

# Multifamily Performance Program

## Quality Assurance Policies and Procedures

### For Participating Providers

May 2021



NYSERDA

# Table of Contents

<b>Overview .....</b>	<b>2</b>
<b>Corresponding with NYSERDA’S Standards and Quality Assurance Team.....</b>	<b>2</b>
<b>Program Roles and Responsibilities .....</b>	<b>3</b>
<b>NYSERDA Portal .....</b>	<b>3</b>
<b>Inspection and Desk Review of Projects.....</b>	<b>3</b>
<b>Field Inspections .....</b>	<b>4</b>
<b>Desk Reviews.....</b>	<b>4</b>
<b>QA Inspection Report.....</b>	<b>4</b>
<b>Scoring Criteria .....</b>	<b>5</b>
<b>Classification of Program Nonconformances .....</b>	<b>5</b>
Incidental.....	6
Minor.....	6
Major.....	6
Critical.....	6
<b>Overall QA Inspection Scoring Criteria .....</b>	<b>7</b>
<b>QA Score Descriptions.....</b>	<b>8</b>
<b>Procedure for Handling Nonconformance and Corrective Actions .....</b>	<b>8</b>
Procedure for Contesting an Inspection Score .....	9
Procedure to Resolve a Corrective Action or Contest.....	9
Field Inspections and Desk Reviews Requiring Corrective Action.....	9
System Shutdowns.....	10
Prescriptive Probation and Disciplinary Action.....	10
<b>Scheduling a call with NYSERDA.....</b>	<b>10</b>

## Overview

NYSERDA maintains the integrity of the Multifamily Performance Program (MPP) through an independent Standards and Quality Assurance (SQA) team, which manages the Quality Assurance (QA) platform for the program. This manual describes the policies and procedures adhered to when conducting QA services for the MPP.

**Quality Control (QC):** control of the process, prior to and during the process.

Planned and systematic activity implemented to ensure quality requirements are met and deficiencies documented in a QA inspection are corrected. Providers/builders/installers should have their own QC resources to confirm their work.

**Quality Assurance (QA):** assuring the work is done properly, at the end of the process.

Field inspections and desk reviews 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.

NYSERDA's team provides third-party QA and monitoring. The QA system has several components, including a review of qualifications and credentials, paperwork audits, establishment of program standards, and comprehensive field inspections and desk reviews. QA inspections and desk reviews involve verification of the contracted scope of work, accuracy of site analysis, and a comparison of installed energy efficiency measures to the MPP existing building program guidelines minimum performance standards or NYS Energy Conservation Code (where applicable). NYSERDA, or its representatives, may make a reasonable number of visits to the customer site before, during, and/or after installation to assess overall compliance.

In the MPP, after inspections are completed, program staff sends an inspection workbook Excel file, which includes the inspection score, to participating providers for their review.

## Corresponding with NYSERDA'S Standards and Quality Assurance Team

All correspondence with NYSERDA's SQA team should be sent to: [inspections@nyserda.ny.gov](mailto:inspections@nyserda.ny.gov). A member of the SQA team will get back to you in a timely manner.

## Program Roles and Responsibilities

The program relies on providers to implement work scopes for building owners. Providers have the following roles and responsibilities in the program:

### Provider Roles and Responsibilities

- Agree to terms of NYSERDA's participation agreement
- Hold the agreement with the customer
- Receive incentive payments
- Responsible for any complaints, warranties, and production guarantees
- Responsible for installation and quality of project
- Responsible for maintaining a credentialed person on staff

Inspections and desk reviews will primarily focus on the quality of the installation, and average inspection scores will be calculated. The provider will be included in any correspondence related to project inspections and desk reviews.

## NYSERDA Portal

MPP program staff can view and manage project information in in the NYSERDA CRIS Dashboard by logging into <https://crisportal.nysERDA.ny.gov/dashboard/>

## Inspection and Desk Review of Projects

QA inspections provide NYSERDA with an opportunity to evaluate the accuracy of the site analysis and verify the MPP measures were installed according to all program requirements. The QA inspection and desk review also includes selected health and safety, performance items, and specific compliance items per applicable code. MPP projects are subject to in-progress reviews upon the provider's request for a 50% completion incentive payment. Projects will always be subject to a desk review or field inspection upon the provider's request of a 100% milestone incentive payment. NYSERDA reserves the right to inspect projects at any time should specific concerns be brought to attention.

