



Request for Proposals: Solar Quality Assurance Services

Date of Issue: April 14th, 2025

Proposals Due: May 12th, 2025, 11:59 p.m.

Total Funding Available: \$1,300,000

All proposals must be submitted to:
solar@masscec.com

I. SUMMARY

The Massachusetts Clean Energy Center (“MassCEC”) is issuing this Request for Proposals: Solar Quality Assurance Services (the “RFP”) to eligible firms (the “Firm”) with significant expertise in installation and/or inspection of residential solar photovoltaic (“PV”) systems in Massachusetts to provide consulting services as part of Massachusetts’s Solar For All (“MASFA”) programming. The selected Firm will be responsible for assisting in the development of technical requirements for PV systems that come through the programming, performing design reviews of potential PV systems, inspecting installed systems, and providing other technical services related to the operation of MASFA programming.

II. ABOUT MASSCEC

The Massachusetts Clean Energy Technology Center (MassCEC) is a quasi-state economic development agency dedicated to accelerating the growth of the clean energy sector across the Commonwealth to spur job creation, deliver statewide environmental benefits and to secure long-term economic growth for the people of Massachusetts. MassCEC works to increase the adoption of clean energy while driving down costs and delivering financial, environmental, and economic development benefits to energy users and utility customers across the state.

MassCEC’s mission is to accelerate the clean energy and climate solution innovation that is critical to meeting the Commonwealth’s climate goals, advancing Massachusetts’ position as an international climate leader while growing the state’s clean energy economy. MassCEC is committed to creating an organization where everyone is welcomed, supported, respected, and valued. We are committed to incorporating these principles in all aspects of our work in order to promote the fair distribution of the health and economic benefits of clean energy. MassCEC strives to lead and innovate in clean energy and climate solutions.

III. PROGRAM GOALS AND DESCRIPTION

PROGRAM DESCRIPTION

Massachusetts has received a \$156 million, five-year award from the Environmental Protection Agency (“EPA”) to launch the MASFA program, which aims to expand access to clean and affordable solar energy to low-income and disadvantaged communities in Massachusetts. The MASFA Coalition, consisting of the Department of Energy Resources, Massachusetts Clean Energy Center, Massachusetts Community Climate Bank, and Boston Housing Authority will utilize federal funds to develop and administer core residential solar PV initiatives in low-income and disadvantaged communities. These include zero-interest solar loan and solar lease initiatives for single-family homes, third-party and direct ownership initiatives for solar systems on public and private affordable multifamily housing properties, and low-income community shared solar initiatives that deepen community solar benefits to eligible subscribers.

To ensure that projects built with MASFA funding are constructed to high standards and perform efficiently, MassCEC will provide a variety of resources and technical services to support participating owners and contractors. Among those services include a quality assurance provider who will help create a thoughtful system of technical requirements and conduct inspections of select systems to support overall installation quality within MASFA programs.

Through this solicitation, MassCEC seeks an experienced firm to assist MassCEC in certain aspects of programmatic requirements and conduct design reviews and quality assurance inspections of solar projects with potential capacity between 1 kW and 5 MW coming through the programming, as well as additional technical services as necessary, which could include but is not limited to:

- Research on a particular technology or product;
- Completion of other types of inspections/audits, including beyond those detailed herein; or
- Firm led trainings for MassCEC or partner staff.

PROGRAM GOALS

- Develop and refine comprehensive minimum technical requirements for PV systems funded through MASFA programming;
- Support selected participating installers, particularly new installers to the programming, with review of PV designs and inspections of installations to ensure compliance with the programming and all relevant codes and standards;
- Ensure the quality of installed PV systems that perform to stated specifications across MASFA programming;
- Provide support for program participants who have concerns about the installation of their system;
- Reduce public safety hazards and adapt QA protocols to standards that apply in localized conditions, where appropriate, ensuring PV systems are properly installed according to all relevant codes;
- Understand trends in installation issues across MASFA programming, including in underserved communities, and use this data to support and educate contractors and adjust QA processes when necessary; and
- Ensure understanding of inspection and audit processes among MassCEC and partner staff.

IV. ELIGIBILITY

Eligible Firms must demonstrate that they have:

- A high level of familiarity with best practices for solar PV system design and installation;

- Familiarity with currently available solar PV equipment, including but not limited to modules, inverters, balance of system, and racking systems;
- Expertise with the National Electric Code, Massachusetts Building and Electric Codes, and permitting requirements;
- Staff with a minimum of 40 hours of formal training in solar PV system design and installation;
- Ability to successfully complete anticipated tasks as laid out in this solicitation;
- Ability to communicate easy-to-understand technical information with contractors and other stakeholders;
- Ability to assist in either technical program design or technical advising; and
- Demonstrate a track record of providing detail oriented and timely work.

