 2: Respondent's business experience and expertise with this type of project and

Criterion 3: Respondent's approach to hydraulic modelling for district energy systems design and sustainability.

The Evaluation Team will not be limited to the criteria referred to above, and the Evaluation Team may consider other criteria that the team identifies as relevant during the evaluation process. The Evaluation Team may apply the evaluation criteria on a comparative basis, evaluating the Submissions by comparing one Respondent's Submission to another Respondent's Submission. All criteria considered will be applied evenly and fairly to all Submissions.

4.3. Evaluation Process

To assist in evaluation of the Submissions, the Evaluation Team may, in its sole and absolute discretion, but is not required to:

- (a) conduct reference checks relevant to the project and background investigations of the Respondent, and any subcontractors proposed in the Submission, with internal and/or external sources, and consider and rely on any relevant information received from the references and from any background investigations in the evaluation of Submissions;
- (b) seek clarification or additional information from any, some, or all Respondents with respect to their Submission, and consider and rely on such supplementary information in the evaluation of Submissions;
- (c) request interviews/presentations with any, some, or all Respondents to clarify any questions or considerations based on the information included in Submissions, and consider and rely on any supplementary information received from interviews/presentations in the evaluation of Submissions; and
- (d) seek confirmation that the inclusion of any personal information about an individual in a Submission has been consented to by that individual.

The Evaluation Team is not obligated to complete a detailed evaluation of all Submission and may, after completing a preliminary review of all Submissions, identify and drop from any detailed evaluation any Respondent which, when compared to the other Respondent, the Evaluation Team judges, in its sole discretion, to not be in contention to be selected as the Preferred Respondent.

4.4. Litigation

In addition to any other provision of this RFEI/SOQ, the City may, in its absolute discretion, reject a Submission if the Respondent, or any officer or director of the Respondent submitting the Submission, is or has been engaged directly or indirectly in a legal action against the City, its elected or appointed officers, representatives or employees in relation to any matter, or if the City has initiates legal action.

In determining whether or not to reject a Submission under this section, the City will consider whether the litigation is likely to affect the Respondent's ability to work with the City, its consultants and representatives and whether the City's experience with the Respondent indicates that there is a risk the City will incur increased staff and legal costs in the administration of an agreement if it is awarded to the Respondent.

5. GENERAL CONDITIONS

5.1. No City Obligation

This RFEOI/SOQ is simply an invitation for Submissions for the convenience of all parties. It is not a tender or a request for proposals and does not commit the City in any way to pre-qualify a Respondent(s), and the City reserves the complete right to at any time reject all Submissions, and to terminate this RFEOI/SOQ process.

5.2. Respondent's Expenses

Respondents are solely responsible for their own expenses in preparing, and submitting a Submission, and for any meetings, negotiations or discussions with the City or its representatives and consultants, relating to or arising from this RFEOI/SOQ. The City and its representatives, agents, consultants and advisors will not be liable to any Respondent for any claims, whether for costs, expenses, losses or damages, or loss of anticipated profits, or for any other matter whatsoever, incurred by the Respondent in preparing and submitting a Submission, or participating in subsequent proposal requests, negotiations for an agreement, or other activity related to or arising out of this RFEOI/SOQ.

5.3. No Agreement

By submitting a Submission and participating in the process as outlined in this RFEOI/SOQ, Respondents expressly agree that no contract of any kind is formed under, or arises from, this RFEOI/SOQ, prior to the signing of a formal written agreement.

5.4. Conflict of Interest

A Respondent shall disclose in its Submission any actual or potential conflicts of interest and existing business relationships it may have with the City, its elected or appointed officials or employees. The City may rely on such disclosure.

5.5. Solicitation of Council Members, City Staff and City Consultants

Respondents and their agents will not contact any member of the City Council, City staff or City Consultants with respect to this RFEOI/SOQ, other than the City Representative named in Section 2.3, at any time prior to the award of an agreement or the cancellation of this RFEOI/SOQ, and which could be viewed as one Respondent attempting to seek an unfair advantage over other Respondents.

5.6. Confidentiality

All Submissions become the property of the City and will not be returned to the Respondent. All Submissions will be held in confidence by the City unless otherwise required by law. Respondents should be aware the City is a "public body" defined by and subject to the *Freedom of Information and Protection of Privacy Act* of British Columbia.