## Field Inspections

Field inspections are conducted by a qualified independent third party, using comprehensive field inspection QA checklists and processes.

In general, QA field inspections are scheduled at the provider and building owner or managers convenience. Building owners or managers and the provider are required to attend the inspection. The building owner or manager will provide access to a percentage of apartment units and to any secured common areas that need inspection. The provider is on-site to answer questions, if needed. The provider will receive the inspection results within 15 business days.

Field inspection procedures, as outlined below, are used to assess the performance of participating providers and their level of compliance with technical standards and programmatic rules. To view a detailed list of all field inspection check points, please refer to the [Multifamily Performance Program Inspection Checklist](#) under the Quality Assurance Reference Guide section.

## Desk Reviews

NYSERDA requires providers to take construction photos for all energy efficiency measures throughout the installation process, not after a request for photos is received.

The construction photos are required in order to conduct a comprehensive desk review. A list of the type of photos and documentation that must be submitted when requesting a milestone payment can be found in the [Standards and Quality Assurance Checklist](#). Taking multiple pictures of everything installed will help ensure a smooth photo inspection process.

## QA Inspection Report

The QA inspection report provides details of all evaluated elements of the project and list any nonconformances identified. The report will provide an overall score of the project and identify a pass or fail.

The report will be made available to the contractor within approximately 15 days after the inspection following an internal review and scoring by NYSERDA. The report will be made available to the system owner upon request directly to NYSERDA. The report contains a score, based on the criteria, and a list of any nonconformances observed during the inspection.

## Scoring Criteria

The scoring criteria characteristics will be used as a guideline for inspectors to gauge relative installation quality but cannot predict every possible situation. These QA scores will:

- Allow NYSERDA to track trends in installation quality over time
- Allow NYSERDA to gauge the relative quality of installations across installers, regions, or other screening criteria
- Provide valuable feedback to contractors, local code officials, and inspectors

## Classification of Program Nonconformances

Prior to issuing an overall QA score, it is important to understand the magnitude of nonconformances observed during onsite inspections. A high-quality solar electric system will:

- Comply with the Uniform Code Supplement as published by the NYS Department of State
- Comply with the National Electric Code (NEC)
- Meet all NYSERDA program requirements and standards
- Generate safe, reliable electricity consistent with pre-installation estimates

**Table 1. Nonconformance Categories**

	<b>Energy Impact</b>	<b>Non-Energy Impact</b>
Incidental	May result in a savings shortfall, but the impact will be small and may not be measurable.	Not expected, on its own, to pose a substantial risk of system failure or hazard.
Minor	Will result in a savings shortfall, but the impact will be small and may not be measurable.	Requires modifications to address but not expected to pose a substantial risk of system failure or hazard.
Major	Will result in a measurable shortfall in energy savings.	Presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard.
Critical	N/A	Presents an imminent hazard and/or probability of system failure.

## Incidental

An incidental nonconformance is not expected, on its own, to pose a substantial risk of system failure or hazard. Examples of incidental nonconformances include:

- Cutsheets will be provided
- The owner will be provided a copy of the Operational and Maintenance Handbook, including start-up and any test reports and preventive maintenance
- Required regular maintenance actions shall be clearly stated and incorporated on a readily accessible label

## Minor

Minor nonconformances need to be addressed but are not expected to pose a substantial risk of system failure or hazard. Examples of minor nonconformances include the following:

- Replacement lamps should be labeled as to whether the ballast has been removed.
- Lighting power (watts) will match or be less than the power in the workscope
- The rated efficiency of the installed water heater shall be equal to or higher than the modeled efficiency

## Major

Major nonconformances present an increased risk of system failure or hazard but are not determined to be in imminent danger of failure or hazard. Examples of major nonconformances include the following:

- The rated efficiency of the installed boiler is equal to or higher than the modeled efficiency
- The rated thermal resistance (R-value) of the insulation is equal to or greater than proposed in the workscope
- A continuous air barrier shall be provided. Verify through observation, review of submittals, and evidence of purchase, or photos

## Critical

Critical nonconformances present an imminent hazard and/or probability of system failure. These issues should be addressed quickly to prevent injury or damage to property. Examples include the following:

- The boiler shall have adequate combustion air
- Draft inducer shall be installed with furnace replacement

This list is not intended to be exhaustive, and inspectors will fully evaluate each installation on a case-by-case basis. Issues listed as examples in one of the categories could be problematic in a particular installation, and thus, fall into a different category for that installation. Ultimately, the inspector will rely on his or her best judgment to determine the seriousness of a nonconforming item.

