New York Power Authority
Request for Information

# Energy Management Control Center

Inquiry No.Q13-5415SG

New York Power Authority
Generating more than electricity

BIDDING DOCUMENTS
INQUIRY NO. Q13-5415SG
POWER AUTHORITY OF THE STATE OF NEW YORK
ADDENDUM NO.1
REQUEST FOR INFORMATION – ENERGY MANAGEMENT CONTROL CENTER

FEBRUARY 22, 2013

TO ALL CONCERNED

The original Bidding Documents for Inquiry No.Q13-5415SG are amended as noted in this Addendum No. 1 and the Addendum shall become a part of the Bidding Documents.

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REQUEST FOR INFORMATION – ENERGY MANAGEMENT CONTROL CENTER

**TO ALL BIDDERS**:

Please **DELETE** the original Request for Information, pages 3-12 and **REPLACE** with the attached updated Request for Information for Energy Management Control Center.

The Due Date for the RFI has been changed from March 13, 2013 to **March 14, 2013.**

Addendum No. 1 shall be part of Q13-5415SG and shall be included in bid submission.

_____
Sharon Green
Procurement Specialist

I HAVE READ THIS ADDENDUM NO.1 AND HAVE CONSIDERED IT IN MY PROPOSAL.

FIRM NAME: _____

BY: _____

TITLE: _____

# Table of Contents


1. Introduction ..... 1
2. NYPA Vision and Objectives ..... 1
3. Information Requested ..... 5
   - 3.1 Business Structure ..... 5
   - 3.2 Products and Services ..... 6
     - 3.2.1 Metering Services ..... 6
     - 3.2.2 Data Communications and Hosting ..... 6
     - 3.2.3 Database Validation, Data Management and Basic Reporting ..... 6
     - 3.2.4 Data Aggregation ..... 6
     - 3.2.5 Advanced Data Analysis, Presentation and Reporting ..... 7
     - 3.2.6 Product Development and Support ..... 7
   - 3.3 Commercial Approach and Alterrnative Business Models ..... 8
4. Instructions ..... 8
   - 4.1 Submission of Responses ..... 8

# 1. Introduction

The New York Power Authority ("NYPA" or the "Authority") is the nation's largest state-owned power supplier, with 17 generating facilities and more than 1,400 circuit-miles of transmission lines. The Authority provides low-cost electricity to government agencies, municipal electric systems and rural electric cooperatives, and to many of the State's businesses pursuant to statutory economic development programs. NYPA operates within the competitive electricity market of New York State. It is not financially supported by the State and has no taxing authority. It raises capital through the issuance of bonds and notes and the sale of power.

The Authority's mission is to provide clean, economical, and reliable energy while promoting energy efficiency and innovation for the benefit of its customers and all New Yorkers. NYPA is a national leader in energy efficiency, committing about $200 million a year to energy efficiency programs. Customer energy efficiency services include project design, management, implementation and financing for building upgrades and equipment replacement, as well as demand reduction programs. NYPA was recently selected to host "Build Smart NY," a New York State initiative to strategically implement Executive Order No. 88 issued by Governor Andrew M. Cuomo on December 28, 2012, which sets specified energy efficiency goals for New York State buildings.

In support of its mission, NYPA is exploring the opportunity to provide real-time energy management services to such parties as state entities, Authority customers, and other entities that are eligible to participate in NYPA's energy services programs (collectively, "Potential Participants"), through a centralized energy management control center (EMCC). NYPA is issuing this Request for Information (RFI) to energy management service companies to develop a better understanding of the commercially available products and services that could support a NYPA EMCC.

Section 2 of this RFI describes NYPA's vision and objectives for the EMCC. Recipients of this RFI are encouraged to reply by answering the questions in Section 3 according to the instructions and schedule presented in Section 4.

# 2. NYPA Vision and Objectives

NYPA is exploring the opportunity to provide real-time energy management services to Potential Participants through a centralized energy management control center. The EMCC would serve as a hub for continuous monitoring, analysis, forecasting, and management of facility energy supply, consumption and costs. The EMCC would complement and support NYPA's role as an energy efficiency project manager and demand response services provider by enabling NYPA to provide comprehensive and

continuous energy management services. NYPA is interested in learning about all commercial options and approaches, including fully outsourced services and in-house offerings with vendor support and/or software licensing.

