

## Addendum / Addenda

Project Description / Description de projet <b>Halifax Energy Metering Project</b>		
Solicitation No./N° de sollicitation <b>18-22088</b>	Project No./N° de projet	W.O. No./N° d'ordre de travail
Departmental Representative / représentant ministériel <b>Scott Shillinglaw</b>		Date <b>January 11, 2019</b>
<p><b>Notice:</b> This addendum shall form part of the tender documents and all conditions shall apply and be read in conjunction with the original plans and specifications.</p>		<p><b>Nota:</b> Cet addenda fait partie intégrale des dossiers d'appel; toutes les conditions énoncées doivent être lues et appliquées en conjonction avec les plans et les devis originaux.</p>

- 1 Questions and Answers
- 2 Section 01 00 10 - General Instructions, pages 1 and 2.

## **RFP 18-22088 – Halifax Energy Metering Project**

### **Question and Answer**

1. Are there Mechanical and Electrical drawings for this project?

**Answer: No.**

2. Are electrical meters being replaced to be installed within the switchboards referenced? If so are PTs required? As an alternative will a meter that can accept 600/347 direct be acceptable? Many meters utilize remote display models to keep the cost down.

**Answer: Yes, new electrical meters are to be installed in switchboards indicated in Section 26 09 23.01, item 3.04. Potential transformers (PTs) are required, as per Section 26 09 23.01, item 2.03. A meter may accept direct 600/347V, but will still need to be isolated from the load using PTs. Remote display models are acceptable as long as the Bidder solution includes all related work and materials (e.g. additional conduits, panels, connections, etc.) and the complete removal of existing metering equipment (i.e. equipment, accessories, wiring, connections, etc.).**

3. Any reason why the (3) ION 7330s are being replaced? Are they inoperable?

**Answer: Data logging capabilities are not compliant with the project requirements and EMCS integration capabilities could not be confirmed. They are currently operational. Bidders must carry the cost to replace these 3 meters.**

4. **From Proposal Form A - Communications Section** *"The proposed digital meter includes a communication interface which provides access to all measured and calculated values indicated above. The communication interface is provided in accordance with at least one of the following protocols: BACnet MSTP, BACnet IP, Modbus RS485 or Modbus TCP."*

Please clarify the intent of the statement above as multiple times throughout the tender document it references that vendors are to work with the BAS vendors in each building to determine the proper communication protocol. The above insinuates that as long as the electrical meters can communicate one of the above listed methods, that the BAS vendor is responsible for integration cost (hardware and labour) as long as the meters meet one of the above protocols. Alternatively is the electrical meter vendor supposed to carry product for the worst case scenario? This could add significant cost to ensure that all (4) methods are allowed for, for each building. Please clarify intent.

**Answer: The intent is not to impose a specific protocol but to let the Bidder and his team of subcontractors, which include the EMCS contractors, to work together to select the integration method in each building. Coordination with EMCS contractors forms part of this project. The electrical meter proposed for a specific building is required to comply with at least one of the four acceptable protocols – not all four. The Bidder may choose to select a**

different protocol in each building to facilitate the integration process with the EMCS. As a result, the Bidder may indicate more than one meter model/series in item 2.04 of Proposition Form A to cover different integration approaches for different buildings.

5. **1.03 PRE-INSTALLATION REVIEW**

*.1 Assist in the pre-installation review in accordance with Section 02 22 00 – Existing Conditions Assessment.*

*.1 Perform final selection of digital metering components and accessories.*

*.2 Coordinate requirements for integration to EMCS in each building.*

Further to above as Pre-Installation Review is not set to occur until 10-days after contract is awarded - does this mean that cost must be carried for worst case scenario (i.e. carrying cost for multiple protocol converters as necessary?)

**Answer: The intent of the pre-installation review is to assess the site and refine coordination details of interfaces between subcontractors' Work. The Bidder and his subcontractors/suppliers (which include EMCS contractors) must discuss their integration solutions before submitting their bid.**

6. ***In the event of a communication failure with the EMCS, indicate the method(s) available for retrieving data logger values (e.g. Ethernet connection, USB, web interface):***

Further to comments above if BAS vendor prefers BACNet/MSTP (serial) as opposed to BACNet/IP this will not be possible. It will be possible with Ethernet.

**Answer: The meter proposed must have the capability to export logs independently from the EMCS – in other words without relying solely on EMCS to access data logs. There is no restriction on the method used. This could be done through any type of ports (serial, Ethernet, USB, etc.) or a special manufacturer tool or software to interface to the meter. However, the final data exported must be formatted in CSV or MS-Excel.**

7. Existing Meters to be reused: (10) ION 6200 serially connected to (1) ION 7550 and Siemens Sentron PAC4200 - These meters communicate Modbus TCP/IP (Ethernet). RFP states that these are deemed to be "Plug-in Ready" Does this mean that BACNet is not required for these meters but is for the others? Please clarify.

