

# REQUESTS FOR PROPOSALS FOR SOLAR PROJECTS AT SOLARMAP CONNECTICUT MUNICIPALITIES

## I. PURPOSE

The Connecticut Green Bank (“Green Bank”) seeks proposals from qualified contractors or entities (“Proposer” or “Contractor”) to provide engineering, procurement, and construction (“EPC”) services for solar photovoltaic (PV) projects at facilities owned by various Connecticut municipalities participating in the Green Bank’s Solar Marketplace Assistance Program for Towns and Cities (“Solar MAP”) as outlined in Table 1 (together being, the “Systems”). These projects will be owned and financed by Connecticut Green Bank and our partner, Inclusive Prosperity Capital.

## II. GREEN BANK BACKGROUND

The Green Bank is a quasi-public agency established by the Connecticut General Assembly in 2011. As the nation’s first green bank, it is leading the clean energy finance movement by leveraging public and private funds to scale-up renewable energy deployment and energy efficiency projects across Connecticut. The Green Bank’s success in accelerating private investment in clean energy is helping Connecticut create jobs, increase economic prosperity, promote energy security and address climate change. In 2017, the Connecticut Green Bank received the Innovations in American Government Award from the Harvard Kennedy School Ash Center for Democratic Governance and innovation for their “Sparking the Green Bank Movement” entry. For more information about the Connecticut Green Bank, please visit [www.ctgreenbank.com](http://www.ctgreenbank.com).

## III. PROGRAM BACKGROUND

The Green Bank, through its Solar MAP program<sup>1</sup>, is working with the following Connecticut municipalities to facilitate solar PV projects at their selected buildings:

- Avon
- Bolton
- Darien
- Farmington
- Groton
- Kent
- Redding
- Sharon
- Washington
- Windsor Locks

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<sup>1</sup> <https://www.ctgreenbank.com/solarmap-townsandcities/>

The Green Bank, through this RFP, will procure EPC services for the projects outlined in Table 1.

The Green Bank is working with CSW Energy to co-administer this RFP (“RFP Administrators”).

**IV. SCOPE OF SERVICES AND PROJECT INFORMATION**

**A. Site Locations**

**Table 1: Site Information**

<b>RFP Exhibit A Site Reference</b>	<b>Municipality</b>	<b>Site Name</b>	<b>Installation Type</b>	<b>EPC Cap NTE (\$/W-DC)</b>	<b>LREC/ ZREC System Size (kWac)</b>	<b>LREC/ ZREC Maximum Annual Quantity (MAQ)</b>
449	Groton	Mystic River Magnet School	Carport	N/A	100	156
455-rev1	Bolton	Bolton High School	Carport	N/A	100	156
475	Groton	Groton Middle School	Rooftop	\$1.83	230	358
544	Kent	Kent Center School	Rooftop	\$1.83	160	249
569	Sharon	Sharon Center School	Ground	\$1.75	150	234
586A	Redding	Redding Elementary School	Rooftop	\$1.83	100	156
586B	Redding	Redding Elementary School	Rooftop	\$1.83	100	156
587	Redding	John Read Middle School	Rooftop	\$1.83	170	265
596	Washington	Washington Town Hall	Rooftop	\$1.83	60	94
600	Washington	Washington Fire Department	Rooftop	\$1.83	40	63
641	Washington	Washington Primary School	Rooftop	\$1.83	100	156
747A	Windsor Locks	Windsor Locks High School and BOE Offices	Rooftop	\$1.75	325	506
747B	Windsor Locks	Windsor Locks High School and BOE Offices	Rooftop	\$1.83	100	156

