Solicitation Number: 22-58116

SAS N2 Building Automation System (BAS) Upgrade

1. Advance Contract Award Notice (ACAN):

An ACAN is a public notice indicating to the supplier community that a department or agency intends to award a contract for goods, services or construction to a pre-identified supplier, thereby allowing other suppliers to signal their interest in bidding by submitting a statement of capabilities. If no supplier submits a statement of capabilities that meets the requirements set out in the ACAN on or before the closing date stated in the ACAN, the contracting officer may then proceed with the award to the pre-identified supplier.

2. Definition of the requirement:

The National Research Council of Canada (NRC) operates the Gymnasium Road Campus in Saskatoon that consists of six wings. These wings are primarily monitored and controlled under Johnson Controls proprietary Metasys Building Automation System Platform.

The proprietary "N2" communication language (Protocol) used within the Metasys Building Automation System has reached the end of its life and has been phased out in favour of the open source "BACnet" MS/TP communication language (Protocol).

To ensure ongoing system compatibility and interoperability within the existing NRC infrastructure while removing potential disruptions in service, NRC wishes to issue a contract to upgrade all remaining infrastructure and equipment still operating on the N2 protocol to the BACNet protocol under the Metasys Building Automation System.

3. Criteria for assessment of the statement of capabilities (minimum essential requirements):

Any interested supplier must demonstrate by way of a statement of capabilities that they are capable to provide, install and support the following project minimum requirements:

- Supply and install a licensed upgrade instance of Johnson Control's "Metasys User Interface" with NRC approved remote access capabilities
- Reprogram existing, N2/BACNet compatible, supervisory controllers on the system, to operate in BACNet fulltime
- Removal of exiting N2 controllers and replace with the following Johnson Controls Gen4 BACnet controllers
    - AHU Controllers: two (2) x CGM9090;
    - UNT Controllers: Sixty-one (61) x CGM6060;
    - VAV Controllers: One hundred fifty-eight (158) x CVM3050;
    - Thermostats: One hundred fifty-eight (158) x NSBIBTN240 .
- Program new controllers to the same sequence of operations as existing controllers being replaced.

- Replace complete comm buss electrical lines, in parallel to reduce system downtime.
- Map all new controllers into the existing Metasys network architecture and create new graphics within the Metasys User Interface.
- Pre-planning checklist/sign-off procedure
    - Site Survey, network architecture review, communication port review, review network segments, review network speeds
    - IOU module / Controller replacement review
    - Standardization requirements / implementation
- Remediation of issues that directly impact transition from pre-planning checklist
- Completion of detailed designs, and final as-built package.
    - Shop drawings of proposed equipment
    - Networks and address
    - Controllers, cut-sheets
    - Verification sheets
- Re-create: Users Groups (Administration), Graphics, Trend groupings and charts, Alarm, objects, Schedules.
- Integration to all 3rd-party systems.
- Post deployment verification and commissioning of proper operation of each field controller.
- Decommissioning and environmentally responsible, disposal of outgoing controllers
- Provide a minimum of 30 hours training by a certified and current Johnson Controls, Metasys trainer.

4. <u>This procurement is subject to the following trade agreement(s):</u>

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- Canadian Free Trade Agreement(CFTA)
- Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)
- Canada-European Union Comprehensive Economic and Trade Agreement (CETA)
- World Trade Organization–Agreement on Government Procurement (WTO-GPA)
- Canada–Honduras Free Trade Agreement
- Canada–Korea Free Trade Agreement
- Canada–Panama Free Trade Agreement
- Canada–Peru Free Trade Agreement

5. <u>Justification for the pre-identified supplier:</u>

Johnson Controls currently provide the maintenance and service for the controls systems for the NRC building located at Gymnasium Place in Saskatoon.

Johnson Controls is the manufacturer, installing company, and service provider for all related building automation needs at the NRC Saskatoon facility. There is no product distribution network or certified installers outside of the Johnson Controls regional branch offices.

The current Supervisory Network Architecture of NRC Saskatoon has been replaced and is now operating in the open BACNet protocol, while many field devices are still communicating via the proprietary "N2" language (Protocol). The proprietary "N2" communication language (Protocol) is currently used to communicate conditions within the facility as well as command and control the equipment. The upgrade in protocol will facilitate the ongoing need to maintain comfort and safety for the occupants.

Johnson Controls has moved to phase out the N2 communication protocol in favor of an open universal language of BACNet. The legacy N2 controllers will no longer be supported for parts and software as failures occur. This upgraded open control system will provide advantages to the NRC such as: leveraging the latest available technologies, providing access to a wider family of products, while providing a consolidated communication protocol throughout control devices.

This upgrade strategy has a direct synergy to the NRC retrocommissioning strategy which will provide standardization of control sequences and refining overall system operation to maximize system efficiency while being incorporated with the controls upgrade.

This upgrade is the only compatible and interoperable solution that prevents from upgrading the current BAS infrastructure and software which would make any other solutions cost prohibitive and logistically extremely challenging.

The Johnson Controls building automation platform is fully integrated into the fabric of the NRC facility. Johnson Controls Metasys building automation systems have enabled NRC facilities personnel to do more with less staff. Mobile optics into the comfort and performance of the facilities means that NRC Maintenance staff have the tools to troubleshoot and respond to facility concerns without necessarily requiring an in-person visit. Moreover, the Building Automation systems are connected to and supported by the new "Metasys User interface". This offering has allowed NRC to have a visual ability to verify conditions within the facility without having to have a person onsite.

6. <u>Government Contracts Regulations Exception(s)</u>

The following exception(s) to the Government Contracts Regulations (GCRs) is invoked for this procurement under subsection 6 (d) – only one person/firm is capable of performing the work.

Johnson Controls is the only authorized dealer to supply, install, and maintain the Metasys Building Automation System in Saskatchewan.

7. <u>Exclusions and/or limited-tendering reasons:</u>

If the goods or services can be supplied only by a particular supplier and no

Reasonable alternative or substitute goods or services exist for any of the

Following reasons:

- to ensure compatibility with existing goods, or to maintain specialized goods that must be maintained by the manufacturer of those goods or its representative;

For additional deliveries by the original supplier of goods or services that were not included in the initial procurement, if a change of supplier for such additional goods or services:

(i) cannot be made for economic or technical reasons such as requirements of interchangeability or interoperability with existing equipment, software, services, or installations procured under the initial procurement; and

(ii) would cause significant inconvenience or substantial duplication of costs for the procuring entity

8. Period of the proposed contract or delivery date:

The proposed contract is for a period 10 weeks from contract award.

9. Cost estimate of the proposed contract:

The estimated value of the contract, is *$450,016.86* (GST/HST extra).

All costs are subject to negotiations.

10. Name and address of the pre-identified supplier:

Johnson Controls L.P.
1-3006 Cleveland Ave
Saskatoon, SK
S7K 8B5

11. Suppliers' right to submit a statement of capabilities:

Suppliers who consider themselves fully-qualified and available to provide the goods, services or construction services described in the ACAN may submit a statement of capabilities in writing to the contact person identified in this notice on or before the closing date of this notice. The statement of capabilities must clearly demonstrate how the supplier meets the advertised requirements.

12. Closing date and time for a submission of a statement of capabilities:

The closing date and time for accepting statements of capabilities is:

January 31, 2023 at 14:00 PM CST

13. <u>Inquiries and statements of capabilities are to be directed to:</u>

NRC Contracting Officer: Collin Long
National Research Council Canada
Email: Collin.Long@nrc-cnrc.gc.ca