

**Attachment C-1**  
**RFQL4272 Standards and Quality Assurance**  
**Statement of Work for Combined Heat and Power**  
**Inspection Services**

This Attachment will be the basis for a binding agreement (Task Work Order) between NYSERDA and a Quality Assurance Service Provider receiving an award for field and/or photo inspection services under RFQL 3695.

**Definitions:**

Quality Assurance (QA): Field and photo evaluations to verify compliance of key milestones within projects to assess compliance with industry standards and Program requirements; identify corrective action necessary to comply with said standards and requirements.

Quality Control (QC): Planned and systematic activity implemented to ensure quality requirements are met and deficiencies documented in a QA inspection are corrected.

Quality Assurance Services Provider (QSP): Qualified third-party consultant under contract with NYSERDA responsible for inspection services. The QSP is fully separate and independent from the Program Implementer.

Program Implementer (PI): Company under contract with NYSERDA to assist NYSERDA Staff with the administration of NYSERDA Programs, including the arbitration of inspection reports that require corrective action be taken.

Field Inspection Report: Quality report that details findings gathered during an in-progress or post-completion field inspection, including all non-conformances related to health and safety, performance, program requirements and standards. Field inspection reports that score 1 or 2 out of a 5-point scale are rated as failed and the Participating Contractor (PC) must document resolution of all major and critical failures.

Photo Review Report: Quality report that details findings after reviewing site photos submitted by the PC who completed the project, including all non-conformances related to health and safety, performance, program requirements and standards. Photo review reports that score 1 or 2 out of a 5-point scale are rated as failed and the PC must document resolution of all major and critical failures.

Participating Contractor (PC): Independent contractor that provides energy efficiency and/or renewable energy products and services to customers through NYSERDA Programs.

Standards and Quality Assurance (SQA) Team: Oversees the quality function for NYSERDA, has the primary responsibility for the application of industry standards and quality principles for the authority and manages all activities related to Quality Assurance (QA) inspections.

Performance Summary Report (PSR): A report generated using NYSERDA's database to summarize production, inspection, inspection rate and quality performance by PC.

Project Detail Report (PDR): A report that contains specific details for all QA inspections, available for a specific PC or for all PCs.

**Staff Listing**

All staff engaged in this Agreement are listed below. The QSP shall notify of any change in personnel and will have approval rights for field staff.

<b><u>Name</u></b>	<b><u>Title</u></b>	<b><u>Role on Project</u></b>

**Task 1: Retain and Train Credentialed Staff**

The QSP shall have technically proficient and appropriately credentialed field staff, regionally located to adequately provide the required inspection services and other tasks. The QSP shall provide ongoing training for software and hardware tools used to conduct field inspections and on software modeling tools (if applicable). The QSP shall also ensure that, during the contract period, all inspectors hold in a current status all required professional certifications.

**Task 1: Deliverables**

- Organizational Chart
- Record of up-to-date professional credentials for staff upon request
- Record of ongoing staff training

**Task 2: Field Inspection Implementation**

**Task 2.1 Schedule Field Inspections**

The QSP shall be responsible for scheduling inspections of eligible projects and shall attempt to conduct inspections within (30) days and no more than sixty (60) days of the approval date for the inspection type being conducted. The QSP shall schedule inspections to meet the project inspection sampling percentage requirements approved by NYSERDA. The QSP shall not schedule customer requested inspections for projects that are more than one (1) year from completion unless approved by the SQA Project Manager.

**Task 2.2 Conduct Customer Surveys**

If applicable for the Program/Technology area, the QSP shall conduct a brief customer satisfaction survey for all post completion inspection that are completed.

### **Task 2.3 Review and Maintain Project Data**

The QSP shall retrieve and use relevant NYSERDA Program databases to review, retrieve, and upload files and project information for use by field inspectors. The QSP shall ensure completeness of all project data necessary to conduct field inspections and request additional information from the Program Implementer and NYSERDA as needed.

### **Task 2.4 Conduct Field Inspections and Re-Commissioning Services**

System inspections will verify that the CHP equipment and monitoring equipment are installed in accordance with Program requirements and specifications. The contractor will work under the direction of, and in coordination with NYSERDA's Project Manager to provide system inspections for CHP systems. System inspection will be conducted upon completion of installation and initial commissioning of the system (the initial commissioning will be performed by the CHP system vendor).