748	Windsor Locks	Windsor Locks Middle School	Rooftop	\$1.83	200	311
749	Windsor Locks	South Street Elementary School	Rooftop	\$1.83	150	234
750	Windsor Locks	Windsor Locks North Street Elementary School	Rooftop	\$1.83	100	156
757	Avon	Avon High School	Rooftop	\$1.83	249	388
758	Avon	Thompson Brook School	Rooftop	\$1.83	225	350
759	Avon	Pine Grove School	Rooftop	\$1.83	225	350
760	Avon	Avon Middle School	Rooftop	\$1.83	100	156
761	Avon	Roaring Brook School	Rooftop	\$1.83	200	311
769	Darien	Hindley Elementary School	Rooftop	\$1.83	50	78
770	Darien	Holmes Elementary School	Rooftop	\$1.83	100	156
771	Darien	Ox Ridge Elementary School	Rooftop	\$1.83	100	156
772	Darien	Royle Elementary School	Rooftop	\$1.83	100	156
775	Avon	Avon Police Department, Bldg 3	Rooftop	\$1.83	50	78
783	Farmington	Noah Wallace Elementary School	Rooftop	\$1.83	100	156

Footnote:

<sup>1</sup>The bid price included in Exhibit C.1 (EPC SYSTEM SPECIFICATIONS AND BID PRICE) may not exceed the amount referenced in Table 1

**B. System Sizing and RECs**

The Green Bank commissioned an evaluation of each Municipal property in order to determine the system size, identify the location of the proposed Systems, and locate the existing electrical equipment. The Green Bank has secured ZRECs for the Systems. Table 1 above identifies the project ID, site name, property address, ZREC size and Maximum Annual Quantity, project type and the Exhibit A reference. Proposers shall submit proposed site plans, system sizes and pricing to maximize the ZREC size.

An exhibit has been made for each site that shows the overall facility layout and conceptual design which identify the areas suitable and approved for System installation. Also identified is the approximate location of the electrical service equipment such as

switchgear and utility meters. The annual on-site usage (kWh/year), peak demand (kW) and electrical service rating (volts and amps) is provided on the exhibit as well. The exhibit also identifies whether or not the facility has a standby generator that provides backup power to the entire facility during a utility outage. Exhibits for all sites can be found in Exhibit A.

**C. Construction Schedule**

Proposals should include a draft project schedule which includes all necessary milestones including permits, inspections, and testing. Final construction schedule will require approval of Green Bank and each applicable municipality.

**D. Background Checks**

The awarded Proposer will be required to comply with any municipally required background checks.

**E. Utility Interconnection**

The awarded Proposer will be fully responsible for the interconnection application process with the utility company for each awarded System. This includes but is not limited to the riser diagram, site plan, application and the standard application fees. In the event the utility company determines an impact study is required the cost of this study will be covered by the Green Bank.

**F. Design and Permitting**

The awarded Proposer shall develop a fully engineered system compliant with all applicable regulations, codes and requirements, including all building and electrical codes, zoning regulations, industry best practices and utility company interconnection requirements. The design should assume all existing conditions such as trees. The awarded Proposer is responsible for acquiring all necessary permits from governing agencies, and for the payment of applicable fees. Any permitting fee assumptions should be included in Exhibit C. It is the responsibility of the Proposers to understand all applicable codes, regulations and fees. This must be reflected in the submitted bid prices.

**G. Electrical Design**

The electrical plans must identify the point of interconnection and the method for connecting the System(s) into the existing electrical service equipment of each facility. If any modifications to the existing electrical service equipment is required then the electrical plans must show the new equipment specification, the proposed location, and any demolition work required. The location of all new equipment such as combiner panels, disconnect switches, meter, etc. must be included in the plans. These equipment locations must be reviewed by the facility manager prior to installation. Include details and specifications on modules, inverters, data acquisition system, balance of system electrical components, labeling, wire management protocols, housekeeping pads and trenching.

**H. Data Acquisition System**

The data acquisition system shall allow for remote performance monitoring of each System’s Real Power (kW), Energy (kWh), Voltage (V), Amperage (A), and Power Factor. Table 2 below provides additional monitoring requirements based on the System’s size.