6. CITY DISCLAIMER

- a. The information in this RFEOI/SOQ and any further supporting documentation is provided for reference purposes only. It is the responsibility of interested parties to confirm the accuracy and applicability of this information. All costs related to updating or acquiring additional information shall be born solely by the Respondent. The information contained in this RFEOI/SOQ has been prepared, in part, on information provided by others, and such information is believed to be accurate and reliable. However, by its receipt of this RFEOI/SOQ, each Respondent remises, releases, and forever discharges the City and its representatives (including staff and consultants and other professional advisors) from any and all claims which such person has, have, or may hereafter have arising out of any information contained herein. Any party who intends to submit a response to this RFEOI/SOQ is specifically invited to independently verify the accuracy of the information contained herein.
- b. The City shall not be obligated to review or accept any Submission and may reject any or all Submissions without giving reasons therefore.
- c. All negotiations and discussions with Respondents are on a "without prejudice" basis and cannot be construed as an agreement, and/or otherwise unless expressly approved by City Council and a written agreement is signed by the City.
- d. The City may negotiate with any one or more of the Respondents without having any duty or obligation to advise or allow any other Respondents to vary their Submission or otherwise negotiate with the City.
- e. The City may enter into discussions to clarify issues related to any Submission. If at any time the City reasonably forms the opinion that a mutually acceptable agreement is not likely to be reached, the City may give notice terminating discussions, but is under no obligation to do so.
- f. The City does not authorize any other person or agency to represent the Project on its behalf without the prior written approval of the City.
- g. By submitting a Submission and participating in the process as outlined in this RFEOI/SOQ, Respondents expressly agree that no contract of any kind is formed under, or arises from, this RFEOI/SOQ process.

7. DISCLAIMER

Notwithstanding anything contained herein, the Respondent agrees that he shall take all necessary steps to confirm the accuracy of this RFEOI/SOQ and agrees that the City shall have no liability whatsoever in respect of any losses or damages of any kind howsoever arising in relation to this RFEOI/SOQ.

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SCHEDULE A - SCOPE OF SERVICES

1. Scope of Services

The City of Surrey (the “City”) is seeking a consultant to build the City’s District Energy (DE) hydraulic model, calibrate/validate the model, and conduct scenario-based study. To develop this model, the following services are required:

- (a) Project management
- (b) Development of a hydraulic model for the City’s DE
- (c) DE model calibration and validation for various operating conditions
- (d) Simulate and analyze 4 scenarios and provide optional price for more scenarios
- (e) Summary report preparation
- (f) Model delivery and City staff training on the developed DE model

Respondents who will be invited for submission of their proposals can participate in the next stage after the RFP is posted. The above-mentioned services are expected to be delivered by the selected proponent.

2. Project Background

Under the City of Surrey’s 2019 Climate Emergency Declaration and the Official Community Plan, the City has committed to a target of net-zero GHG emissions by 2050, and Surrey’s DE is a key component of this decarbonization pathway. The City is advancing a DE system in the rapidly growing City Centre area. Substantial expansion in the pipe distribution network is on-going in order to service new buildings.

Hydraulic and thermal analysis of a DE network is essential for understanding network behaviors and bottlenecks, minimizing operating costs, operation planning, and analysis of alternative scenarios. The purpose of this project is to develop a hydraulic model platform for the City’s DE system and conduct scenario studies. A previous model has been developed for the City using Termis software which is owned and operated by a third-party consultant. The City is interested in bringing a new version of the model in-house in order to allow more frequent updates and additional insights into the operation parameter of the DE system. Further, with the recent adoption of the City Center Plan Update, there is a need to update the input parameters of the model to account for significantly increased density within the DE service area.

3. Project Overview

The Objectives of this project are to:

- (i) review and compare various DE hydraulic software;
- (ii) choose the most suitable software for the City’s DE system;
- (iii) develop a hydraulic model for the City’s DE system;
- (iv) conduct scenario-based studies;
- (v) deliver the model; and

(vi) provide in-house training. More details regarding scope of services, project phases, and project deliverables are outlined below.

4. Project Deliverables

The following deliverables are to be provided by the successful proponent of the next stage of the competitive solicitation process.

Phase 1 (Hydraulic Model Review and Selection)

- (a) List and review the available hydraulic model software for DE system,
- (b) Develop a comparison matrix to describe, evaluate and compare key features and capabilities of the software,
- (c) Select the most suitable software to model the City's DE system

Phase 2 (Hydraulic Model Development and Calibration)

- (d) Develop a hydraulic model for the City of Surry's DE system using the selected software from Phase 1
- (e) Include all the current and new development projects and DE pipeline updates in the developed model
- (f) Calibrate and validate the hydraulic model with the real-time data of the City's DE system

Phase 3 (Operational Analysis)

- (g) Conduct operational optimization via the hydraulic model
- (h) Study thermal losses (transmission losses) in the DE pipeline network for troubleshooting and improving the system efficiency

Phase 4 (Scenarios Study)

- (i) Utilize parcel level GIS data from City Centre Plan update to forecast future development with DE service area
- (j) Simulate and analyze 4 future growth scenarios and provide optional price for more scenarios

Phase 5 (Model Delivery and In-house Training)

- (k) Model delivery and model installation on the City's computer network
- (l) Provide training and support for the City's staff

The successful Proponent will provide the following deliverables:

- (a) A draft summary report on comparison of various hydraulic models for DE systems and model selection procedure for the City's DE system
- (b) A robust hydraulic model delivery
- (c) Simulation and analysis of four (or more) scenarios
- (d) Support and City staff training on the developed DE model
- (e) Submission of final summary report

The above-mentioned deliverables are estimated to take approximately 6 months to be completed after the appointment of consultant for developing hydraulic model for the City of Surry's district energy system.