The Contractor will be asked to conduct system inspections at sites throughout New York State. The Contractor will NOT be asked to verify that the CHP equipment was installed according to code. The Contractor will verify the proper operation of the associated monitoring equipment and report any observations that may be of concern regarding the performance of the CHP system.

The Contractor shall be responsible for coordinating with the site owner/operator to schedule each inspection.

The Contractor will be required to prepare a report for each inspection and provide those to NYSERDA for review and acceptance. The reports will include photographs of installed CHP equipment and identify any non-compliance with the system specification supplied by NYSERDA for the site. The Contractor will be expected to maintain records of site inspection for a minimum of 5 years following the date of inspection. Items to be verified may include, but are not limited to:

- Site/building name and location
- Name of CHP vendor
- Location of major system components at the site
- Number and rated output of CHP units
- Make, model and serial numbers of all major equipment including cogeneration units, inverters, pump modules, load modules, radiators, and other equipment panels as applicable
- Make and model of data logging device
- Location of sensors and meters with respect to proper measurement of associated system parameters
- Communication support (phone, wifi, Ethernet, etc.) to the data logging device
- Proper configuration of priority loads for load shedding and backup operation

The Contractor is also expected to provide value added services during the system inspection, such as identifying installation peculiarities observed that might negatively impact the operation of the system.

### **Re-commissioning Services Requested**

Re-commissioning will determine if the CHP system and monitoring equipment is operating as intended and in accordance with Program requirements and specifications, and that the system is interfacing properly with building controls and infrastructure. The contractor will work under the direction of, and in coordination with NYSERDA's Project Manager to provide re-commissioning services for CHP systems to seek optimization from an energy efficiency, economic performance, and emissions perspective. In general, a re-commissioning will begin between the first and second year of CHP system operation. The contractor is expected to perform the following tasks:

- Site Assessments – including, but not limited to; reviewing existing CHP system documentation and performance data from NYSERDA's DG/CHP website (<http://chp.nyserdera.ny.gov/home/index.cfm>), observing the system in operation, interviewing the building owner, system vendor, and others as needed to review system design, equipment installation and operational intent, reviewing equipment nameplate ratings, condition and calibration, reviewing control and operational problems, as well as operations and maintenance practices. The site assessment will also include looking at building occupancy and use, and identifying any changes since the original commissioning of the system and how those changes might impact CHP system operation.
- System Testing –The contractor is expected to make recommendations which may include, but not be limited to; re-calibration of sensors/meters, testing to verify that the system is operating as originally intended, testing the system for identification of operational deficiencies, and testing to help identify changes that would provide cost effective or operational improvements.,
- Prioritize Issues Identified – The contractor will work in consultation with the building owner and system vendor to prioritize issues identified during the re-commissioning. The value of any improvement will depend on many factors and the specific goals of the building owner. However, the primary emphasis will be on straightforward improvements that will be quick to implement and measure and will have meaningful impacts. The priority actions will need to be assessed for ball park costs to implement and benefits, in order to inform the investment consideration.
- Prepare Report – The contractor will prepare a detailed report on each re-commissioning and will review it with the building owner, system vendor, the NYSERDA Project Manager, and others as needed. The contractor will provide recommendations based on the building owner's needs and priorities.
- Implementation – System changes, adjustments, or improvements as a result of recommendations provided above may be conducted by the building owner or system vendor, depending on the complexity. The re-commissioning will not mandate any implementation, but it is anticipated that the coherent information provided by the re-commissioning will inspire rational decision making and accompanying actions by the building owner. Should the building owner decide to make any changes, adjustments, or improvements, the contractor is expected to provide clarification as needed for such implementation.