Through the EMCC, NYPA seeks to offer the following services:

- Monitoring – hourly or real-time energy usage monitoring and reporting
- Baselines - Establishing granular baselines for each facility which will enable comparisons over time and across similar kinds of facilities
- Notification – customer notification of sudden increases in energy demand, short- or medium-term trends in increased energy consumption, and confirmation of significant energy- or demand-savings activities
- Load profile and cost analysis – energy budget planning and utility bill audits
- Rates and tariffs – modeling of alternative customer rates and utility tariffs for specific facilities
- Building equipment performance analysis – recommendations for re-commissioning and continuous commissioning
- Demand response services – expansion of existing NYPA programs and integration with other utility programs to capitalize on revenue generating opportunities through both NYPA and NYISO incentives
- Training, technical support and education – energy management training, feedback and technical support for facility managers, including training and support on web-based energy usage performance tracking, shadow monitoring capabilities and dashboard software tools

EMCC implementation would be coordinated with NYPA's existing Energy Services Program (ESP) and the Build Smart NY initiative and make use of facility data that has been collected under the ESP, as well as data and experience gained from NYPA sub-metering and demand response programs.

The facility types that are being considered for the program include, but are not limited to, the following:

- Public colleges and universities
- Emergency facilities – medical, police, and fire (open 24 hours)
- Garages/warehouses – large buildings with warehouse-type areas, including public works and parking facilities, and distribution centers
- Health facilities – hospitals, medical facilities
- Housing – multifamily housing (primarily medium-rise to high-rise public housing)
- Office buildings
- Terminals – airport and bus terminals
- Transit/Traction – subway and railway stations and trains
- Water/Sewage – water and sewage treatment facilities

**List of EMCC Services sought by NYPA**

The implementation of the EMCC is expected to include the technology elements listed below.

1. Metering Services

    a. Developing the metering plans for facility metering and selected sub-metering (e.g., buildings, portions of buildings and possibly specific equipment and circuits)

    b. Designing the metering installation

    c. Purchasing the metering equipment (NYPA will likely purchase the metering equipment and transfer ownership to the customer/facility)

    d. Coordinating the meter installation

    e. Installing the meters

    f. Identifying data collection points to enable real-time data communications between the metering points and the EMCC

    g. Maintaining metering installations

2. Data Communications and Hosting

    a. Providing all data communications equipment and software/hardware systems required to access metered data from facility meter installations at customer sites

    b. Transferring metered data to secure data hosting facilities

    c. Providing real-time access to metered data over network or web applications from the EMCC

    d. Providing access to metered data via web portal from any password-enabled workstation

3. Database Validation, Data Management and Basic Reporting

    a. Providing a tracking system for metered site identification and characteristics data

    b. Validating data being collected from the meter sites to ensure it is consistent with data previously collected

c. Providing statistical reports documenting the contents of the database and validation checks

4. Data Query, Filtering and Extract Capability

   a. Providing a means for NYPA staff to query, filter and extract data from the meter database and export to NYPA custom applications in formats compatible with databases and applications currently in use by NYPA

5. Advanced Data Analysis, Presentation and Reporting

   a. Providing applications for the analysis, presentation and reporting of facility and end use interval load profile data, including custom group segmentation, weighting/combining of group results, integration of intervals for 5-minute, 15-minute, and 60-minute intervals

   b. Providing tabular and graphic screen displays and printed reports that can be customized to support energy efficiency, demand response and energy planning services for participating facilities

   c. Providing training on analysis tools and interpretation of data

6. Notification, Data Collection and Reporting Services Relating to Demand Response Program Participation

   a. Providing a means to send notifications to demand response participants to activate demand response events

   b. Documenting loads controlled during demand response events

   c. Providing real-time feedback, reporting and required documentation confirming performance of demand response events to NYISO as applicable.

*OPTIONAL EMCC ELEMENT:*

7. Scalability of Technology for Future Development of Targeted Microgrids

   a. Providing a technology platform that may eventually integrate with Smart Grid functionality (e.g., automated switchgears) for enhanced optimization of localized distributed and renewable energy sources versus external electric service.

b. Promotion of automated solutions aimed at reduced losses, energy efficiency, and peak load reduction by locating generation near demand wherever possible.

# 3. Information Requested

Please provide the information requested in the following subsections. Your responses must be complete and detailed, and must fully respond individually to each item as numbered. In cases where multiple companies are responding as a team, one company must be designated as primary, and information must be provided on all the companies that are part of the team.

## 3.1 Business Structure

1) State the name of your company.

2) Describe the business form of your company (e.g., publicly held corporation, privately held corporation, LLC, partnership).

3) Identify where your company is incorporated and its address.

4) Identify your parent company, if any. If there is a parent company, respond to items 1-3 with respect to you and your parent company.