## Overall QA Inspection Scoring Criteria

Each inspection and desk review will receive a score on a five-point scale. The score is an indicator of the overall quality and compliance with program requirements, based on the number and type of nonconformances observed. Projects receiving an inspection score of 1-2 are considered failures whereas projects receiving an inspection score of 3-5 are passing scores.

Projects with an inspection score of 5 represents a fully compliant project that employs best practices. Projects with an inspection score of 3 signifies a fully acceptable project. Receiving a 1 on an inspection represents a project with major or critical failure. Inspection scores of 2 and 4 will be used to score projects that fall in between.

NYSERDA will produce a detailed report and determine whether the project fully complies with all program requirements and meets acceptable standards of workmanship. The QA inspection report will provide all evaluated elements of the project and list any identified nonconformances. Projects that have nonconformances related to critical (health and safety) or major (system performance) attributes will automatically fail. Specific criteria for each score are given in Table 2.

**Table 2. Inspection Score Criteria**

QA Scoring Matrix				
Score	Incidental	Minor	Major	Critical
5	Up to 3	Up to 2	0	0
4	More than 3	Up to 3	0	0
3	N/A	More than 3	0	0
2	N/A	N/A	Up to 1	0
1	N/A	N/A	More than 1	More than 0

When assigning a QA score, the inspector will consider the highest level of nonconformance observed. For example, a system with two major nonconformances will receive a score of 1, even if there were no minor or incidental nonconformances. Systems with any critical nonconformance will automatically receive a score of 1. A system with four minor nonconformances will receive a score of 2 or 1 depending on the severity of other nonconformances identified on the report. Similarly, a system with only three minor nonconformances will receive a score of 4 since it does not quite meet the requirements for a 5 but exceeds the thresholds of a score of 3.



## QA Score Descriptions

### **5: System Meets All Program Criteria**

A system receiving a score of 5 is generally well-installed, with no noticeable defects in workmanship, code compliance, or expected energy output. These systems are examples of best practices in commercial/industrial solar electric installation.

### **3: System Meets Key Program Requirements**

A system achieving a score of 3 meets basic program requirements, but it may require some modification to be considered fully compliant.

### **1: System Does Not Meet Program Requirements**

Systems receiving a score of 1 failed to meet key program requirements and are not expected to safely generate electricity consistent with program records. These systems may require urgent attention to address safety concerns.

## Procedure for Handling Nonconformance and Corrective Actions

The QA inspection and desk review reports will provide details of all evaluated elements of the project and list any nonconformances identified. The report will provide an overall score of the project and identify a pass or fail. Projects that have nonconformances related to critical, health and safety, or major system performance attributes will automatically fail. Projects that have minor or incidental nonconformances may pass or fail based on their overall merits.

All identified nonconformances are expected to be addressed and corrected from the Inspection Report and in future work conducted in the program. Acknowledgment and plans for preventing future problems may be requested with the report. Nonconformances can be corrected post installation through corrective action to the documentation, incentive applied to the project, or remediation of the installation or its components.

Providers are required to respond to NYSERDA with proof of corrective action for those projects that received a failed inspection report with a score of 1 or 2. A failed inspection or desk review report must be either disputed within 15 days by contacting NYSERDA or remedied within 30 days. Sufficient evidence of remediation must be provided to NYSERDA documenting the completion of required actions. NYSERDA may, at its discretion, conduct a field verification of the remediated installation.

NYSERDA has the right to provide a copy of the QA report or specific information from the inspection directly to the site operator, AHJ, or the interconnecting utility based on health, safety, and compliance concerns. In an emergency, NYSERDA or its representatives may shut down the system and will notify the provider of such action as soon as is possible.

