

**Quonset Air National Guard Base
2 Hercules Drive
North Kingston, R.I 02852**

STATEMENT OF WORK

**TWLR092101
INSTALL SMART METERS**

FOR
QUONSET ANG BASE CONTRACTING OFFICE
RHODE ISLAND AIR NATIONAL GUARD
NORTH KINGSTOWN, RI

PREPARED BY

HENRY H CHMIELINSKI IV, CPT RIANG
1 AUG 2008

Project Coordination:

- User: _____
- Fire Department: _____
- Safety Officer: _____
- Security Police: _____
- Environmental Officer: _____
- Communications Officer: _____
- Base Carpenter: _____
- Base Electrician: _____
- Real Property: _____
- Base Facility Manager: _____
- Base Civil Engineer: _____

INSTALL UTILITY MONITORING BASEWIDE

A. RELATED DOCUMENTS

- a. General provisions of the Contract, including Default Technical Specification Sections, apply to this Document.

B. SUMMARY

- a. This work shall provide Quonset Point Air National Guard Base a turnkey solution for the installation of Advanced Metering Infrastructure: 12 electric , 12 natural gas and 12 water meters and associated infrastructure into the following buildings: 1, 2, 3, 4, 5, 7, 8, 11, 502, 508, 524, 571, and 575. The Rhode Island Air National Guard (RIANG) is developing energy saving solutions for its current facility portfolio. This Statement of Work reflects current RIANG policies and practices, allowing offers to propose and price a solution to the desired performance objectives. RIANG desires that the new meters and software are compatible with Andover DDC system. The Contractor will provide and install all network wiring, Meters, and equipment etc required for a turnkey solution.

C. SCOPE OF WORK

- a. The contractor shall provide the necessary personnel, equipment, and materials required to provide and install smart utility monitoring devices to all buildings covered under this Statement Of Work (SOW). All work performed under this Statement of Work (SOW) shall be conducted in accordance with all applicable state and federal laws and regulations, ANG policies and regulations, and this SOW as outlined below. Contractor will provide any designs, engineering, calculations, and shop drawings required to support the installation of the meters.
- b. The tasks of the SOW are:
 - i. Furnish and install SquareD ION Enterprise meter system for electric, natural gas and water within buildings 1, 2, 3, 4 5, 7, 8, 11, 502, 508, 524, 571, and 575.
 1. All smart meters shall perform totalization locally and report back through communications protocol, the accumulated usage and real time data. Meters shall be Ethernet based using standard protocol ModbusTCP or BacnetIP/AnnexJ. LonWorksIP shall not be allowed.
 2. Any meter that simply reports the real-time rate and relies on the control system to calculate a total through integration is not allowed.
 3. Where smart meter has a display, the display shall be mounted in a location that is easy to see. If remote display is an option, this should be provided when direct-mount standard display would make it difficult to read.
 4. All meters shall be installed per manufacturer's instructions and appropriately selected for intended use. Including, but not limited to, straight pipe run requirements up-stream and down-stream of meters.
 5. Meters shall be provided with complete associated ION Enterprise software on dedicated rack-mount server which has air national guard ATO (Authority to Operate) status.
 6. Pulse-type meters shall be compatible with SquareD ION enterprise system
 7. Meters data shall be capable and tested to read into Andover Continuum.
 - ii. Create and install any necessary software or hardware to integrate meters into existing DDC system. Data shall be displayed on the Andover DDC system both graphically and in tabular format. The data, graphs and tables shall be exportable

to Microsoft Excel .xls format for use on other computers and in preparation of reports.

- iii. Provide all necessary power and communications wiring and infrastructure to accommodate full functionality of the installed meters.
- iv. Meters:
 - 1. Electric – Install Square D Power Logic PM870 Electric Meters model SQD-PM879 (or approved equal). Meters will be installed on the electrical service inside the building. It shall be the contractor's responsibility to provide three phase breakers, shorting blocks, enclosures and other material as required by the installation instructions to ensure turnkey solution.
 - 2. Gas – meter shall be Itron Dattus Modbus RTU compatible or approved equal and shall seamlessly integrate with SquareD ION enterprise system.
 - 3. Water – Water meters shall be positive displacement Elster AMCO Water C700 (or approved equal) sized based on continuous flow rate and capable of withstanding burst flow rates of the system. Meter shall be provided with digital register dry-contact 4W reed switch pulse output. High speed pulse output such as meter master Neptune transmitter not acceptable. Any areas defined as high flow rates above C700 capabilities should use the Elster AMCO Water P4000 turbine meter (or approved equal) with digital register. Meter shall seamlessly integrate with SquareD ION enterprise system

Where domestic water and fire protection water enters the building at a single point, water meter shall be placed on the domestic line after fire pump branch "T" connection.

- v. Data must be stored at the meter for a minimum of 45 days to accommodate interruptions of central power or communications.
 - vi. Data at the central head end must be programmed to record each piece of data hourly, daily, monthly, yearly, at intervals of 15 minutes, and stored for 10 years
 - vii. Changes of recording intervals need to be user friendly.
 - viii. All recorded data must be available on an excel spreadsheet.
 - ix. Provide 8-hr training to include hands on, classroom and any OEM recommended training.
 - x. Provide 1 year warranty entire system provided under this SOW – parts and installation
 - xi. Provide minimum of three site visits for follow-up support
 - xii. Provide any required meter calibrations for a period of one year following installation
 - xiii. Installation must meet NEC and all applicable national building code requirements
 - xiv. Meter is to be Digital/solid state
 - xv. Accuracy 0.5%
 - xvi. Provide all manuals, As-builts and warranties in electronic (Adobe Acrobat) format and 1 hardcopy binder
- D. **Contractor's Fire Protection:** Contractor shall provide its own fire protection to include fire extinguishers. Open flame devices or arc welding is not permitted except when a permit has been applied for and received. Permits shall be obtained from the Base Fire Department, and are required 24 hours prior to using any open flame devices or welding devices on Base property.
- E. **Security:** Before working on base all workers shall complete a police check and be issued photo identification. Photo I.D. shall be worn at all times while working on base. Police checks require a minimum of two weeks to process. The contractor shall restrict all workers to the

immediate work area due to security issues on base. The contractor shall be responsible for security of his work site to include equipment until accepted by the government.