5) State the name of the division(s) or parts of your company that would be responsible for the elements (products and services) of the EMCC as described in Section 2.

6) Identify where each division named in Item 5 is located.

7) Identify any elements of the EMCC as described in Section 2 that would be delegated to other entities (e.g., partners, affiliates, subcontractors), and name those other entities, and the specific products or services they would provide.

8) Identify where each of the entities named in Item 7 is located

9) Identify how long each company named in the responses to items 1-8 has been providing EMCC-related products and services.

10) Provide the name, title, and contact information for the person or persons who would provide further technical or commercial information regarding this RFI response.

11) Submit three (3) complete sets of company information (literature/brochures/CDs) on this subject matter.

## 3.2 Products and Services

### 3.2.1 Metering Services

1) Describe how your company plans, designs, installs, and tests interval metering and sub-metering for sites to be monitored.

    a) Describe your experience providing metering services in New York State, including which utility service territories you have experience in.

### 3.2.2 Data Communications and Hosting

1) Describe how your company plans, designs, installs, and tests data communication facilities for acquiring interval metering data in real time.

    a) Describe your experience in the New York market.

2) Describe how your company integrates metering data communication facilities with existing customer and facility networks and building energy management systems.

3) Describe how your company manages metering metadata (e.g., metering point names, characteristics).

### 3.2.3 Database Validation, Data Management and Basic Reporting

1) Describe how your company produces a complete and consistent set of validated real-time data (e.g., missing data detection and replacement, data anomaly detection).

### 3.2.4 Data Aggregation

1) Describe the data aggregation functionality provided by your company.

    i) Aggregation of all or selected sub-meters for a given customer

    ii) Simple/weighted averaging of interval, hourly, daily, weekly, monthly historical data for a given customer

iii) Simple/weighted averaging of interval, hourly, daily, weekly, monthly historical data for a given customer class or load type, including sub-metered end uses, where available

iv) Other metering data aggregation functionality

a) Identify specific customers, with facility types (e.g., colleges, office buildings, hospitals) and locations, for which your company has provided metering data aggregation products and services.

### 3.2.5 Advanced Data Analysis, Presentation and Reporting

1) Describe the data presentation functionality provided by your company (e.g., dashboards, trending, alarming, benchmarking).

   a) Describe the capability provided by your company to customize data displays and reports and provide at least two examples of such displays and reports.

2) Describe the data analysis functionality provided by your company (e.g., associating data trends with specific equipment operations).

   a) Describe specific experiences using data analysis functionality to identify real time energy efficiency solutions (e.g. turning off lights, reducing cooling temperatures during unoccupied times, etc.)

### 3.2.6 Demand Response Notification, Management and Reporting

1) Describe your company's capabilities and experience relating to providing demand response support services

   a) Describe your company's typical approach and options for providing support for notification services to customers and facilities enrolled in demand response to which you provide related services, ranging from monitoring to turnkey demand response services

   b) Describe your company's typical approach and options provided for demand response data collection, monitoring, and reporting of loads. Describe your company's typical approach and options for providing reporting and compliance support for demand response programs

   c) Provide at least three case studies of demand response support, including any experience in the New York State market, noting your company's role in data monitoring, notification support, data management, analysis and compliance reporting

### 3.2.7 Scalability of Technology for Future Development of Targeted Microgrids (Response to this subsection is optional)

Discuss your company's technology platform as it may relate and/or integrate with Microgrid and/or Smart Grid functionality (e.g., automated switchgears) for enhanced optimization of localized distributed and renewable energy sources versus external electric service

### 3.2.8 Product Development and Support

1) Describe your company's practices with respect to baseline product development and support.

2) Describe your company's long-range development plan for EMCC-related products and services.

## 3.3 Commercial Approach and Alternative Business Models

1) Describe in depth the business model your company uses in providing products and services in each of the project elements listed in Section 3.2. (e.g., paid-up perpetual license for software, annual license for software, services only).

2) Describe all alternative approaches or business models your company would be willing to offer for providing products and services in each of the project elements listed in Section 3.2.

3) Describe the user group organization and structure (e.g., your company's role in establishing user group agendas, programs, and priorities; support for user group meetings (logistics, attendance by company personnel); the user group's role in establishing product development priorities) and the user group's activities related to EMCC products and services.

# 4. Instructions

## 4.1 Submission of Responses

The response to the RFI must be transmitted electronically to the following email address: Sharon.Green@nypa.gov (using "RFI Submission" in subject line) by Close of Business (5:00 p.m.) Eastern Standard Time on March 14, 2013