**Table 2: Monitoring Platform & Weather Station Specifications**

<b>System Size</b>	<b>Monitoring Platform</b>	<b>Weather Station Spec &amp; Parameters</b>	
>400 kW-AC	Locus LGate 360	Lufft WS601-UMB Smart Weather Sensor	Ambient & Cell Temperature
			Wind Direction
			Wind Speed
		Hukseflux SR-30	Irradiance
<400 kW-AC > 220 kW-AC	Locus LGate 360	IMT S-RS485-TC-T or Kipp & Zonen RT1	Ambient & Cell Temperature
			Irradiance
≤ 220 kW-AC	PowerLCS 400		

**I. Roof Mounted Systems - Specific Items**

The following requirements are specific to the roof mounted Systems:

A structural analysis must be performed to quantify the available capacity of the roof to support the installation of the System. The structural analysis shall be used to develop a fully engineered racking design for mounting of the solar modules.

Each System’s array layout must meet code required setbacks, access pathways and include working clearances around existing roof top equipment. The layout shall be reviewed by the Green Bank and the facility manager prior to commencing work.

The awarded Proposer is responsible for procurement, installation and assembly of racking components, mechanical attachments, ballast blocks, slip sheets and mounting of modules. Any active roof warranties must remain in effect after the installation of each System. Coordination and communication with the roofing manufacturers as well as fees associated with any required roof inspection necessary to secure an overburden waiver are the responsibility of the selected Proposer. All work performed on the roof shall be in compliance with any and all standards and specifications set by the roofing manufacturer.

**J. Carport Systems - Specific Items**

The awarded Proposer must obtain an ALTA compliant survey and geotechnical study.

The awarded Proposer is responsible for the installation of bollards where deemed necessary to protect new System equipment from vehicular traffic.

Equipment such as inverters and disconnects within the carport area shall be mounted at heights to discourage and prevent tampering and vandalism. Any electrical equipment mounted on the ground level within the parking area such as combiner panelboards, switchgear, transformers, etc shall be fenced.

A snow rail shall be provided and installed on the lower edge of the carport structure in order to mitigate shedding of snow and ice from the carport.

The awarded Proposer shall provide a maintenance plan to the Site representative to that outlines when snow and/or ice removal is necessary and the proper procedures.

The carports shall be standard galvanized steel, painting and/or powder coating is not a requirement.

As part of the design phase, it is the responsibility of the awarded Proposer to perform Call Before You Dig and conduct an underground survey to identify any and all existing utilities.

The locations of such utilities shall be reflected on the design and must be taken into consideration when locating the carport foundations, trench routes and any other Site work activities.

All carport structures have a minimum height clearance of 10 feet.

**K. Construction**

Awarded Proposer shall supply all equipment, materials, and labor necessary to install turnkey Systems and interconnect into the electrical services of each facility. Proposer is responsible for establishing a staging area, coordinating material delivery, storage and site security. Staging areas must be reviewed with facility manager ahead of site mobilization. All work shall be performed by tradesmen holding adequate licensing.

**L. Electrical Installation**

Furnish a complete and operational electrical system. This includes mounting and wiring equipment such as modules, inverters, combiner boxes, panelboards, disconnect switches and meters. Review location of any equipment to be mounted in or on the building exterior with the facility manager prior to start of work. Interconnect each System into the appropriate electrical service equipment.

**M. Facility Shutdowns for Interconnection**

The awarded Proposer will have the opportunity to visit each facility in order to prepare a shutdown and interconnection plan and schedule. The final interconnection of each System into the electrical service must be coordinated with and approved by the facility manager and Green Bank prior to commencement of any work. All efforts should be taken to minimize the impact on the facility's operation. This includes having all materials necessary to perform the interconnection on-site prior to the start of the shutdown procedure. Shutdowns may be required outside of normal business hours.