- F. **Hazardous Material Usage:** The contractor planning to use hazardous material (HM) on base for the work outlined above shall register with the base Hazardous Material Pharmacy (HMP) prior to start of work in order to support the installation's compliance with Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements. All HM brought on base that is required to support this contract shall be reported to the HMP using a Contractor HM Identification Form. The Contractor HM Identification Form shall be provided to the contractor at/or prior to the Pre-Construction meeting.
- G. **Damage to Government Property:** The contractor shall immediately notify the government project manager if any Government property is damaged by the Contractor's operations and immediately repair or replace the damaged item to match the existing at no additional cost.
- H. **Material Submittals:** The contractor shall submit to the Contracting Officer (CO) for approval all items required for installation of the meters and all shop drawings within **10 calendar days** of the notice to proceed on an AF Form 3000. Ensure that any disapproved material submittal will not impact the approved project execution schedule, as disapproved submittal shall not be considered grounds for a time extension. Allow for a minimum of 14 calendar days and maximum of 30 calendar days for the Government's processing of material submittals. The contractor shall not order, deliver or install any materials without CO's material approval. Remove any materials on site, which have not been properly approved.
- I. **Contractor's Equipment & Supplies:** Store all Contractor tools, equipment and supplies in a location approved by the government project manager, on or off Base property. Government shall not be held responsible for missing or damaged contractor owned equipment or materials.
- J. **Trash, Refuse & Debris:** The contractor shall not use any government disposal bins, dumpsters or trash receptacles for any reason at any time. The contractor shall provide appropriate disposal bins/trash receptacles. Approval of disposal bins/trash receptacles location(s) shall be coordinated through government project manager. The contractor shall not allow debris to leave the work area due to potential damage to aircraft engines. Contractor shall coordinate with the base Environmental Manager (EM) prior to disposing any materials off base. All debris or trash shall be disposed of off base. All demolition debris shall be disposed of at a permitted landfill, with landfill authorization, unless other arrangements have been coordinated through the EM. Provide proof of landfill disposal from the landfill that accepts the materials. This may be accomplished by providing the government project manager with landfill receipts; waste manifests, or weight tickets from the landfill that accepts the construction debris.
- K. **Material & Equipment Accountability:** Notify the government project manager prior to delivery of any material or equipment to the site. The contractor shall ensure someone is available to receive delivered materials and able to store them safely in an area to be coordinated with the government project manager. Any materials delivered without prior coordination and without having someone to take receipt, shall not be accepted and turned away.
- L. **NORMAL HOURS OF OPERATION:** 7:00 a.m. – 1730 p.m. Tuesday through Friday except on Federal Holidays. Contractor will be allowed access on Mondays. Any work to be completed on Saturdays, Sundays, and Holidays must be approved by the COR and Contracting Officer prior to commencement.



Rhode Island AIR NATIONAL GUARD
143rd AW WING (AMC) (ANG)
2 Hercules way
North Kingston, R.I 02852

08 Sept 2011

MEMORANDUM FOR 143 MSG/MSC

FROM: 143 CES/CEP

SUBJECT: Sole Source Justification for TWLR092101 Energy: Install Smart Meters

1. In accordance with FAR 6.302-1 and 6.303-3, this letter is for Justification and Approval for other than full and open competition for a brand name/sole source request that has been provided to the 143rd Airlift Wing, Base Contracting Office for review and approval.
2. Nature and Description of Action: The RI Air National Guard (RIANG) has a requirement to install smart meters on 12 buildings at Quonset Air National Guard Base, Rhode Island that will report to the Andover (proprietary system) Direct Digital Controls (DDC) system.
3. Description of Item/Service and Estimated price: The following services are required:
 - a. See Statement of Work (SOW) for details.
4. Statutory Authority:
 - a. Citations: 10 USC 2304(c) or 41 USC 253(c)(1)
 - b. When the supplies or services required by the agency are available from only one responsible source, or for DOD, NASA, and the Coast Guard, from only one or a limited number of responsible sources, and no other types of supplies or services will satisfy agency requirements, full and open competition need not be provided for.
 - c. Demonstration of the proposed Contractor's unique qualifications: Smart meter data is required to report to one location. The location is the Andover DDC computer system. Andover is a proprietary system. Andover only supplies the equipment and programming authority to regional representative. Our region is under InControl Inc. Refer to the ANG/ETL 01-1, sections 10, 29, 2, 7 thru 9.
5. Source Sought/Market Research: Andover Continuum components and software are proprietary to Andover and the only certified company in southern New England is InControl, Inc.
6. Source Selection/Market Research: SquareD ION Enterprise meter system components are required for connectivity to the NGB network for future national level monitoring and reporting.
6. Any further technical questions may be directed to the undersigned at DSN: 476-3024 or (401) 267-3024

KEVIN MOTT, Capt, RI ANG
143rd CES/CEP

Timothy J. Caron
143D AW BCO