Preference will be given to Firms based in Massachusetts.

V. ESTIMATED TIMELINE

This timeline is subject to change at MassCEC's discretion.

Release of RFP	April 14, 2025
Questions due to MassCEC via email to <i>[email address]</i>	April 22, 2025
Questions with Answers Posted to MassCEC Website	April 28, 2025
Proposals Due	May 12, 2025
<i>[if applicable]</i> Interviews of Top Applicants	Week of May 19, 2025
Notification of Award	May 28, 2025

VI. SCOPE OF WORK

ANTICIPATED TASKS

Through this RFP, MassCEC seeks a Firm to perform the following roles:

Initial Development and Periodic Updates of Minimum Technical Requirements– Task 1.1

The selected Firm will assist MassCEC in developing Minimum Technical Requirements for PV systems installed through MASFA programming and developing a comprehensive quality

assurance approach. This will include requirements and approach for the small residential focused programming, multifamily buildings, and community solar projects being supported through other MASFA coalition partners. Minimum Technical Requirements may include, but are not limited to, requirements around electrical and building code, equipment, warranties, energy production, and system design requirements. These requirements will be established at the beginning of the programming and may require periodic updates throughout the five-year program period as programming evolves and as Massachusetts and National Electric Code changes. The Firm, at MassCEC's direction, will also assist in answering solar technical questions from installers and helping to recommend additional technical requirements as necessary.

Project Management – Task 1.2

The selected Firm will also provide project management, coordination, and reporting within Task 1, including

- Status meetings with MassCEC held no less frequent than monthly;
- Design review and inspection tracking, updated no less frequently than weekly, including a shared network drive (e.g., SharePoint) for file sharing;
- A point of contact available to support MassCEC staff in coordinating on these tasks, as needed.

PV Design Reviews – Task 2

The Firm, at MassCEC's direction, will conduct PV system design reviews for projects applying through MASFA programming. Design reviews will consist of the Firm reviewing submitted project design plans and providing any necessary feedback to facilitate corrections on, at a minimum, system feasibility, layout, electrical design, equipment specification, safety features, compliance with the Minimum Technical Requirements and Massachusetts Electrical Code. Design reviews are intended primarily for Installers that have not previously worked with MassCEC in any solar-related program, though MassCEC reserves the right to request a design review for any project coming through MASFA. Applicants should propose core elements of a design review that will support installation quality, and design reviews should ultimately align with the Minimum Technical Requirements created in Task 1. The approach should include at minimum:

- Review of design plans submitted by installer(s), including but not limited to shading analysis, roof condition, and project siting, ensuring that project plan is appropriate for the site and is in compliance with Minimum Technical Requirements;
- Review of project 3-line electrical diagram, ensuring that the final PV system design is in compliance with National Electric Code ("NEC")/Massachusetts Electrical Code; and
- Identifying and notifying Installer of errors in project design and work with the Installer to correct and develop a code compliant system design.

New Installer PV Inspections/Quality Assurance – Task 3.1

The Firm, at MassCEC direction, will conduct highly detailed inspections of solar PV systems installed by installers new to MASFA or of other projects as assigned by MassCEC. Inspections may include an on-site assessment or a remote inspection of the project completed by an approved inspector. Instances in which an on-site inspection will be conducted rather than a remote video inspection, and vice versa, should be proposed by the applicant and will be finalized in contracting with MassCEC if selected. Inspections may be for systems located on single family homes (as small as 1 kW), multi-family buildings, and include community shared solar projects (as large as 5 MW) that receive funding through MASFA. Applicants should describe in their application how the inspection process may vary based on project type. Applicants should propose elements they consider critical in an inspection process that promotes installation quality. It is anticipated the inspection work may include the following activities:

- Develop detailed inspection form(s) that can be used consistently across inspections. Rubric should be developed in alignment with the Minimum Technical Requirements and with reference to inspection reports of previous MassCEC solar PV inspections and those of nearby states.
- Schedule inspections within a pre-approved period after receiving the inspection request and associated documentation from MassCEC.
- Coordinate with Authority Having Jurisdiction (AHJ) for municipal inspector to attend inspections whenever possible.
- Measure project shading and develop independent energy production estimate for solar PV project.
- Spot measure system voltages, currents, and other operating characteristics.
- Verify solar PV project compliance with NEC/Massachusetts Electrical Code, and any other local codes or standards.
- Verify compliance with Program Minimum Technical Requirements (to be developed by selected Firm, in conjunction with MassCEC).
- Develop a detailed draft report of the inspection and any findings.
- Develop a process to allow installer to remedy any aspect of a project that was found to be non-compliant at time of inspection.
- Issue a final report once solar PV system meets Program Minimum Technical Requirements, clarifying any changes made by the installer post-inspection, and submit this report to MassCEC, the installer, and the building owner.
- Maintain an inspection tracker that is shared with MassCEC staff, including information such as the following:
 - Project information (Name of project, site address, installer)
 - Timeline of project inspection milestones (MassCEC request for inspection, inspection scheduled, initial inspection complete, report completed)
 - Category of inspection (no issues identified, minor issues, moderate issues, etc.)
 - High level categorization of any non-compliant aspects of a project that need remediation
 - Current project status

- High level notes for MassCEC (i.e. pending second inspection - date)
- If applicable - method to track budget spent on each inspection including hours spent, and what amount has been invoiced to date

Quality Assurance Spot Inspections – Task 3.2

The Firm will also conduct highly detailed inspections of a subset of solar PV systems installed by Installers experienced with MASFA programming. Inspections will be comprised of random projects and assignment of inspection for projects with concerns or suspected installation issues. Inspections may be for systems located on single family homes and multi-family buildings and include community shared solar projects that come through the Program. The inspection may include the same activities as outlined under Task 3.1. Applicants should propose options for how they will conduct these inspections (e.g. on-site or remotely, etc.) in their application.

Project counts participating in MASFA programming will vary based on actual project costs and other factors. The total count of MASFA projects is estimated to be 5,500 small residential projects, 150 multifamily projects, and 75 community shared solar projects. The number of needed inspections will depend on actual project and contactor participation and will be cooperatively adjusted with MassCEC staff throughout program operation.

Miscellaneous Technical Services – Task 4

The Firm will create and submit to MassCEC on a regular interval (at least quarterly) an overview report (1-3 pages) of inspection data and trends encountered during the past quarter. Trends may include:

- Emerging patterns from inspections (for example, consistent errors or confusion around a particular technical issue)
- Breakout of inspection results (% Major Issues, % Minor Issues, % No issues, etc.) including comparison of that quarter's inspections to program as a whole
- Average completion time for specified project milestones (e.g., Average time to Schedule Inspection, Average time to Get Issues Corrected, Average time to prepare report)

Firms that can provide actively updated access to these data and trends will be considered favorably.

The Firm may provide other technical services at MassCEC's direction and request. Examples of other services include, but are not limited to, research on a particular technology or product, completion of other types of inspections/audits beyond those detailed herein, or Firm-led trainings on applicable technical topics.

VII. HOW TO APPLY

Please submit a completed proposal via email to solar@masscec.com no later than 11:59 PM on May 12, 2025. Only complete and timely proposals will be considered. Proposals should be sent in a single PDF document.

In your proposal, please include the following attachments:

- **Attachment A:** Authorized Applicant's Signature and Acceptance Form
- **Attachment B:** Application Form
 - Narrative describing qualifications listed in Section IV: Eligibility
 - Proposed approach to tasks described in Section VI: Scope of Work, including proposed project timeline
 - Firms are required to propose their approach to both in person and remote PV inspections.
 - Firms are encouraged to propose alternative inspection workflows to those described in Task 3, to the extent alternative proposals can improve affordability and scalability.
 - Budget and pricing, as outlined in Section IX: Budget
 - * Applications should be aware of and responsive to the items under Section VIII: Selection Criteria
- **References (See Attachment B: Application Form):** Responses should include reference contacts from at least one client of the Applicant, and preferably clients for whom the Applicant assisted on matters similar to the proposed services. Please provide a description of the services provided, contact person, full address and phone number.
- **Experience with Eligible Populations (See Attachment B: Application Form):** Please include a brief summary of you or your organization's experience in working within Solar For All-eligible populations (as defined by EPA). If available, please provide or link to any relevant materials. Include brief examples of initiatives, projects, or other work in which you or your organization has demonstrated a track record of working with the eligible population.
- **Staff Qualifications:** All responses must include resumes of each individual who will be providing technical services.
- **Attachment C. Sample Agreement:** Please review and be prepared to sign Attachment C (Sample Agreement). Any requested change to the Sample Agreement should be marked within the attachment with detailed explanations.

Under no circumstances will MassCEC accept responses past the deadline.