**N. Commissioning**

The awarded Proposer is responsible for facilitating commissioning of the project by Green Bank or Green Bank's affiliate to confirm installation is in accordance with construction documents and compliant with all applicable building codes. Performance testing of the system for systems greater than 400 kW AC shall be done to validate generation is consistent with production modeling. The performance testing procedures are included in Schedule #7b of Exhibit D, and are in accordance to *ASTM E2848-13, Standard Test Method for Reporting Photovoltaic Non-Concentrator System Performance*.

The awarded Proposer shall review commissioning procedures and associated schedule with the facility manager and Green Bank. Refer to Schedule #15 of Exhibit D for commissioning protocols. This commissioning form will be completed by Green Bank or Green Bank's affiliate as part of the close-out process. Upon completion of commissioning the awarded Proposer shall provide As-Built PDFs, product data sheets, access to the data acquisition system platform, manuals and product warranties

**O. Approval to Energize**

The awarded Proposer is responsible for all utility coordination, testing requirements and associated fees necessary to achieve approval to energize and an executed interconnection agreement.

**V. PROPOSAL REQUIREMENTS**

Each Proposer shall carefully examine the RFP and any and all amendments, exhibits, revisions, and other data and materials provided with respect to this RFP process. The requirements outlined here are not a full list of requirements of the EPC contract. Proposers should familiarize themselves with all requirements in that contract prior to submitting their proposal. Should the Proposer note any discrepancies, require clarifications or wish to request interpretations of any kind, the Proposer shall submit a written request to [RFP@ctgreenbank.com](mailto:RFP@ctgreenbank.com). Green Bank shall respond to such written requests in kind and may, if it so determines, disseminate such written responses to other prospective Proposers.

Proposers can bid on a single project, any subset of projects, or the entire portfolio of projects in Table 1.

Any proposal should include the following elements:

**A. Proposer Qualifications**

The Proposer shall include the following:

Corporate:

- Company overview and relevant experience, which shall include at a minimum (A) the number of employees, (B) the office locations, (C) and an outline of operational assets showing project locations and system sizes.

Team:

- Highlight key personnel and subcontractors who will be assigned to this project.
- Describe their respective experiences and skills with the development, engineering and installation of similar projects.
- Highlight the relevant licenses and certifications held by these key personnel.

Project Experience:

- Provide track record of actual annual generation relative to projected generation within the Proposer's operational assets (if applicable).
- Outline approach Proposer takes to ensure the installed Systems meets the projected generation values.

Preferred Qualifications

- Years of experience – five years minimum
- Municipal experience – highlight project(s) developed and installed for municipalities within the state of Connecticut or region
- Portfolio project development/management – outline any portfolio project development and management

**B. Project Scope and Schedule**

Include a general scope of the work the Proposer intends to provide upon selection and execution of an EPC agreement. The scope narrative shall outline all major tasks and milestones necessary to design, permit, coordinate with utility company, mobilize, construct and commission the project. Proposals should include a complete project schedule indicating major project milestones and durations, such as engineering, permitting and construction.

**C. System Design and Equipment**

Proposals shall provide a design layout for each System, including the make/model, wattage and quantity for both inverters and modules, racking product, azimuth, tilt and system size kW-AC and kW-DC, and the DC:AC ratio. Proposals shall provide specified equipment manufacturer data sheets and warranties, pricing, etc. All solar modules, racking systems, inverters, data acquisition systems and other equipment shall be new with acceptable warranties that meet industry standards for Tier 1 equipment, are listed on the Approved Vendor List in Exhibit B and are UL Listed. The proposed equipment must be included in the Exhibit Proposal Form in Exhibit C and must be completed and returned with any proposals.

The DC:AC ratio of any proposed system shall not exceed 1.35.

**D. System Production**

Proposals shall provide details about the estimated kWh-AC to be generated by the Systems, including all necessary assumptions, for example: Insolation (or sunlight availability), maintenance down time, soiling losses, shading losses, efficiency losses, AC losses, etc. Copies of PVSyst, Helioscope or other industry standard reports used to estimate production for each System shall be included with the proposal.