- Measurement and Verification – Once any changes, adjustments or improvements have been made, the contractor may be required to return to the site at an appropriate time to verify the effectiveness of the changes and to ensure that the desired results are achieved. Additional data collection may be required as needed. The contractor may be asked to prepare an addendum to the re-commissioning report identifying the impact of the changes.
- Catalog Lessons Learned, Best Practices and Trends – The contractor will develop a tracking system for compiling lessons learned and best practices for future sharing and dissemination. Information should be stored in a manner that allows users to identify information by keyword such that trends can be identified.
- Annual Report – The contractor will prepare and submit an annual report during the course of the contract that summarizes the findings from the sites re-commissioned over the course of the previous twelve months. The report shall identify all of the sites re-commissioned, trends, lessons learned, issues with particular vendor equipment, and recommendations for similar projects that can benefit from specific lessons shared.
- Dissemination of Lessons Learned, Best Practices and Trends – The contractor may be asked to develop a plan for and conduct technology transfer activities, which may include publications, webinars, workshops and/or conferences as appropriate to help inform the marketplace of the lessons learned and the benefits obtained from the re-commissioning activities. This should be done in such a way as to encourage the marketplace that re-commissioning is beneficial and should be considered an integral part of implementing CHP.

### **Task 2.5: Inspection Reporting**

After the inspector has completed the inspection, the QSP project manager shall review and approve the inspection data for each project within five business days. Upon approval of the inspection data, the QSP shall submit the report to NYSERDA or directly to the participating Contractor at the discretion of the NYSERDA PM. For Programs using Salesforce a Field Inspection Report will auto-generate, and the report will be transmitted to the PC via Salesforce. Other Programs will prepare and issue reports using MS Excel or other format as acceptable to NYSERDA, until such time that inspections can be completed in Salesforce.

### **Task 2: Deliverables**

- Inspection schedule
- Customer satisfaction survey data
- Uploaded project information to NYSERDA internal database(s), or MS Excel
- Document field inspection data
- Field Inspection Report

### **Task 3: Program Administrative Activities**

#### **Task 3.1 Meetings with NYSERDA**

The QSP shall schedule and attend weekly teleconference calls with the NYSERDA PM, and monthly meetings with appropriate parties (NYSERDA, QSP field staff and administrative staff) by teleconference or in-person with no less than four in-person meetings at NYSERDA Albany office during the 12-month contract period. The QSP shall submit a summary of each weekly teleconference and a Memo Summary for each monthly meeting to the NYSERDA PM.

#### **Task 3.2 Internal Meetings**

The QSP shall conduct weekly meetings, in a format appropriate for the region, with field and administrative staff. The purpose of these meetings is to discuss scheduling, applicable standards, quality protocol, consistency in ratings among field staff, best practices, concerns, IT issues, and other topics as needed for the successful management of the contract. The QSP shall invite NYSERDA as appropriate and incorporate meeting topics into the agenda as requested by the NYSERDA PM.

#### **Task 3.3 Monthly Report and Invoice**

The QSP shall work with the NYSERDA PM to initially develop and then submit monthly, reports for all activity conducted during the previous month. At a minimum, the monthly report shall include all photo and field inspection results. Invoicing must be received by NYSERDA by the 5<sup>th</sup> day of the subsequent month.

#### **Task 3: Deliverables**

- Monthly Report and Invoice
- Weekly teleconference summaries via email
- Monthly meeting summary (Memo to File)

### **Task 4: Non-Standard Inspections and Technical Assistance Activity**

The QSP shall, at NYSERDA request, complete non-standard inspections to include, but not limited to: post inspection follow up in emergency situations, administrative or field inspections of flagged projects and other activity as requested by NYSERDA.

All potential non-standard inspections or technical assistance activity can be identified by NYSERDA, the QSP or the Program Implementer. The QSP shall not embark on any non-standard inspections or activity without written approval from NYSERDA. After the non-standard inspection or work is completed, the QSP shall submit a summary report in a format acceptable to NYSERDA.

#### **Task 4: Deliverable**

- Summary report for each assignment

**Task 5: Support Transition of Services and Technology Transfer**

The QSP shall provide technical support as requested and approved by NYSERDA to effectively transition activities prior to the end of the contract period. The QSP shall coordinate with NYSERDA to transfer, in an acceptable format, all externally located project information, inspection data, summary data and other quality information produced during the contract period. This pertains to all information and data that is not already embedded in the NYSERDA QACSS during the contract period.

**Task 5: Deliverables**

- External data and quality services information.

**Budget**

**Total Not-to-Exceed Budget: \$**

The standard inspection rates and hourly rates to implement shall be consistent with those in the general Umbrella Agreement.

Inspection Type	Rate

**Schedule**

Schedule of services: July 1, 2020 – June 30, 2025.