VIII. SELECTION CRITERIA

Technical Consultant Proposals will be evaluated on the general criteria below:

Proposed Scope and Range of Services to be Provided

- Does the Firm plan to provide services commensurate with the services requested by MassCEC?
- Do the proposed approaches represent a comprehensive and high-quality scope of service that reflects an informed perspective of need, a thorough understanding of technical aspects of solar, and a thoughtful approach toward implementation?
- Has the Applicant proposed any valuable additional scope or recommendations that go above and beyond what is requested in the RFP?

Experience and Qualifications

- Does the Firm have documented experience in the solar PV industry, including inspection or installation of a range of solar PV projects in Massachusetts?
- Does the Firm have documented expertise on the National Electric Code and Massachusetts Building and Electric Codes, especially in relation to solar?
- What is the quality of the Firm's performance on similar past consulting assignments or their achievements related to proposed work? How were their efforts evaluated?
- Does the Firm have experience working with government and quasi-public entities, with demonstrated ability to assist an entity in technical program design or providing technical advisory services?
- Does the Lead Applicant's experience serving the Solar For All-eligible populations or other relevant capabilities or experiences demonstrate an enhanced ability to deliver in this work?

Budget

- How does the scale and quality of the proposed scope compare to other Applicant's proposed scale and quality?
- How do proposed costs/ hourly rates compare to those of other proposals?

Overall Quality of Proposal

- Does the Firm demonstrate an understanding of the concepts and motivators underlying this program?
- Does the proposal represent a good overall value, including proof of previous related experience, understanding of scope of services and quality assurance goals, cost for service and ability to complete deliverables in a timely manner?
- Has the Firm presented their qualifications clearly and demonstrated an ability to write and communicate effectively between different stakeholder groups?

IX. BUDGET

Applicants should propose an estimated budget and rates that maximizes quality assurance impact across MASFA programming. An estimated budget should be provided reflective of the tasks and estimated project counts detailed in VI. Scope of Work. Applicants should at a minimum provide cost estimates for Task 1 on a Time and Materials basis, Task 2 on a per Design Review basis, Task 3 on a per inspection basis, and Task 4 as an available budget to be determined in coordination with MassCEC. Applicant may propose different cost categories for Tasks 2 and 3 depending on project size or complexity, as well as any adjustments if overall inspection volume changes. Applicants may propose alternative budget approaches to the per Design Review or Inspection method provided that is one of the approaches offered.

The maximum budget for this quality assurance work is up to \$1.3 million (\$1,300,000) with programming anticipated to run from July 2025 to August 2029.

X. CONTACT INFORMATION FOR QUESTIONS

Questions and feedback should be submitted to solar@masscec.com within the time window specified in Section 5. MassCEC will publish a list of received questions and answers alongside the RFP.

XI. GENERAL REQUEST FOR PROPOSALS CONDITIONS

NOTICE OF PUBLIC DISCLOSURE

As a public entity, MassCEC is subject to Massachusetts' Public Records Law, codified at Chapter 66 of the Massachusetts General Laws. Thus, any documentary material, data, or other information received by MassCEC from an applicant is a public record subject to disclosure. Applicants shall not send MassCEC any confidential or sensitive information in response to this RFP. If confidential information is submitted as part of the application and not clearly marked as confidential, such information may be made publicly available by MassCEC without further notice to the Applicant.

Please note: consultant rate sheets will be considered a public record subject to disclosure.

DISCLAIMER & WAIVER AUTHORITY

MassCEC is closely monitoring developments at the federal level that may impact the operations of, or the availability of funding for, the MASFA program. Circumstances outside of MassCEC's control may require that we delay, or cancel, awarding funds under this RFP.

This RFP does not commit MassCEC to award any funds, pay any costs incurred in preparing an application, or procure or contract for services or supplies. MassCEC reserves the right to accept or reject any or all applications received, waive minor irregularities in submittal requirements,

modify the anticipated timeline, request modification of the application, negotiate with all qualified Applicants, cancel or modify the RFP in part or in its entirety, or change the application guidelines, when it is in MassCEC's best interests.

This RFP has been distributed electronically using MassCEC's website. It is the responsibility of Applicants to check the website for any addenda or modifications to an RFP to which they intend to respond. MassCEC accepts no liability and will provide no accommodation to Applicants who submit an application based on an out-of-date RFP document.

CONTRACT REQUIREMENTS

Upon MassCEC's authorization to proceed with the proposal, MassCEC and the awarded applicant(s) will execute a contract which will set forth the respective roles and responsibilities of the parties.