**E. Pricing**

Proposals submission pricing must be submitted in the format of Exhibit C. Submissions should not exceed the Not to Exceed (\$W(DC) price referenced in Table 1 for each Site. Proposers can submit a second pricing submission to reflect any tree trimming or removal they deem necessary.

**F. Evaluation Criteria**

All Proposals will be reviewed by the RFP Administrators.

The Green Bank will select a proposal that in its complete and sole discretion, is in the best interest of the Green Bank and Solar MAP program participants. This list of criteria is not intended to be exhaustive, and the Green Bank may assess Proposers based on unlisted items. The Green Bank may reject any proposal despite compliance with these criteria if it is determined to be in the best interest of the Green Bank. Due to the complexity of the Systems and contemplated agreements, the Green Bank is not and shall not be bound to select a winning proposal based upon lowest pricing alone. The RFP Administrators will use the following criteria, among others, in evaluating proposals:

- Submission of a complete proposal consistent with RFP criteria
- Engineering Procurement and Construction (EPC) price
- 20-year annual production estimates (kWh)
- Proposers qualifications, relevant experience with municipalities
- Site plan and equipment proposed for the Systems
- Proposers familiarity with the Connecticut ZREC program
- Proposed project approaches and schedules
- Experience of team including subcontractors
- Proposers commitment and ability to ensure timely success
- System(s) performance guarantee
- References

**F. Insurance**

The selected Contractor shall at all times during the performance of the Work and the duration of this Agreement maintain insurance from an insurance company reasonably satisfactory to the Green Bank or system owner as follows: (a) commercial general liability (“CGL”) coverage of not less than One Million Dollars (\$1,000,000) (per occurrence)/Two Million Dollars (\$2,000,000) (aggregate); (b) automobile liability of not less than One Million Dollars (\$1,000,000); (c) worker’s compensation of not less than the greater of (i) One Million Dollars (\$1,000,000) per accident/disease, and (ii) statutory requirements; (d) umbrella liability of Five Million Dollars (\$5,000,000); (e) professional liability of not less than One Million Dollars (\$1,000,000) (per occurrence)/One Million Dollars (\$1,000,000) (aggregate), and, if subcontracting to an external Professional Engineer, such Subcontractor shall also maintain professional liability of not less than One Million Dollars (\$1,000,000) (per occurrence)/One Million Dollars (\$1,000,000) (aggregate) with the Green Bank or system owner as an additional insured; and (f) property insurance in the form of an installation floater insuring property to be installed while in transit, at off-site

storage, and onsite awaiting installation and after installation until job completion (together (a) through (f) is defined as “Insurance”).

The required EPC Contractor Insurance must cover all actions or activities of any subcontractor(s) for any work or services performed by any subcontractor(s) or any subcontractor(s) must purchase policies satisfactory to Green Bank or system owner and provide evidence of said policies.

**G. EPC Contract**

Selected Contractor shall agree to the terms of the EPC Contract provided in Exhibit D, including the liquidated damages outlined in section 6.4 and Holdback outlined in section 13.3. Proposers will not be allowed to make changes to the EPC Contract.

**H. System Performance Guarantee**

The selected contract shall provide a system performance guarantee as outlined in Schedule #7 of Exhibit D.

**K. References**

Listing of three (3) clients for reference use for whom Contractor has performed similar services as those contemplated by this RFP. Include the name, email and telephone number(s) of the contact person at each reference.

**L. Statement on Proposers Financial Strength**

Preference is for Proposer to provide three years of audited financial statements and/or last 3 years tax returns

**M. Pending Litigation**

Description of any litigation, pending judgments, etc., which could affect the proposer's ability to enter into an agreement with Green Bank. A description of the circumstances involved in any defaults by the proposer. If you have been subjected to any outside audits in the past three years, state by whom the audit was performed, for whom, the facility involved, and the results of the audit.