**Answer: These specific meters are to be used with their current protocols. The Bidder can select any of the four acceptable protocols for other meters. While Section 01 00 10, item 2.01.2.4 indicates that BACnet should be prioritized, it is not mandatory.**

8. Will meters for the Andover/Digicon BCS Ltd. & Alerton/VCI Controls Inc. systems have common communication/output requirements?

**Answer: It is the Bidder's responsibility to coordinate work between EMCS contractors and other subcontractors/suppliers. Since the EMCS work forms part of the bid, requirements**

should be discussed between the Bidder and his subcontractors/suppliers before submitting their bid.

**Part 1 General**

**1.01 SUMMARY OF WORK**

- .1 Work of this Contract comprises the installation of energy metering equipment for HVAC and electrical services and the integration of metering equipment and data to the existing EMCS in nine buildings forming part of DND's Halifax area portfolio including:
  - .1 Shearwater (SH): eight buildings.
  - .2 Willow Park (WL): one building.
- .2 Work Sequence: perform work in accordance with the following staging requirements.
  - .1 Stage 1: Pre-installation Work
    - .1 Perform pre-installation review in accordance with the requirements of Section 02 22 00 – Existing Conditions Assessment and submit report.
    - .2 Perform selection of energy metering equipment and submit detailed shop drawings of proposed equipment, components and accessories.
  - .2 Stage 2: Equipment Purchasing and Coordination of Work
    - .1 Purchase and deliver metering equipment and components on site within the time for completion stated below.
    - .2 Coordinate and perform security clearance requirements for all staff scheduled to work on site.
    - .3 Submit schedules and work plan for performing work and required shutdowns of building services.
  - .3 Stage 3: Metering Installation
    - .1 Perform installation, verification and calibration of energy meters.
    - .2 Integrate energy metering data to each building's EMCS.
    - .3 Perform final commissioning of new systems.
  - .4 Stage 4: Project Closeout
    - .1 Submit closeout documentation.
    - .2 Provide training and demonstration.
- .3 Time for Completion: initiate work within 5 days of receipt of notice of contract award and perform the work listed in each stage indicated in the Work Sequence above, within the time stated in the following table.

Stage	Time for Completion
Stage 1 – Pre-installation Work	Within 10 days of receipt of notice of contract award
Stage 2 – Equipment Purchasing and Coordination of Work	March 15 <sup>th</sup> 2019
Stage 3 – Metering Installation	June 14 <sup>th</sup> 2019
Stage 4 – Project Closeout	June 28 <sup>th</sup> 2019

- ① .1 **Mandatory schedule for performing pre-installation site review: in order to meet facility constraints in terms of security and logistics, and ensure the pre-installation review is completed within the time stated in the table above, a mandatory schedule for conducting site assessments has been arranged as per the following:**
- .1 **Perform site assessments for the pre-installation review, as described in Section 02 22 00 – Existing Conditions Assessment, during the following dates and times:**
    - .1 **January 30<sup>th</sup> 2019, between 8:00 and 17:00.**
    - .2 **January 31<sup>st</sup> 2019, between 8:00 and 17:00.**
  - .2 **Perform review of electrical switchboards, which requires shutdown of existing services, during “off-hours”, between 17:00 on the 30<sup>th</sup> of January 2019 and 7:00 on the 31<sup>st</sup> of January 2019.**
    - .1 **Shutdowns of electrical services will be performed by the facility operations team.**
  - .3 **Conduct pre-construction meeting, as described in PART 1- PROJECT MEETINGS of this section, during the time allocated on site between January 30<sup>th</sup> and January 31<sup>st</sup>.**

#### **1.02 TURNKEY SOLUTION**

- .1 The successful Bidder shall provide a turnkey metering solution that includes the supply, installation and commissioning of energy metering systems, including all required interfaces and programming to enable the transfer of energy meter data logs to the existing EMCS platforms for archiving.
- .2 Refer to PART 2 – GENERAL DESIGN/PERFORMANCE CRITERIA OF THE METERING SOLUTION for requirements related to the overall metering solution.

#### **1.03 CODES AND STANDARDS**

- .1 Perform work in accordance with National Building Code of Canada (NBC) 2015 and other applicable code of provincial or local application including amendments up to project tender closing date provided that in case of conflict or discrepancy, more stringent requirements apply.
- .2 Quality of materials and work must meet or exceed requirements of specified standards, codes and referenced documents. All materials shall be new.

#### **1.04 TAXES**

- .1 Pay taxes properly levied by law (including Federal, Provincial and Municipal).

#### **1.05 FEES, PERMITS AND CERTIFICATES**

- .1 Obtain and pay for building permit, certificates, licenses and other permits as required by municipal, provincial and federal authorities.
- .2 Provide authorities with plans and information for acceptance certificates.
- .3 Provide inspection certificates as evidence that Work conforms to requirements of authority having jurisdiction.
- .4 Submit to Departmental Representative, copy of application submissions and approval documents received for authority having jurisdiction.