NYSERDA may communicate with any provider or site owner/manager on any matter relevant to a project. Such communications may be in reply to an inquiry from a site owner/manager or at NYSERDA's initiation. It is the provider's responsibility to notify the local Authority Having Jurisdiction of any changes made to the installation and coordinate any required reinspection as needed.

## Procedure for Contesting an Inspection Score

A provider may contest the findings of an inspection by emailing supporting documents and information to their program implementation representative. The request must be submitted to NYSERDA within 15 days of receiving the inspection report.

Upon review, if NYSERDA agrees with the provider, the deficiency will be removed. The inspection score may or may not change based on other deficiencies. If NYSERDA agrees with the inspector, the deficiency will stand, and the score will remain the same.

## Procedure to Resolve a Corrective Action or Contest

Field inspection and desk review results will be emailed to the Provider. Inspection results are also uploaded and available to MPP Program and QA staff in NYSERDA's CRIS portal at <https://crisportal.nysesda.ny.gov/dashboard/>.

This step-by-step process will assist providers or builders on how to upload images and documentation for a corrective action or to contest the inspection.

1. MPP Pipeline Manager will send the Provider Inspection Report Action Items.
2. If the provider contests the inspection or action items, they will request a meeting with MPP program staff and inspector.
3. If the action items are accepted, the provider will revise inspection documentation per the action items and resubmit inspection documentation.

## Field Inspections and Desk Reviews Requiring Corrective Action

1. All deficiencies are required to be addressed within 30 days of issuing report.
2. Critical and major deficiencies require a response through the link sent with the report.
3. Responses Corrective action will be reviewed and responded to by NYSERDA staff.
4. If NYSERDA staff accepts the corrective action, the deficiency will be marked resolved.
5. If NYSERDA does not accept the response, the deficiency will be marked resubmit with a description of why the response was not accepted. The deficiency will remain open until NYSERDA accepts a response.

## System Shutdowns

In an emergency, NYSERDA or its representatives may shut down the system. NYSERDA will notify the contractor whenever it takes such action as soon as is possible. In the event an inspector feels an energy storage system, as installed, presents an imminent hazard to persons or property, the following procedure will take place:

1. Inspector contacts the QA contractor project manager to review critical issues and confirm shutdown decision.
2. Inspector takes necessary steps to safely shut down and secure the system and informs the site operator and system owner/operator, of the decision.
3. Inspector calls the system contractor to notify them of the situation and the shutdown. The contractor is instructed that the system may not be re-energized without corrective action being taken. The contractor may address critical issues before receiving the report.
4. The QA contractor project manager will email notice of shutdown to the Energy Storage Program staff.
5. The QA contractor delivers a report to NYSERDA within three days.
6. The contractor receives the report, who then must coordinate any required reinspection with the local authority having jurisdiction or third-party inspection authority.

## Prescriptive Probation and Disciplinary Action

When a Provider fails to consistently complete projects that pass NYSERDA's QA evaluation or fails to respond to or remedy failed inspections, NYSERDA may review their status in the program and take further action.

A provider may be issued a prescriptive plan, in which specific results and a timeline for demonstrating those results will be prescribed and monitored. The provider may be terminated from the program if determined necessary. Complete details of demonstrating continued project viability are located in the Multifamily Performance Program Guidelines document at

[nyserderda.ny.gov/All-Programs/Programs/Multifamily-Building-Programs/MPP-Existing-Buildings/Document-Library](https://nyserderda.ny.gov/All-Programs/Programs/Multifamily-Building-Programs/MPP-Existing-Buildings/Document-Library).

## Scheduling a call with NYSERDA

At times NYSERDA SQA and program staff will contact a provider should they see a negative trend in their performance and see how NYSERDA staff can assist to better performance. Subsequently, a provider may schedule a call at any time to review their inspection reports, contesting a corrective action, and overall check-in with NYSERDA. Please email [inspections@nyserderda.ny.gov](mailto:inspections@nyserderda.ny.gov) and one of our SQA staff will schedule a call.



**New York State  
Energy Research and  
Development Authority**

17 Columbia Circle  
Albany, NY 12203-6399

**toll free:** 866-NYSERDA  
**local:** 518-862-1090  
**fax:** 518-862-1091

[info@nyserda.ny.gov](mailto:info@nyserda.ny.gov)  
[nyserda.ny.gov](http://nyserda.ny.gov)