**VI. PROPOSAL PROCESS**

**A. Timeline**

RFP Posting	Friday, September 10 <sup>th</sup> , 2021
Questions Due	Friday, September 17 <sup>th</sup> , 2021
Site Visits	Week of September 27 <sup>th</sup> , 2021
Submissions Due	Friday, October 15 <sup>th</sup> , 2021

**B. Submittal Process**

If Contractor is interested in submitting a proposal, the following requirements should be observed:

- a. Proposals must be received no later than 5pm ET on Friday October 15<sup>th</sup> 2021. Proposals received after the aforementioned date and time may not be considered in Green Bank’s sole discretion.

- b. Proposals shall be submitted electronically to [RFP@ctgreenbank.com](mailto:RFP@ctgreenbank.com). The subject line should be identified as: “Proposal for CT Municipal Solar Projects”.
- c. Contractors may be required to interview with Green Bank staff on Thursday, October 21<sup>st</sup>, 2021 if deemed necessary.

**C. Q&A Period**

Any questions must be submitted by 12pm noon Friday, September 17<sup>th</sup> 2021 to [RFP@ctgreenbank.com](mailto:RFP@ctgreenbank.com). Answers will be distributed to all Proposers.

**D. Site Visits**

Please find below an outline of the site visit schedule. Proposers will need to sign up to attend site visits at which point they will receive the final schedule and logistics. The [Site Visit Form](#) is linked here and can be found on the Green Bank’s RFP webpage.

	Tuesday 9/28	Wednesday 9/29	Thursday 9/30	Friday 10/1
AM		Windsor Locks and Bolton	Kent and Sharon	Darien
PM	Groton	Avon	Washington and Farmington	Redding

**VII. GENERAL TERMS AND CONDITIONS**

Contractor elects to respond to this RFP, submission of your proposal assumes the acceptance of the following understandings:

- A. Green Bank reserves the right to reject any or all of the proposals received in response to the RFP, to waive irregularities or to cancel or modify the RFP in any way, and at any Green Bank chooses, in its sole discretion, if Green Bank determines that it is in the interest of Green Bank.
- B. Green Bank further reserves the right to make awards under this RFP without discussion of the proposals received. Proposals should be submitted on the most favorable terms from a technical, qualifications, and price standpoint. Green Bank reserves the right not to accept the lowest priced proposal.
- C. Proposals must be signed by an authorized officer of the Contractor. Proposals must also provide name, title, address and telephone number for individuals with authority to negotiate and contractually bind Contractor, and for those who may be contacted for the purpose of clarifying or supporting the information provided in the proposal.

- D. Green Bank will not be responsible for any expenses incurred by any proposer in conjunction with the preparation or presentation of any proposal with respect to this RFP.
- E. Green Bank's selection of a Contractor through this RFP is not an offer and Green Bank reserves the right to continue negotiations with the selected Contractor until the parties reach a mutual agreement.
- F. Contractor will execute a Solar EPC Agreement as set forth in the attached Exhibit D. **If the Contractor does not agree with any of the specific terms set forth in the Solar EPC Agreement, the Contractor must set forth such terms and rationale in your response to this RFP.**

**Green Bank is subject to the requirements outlined in Sections 16-245n of the Connecticut General Statutes. GREEN BANK SHALL HAVE NO LIABILITY OR OBLIGATION OF ANY SORT HEREUNDER, INCLUDING, WITHOUT LIMITATION, IF FOR ANY REASON OR NO REASON A BINDING AGREEMENT IS NOT ENTERED INTO WITH ANY PROPOSER. IN MAKING ITS SELECTION OF A SUCCESSFUL PROPOSER, GREEN BANK MAY CONSIDER ANY AND ALL FACTORS AND CONSIDERATIONS WHICH GREEN BANK, IN ITS SOLE DISCRETION, DEEMS RELEVANT, THE RELATIVE IMPORTANCE OF WHICH SHALL BE IN THE SOLE DISCRETION OF GREEN BANK.**

**EXHIBIT A**

**SITE INFORMATION**

**EXHIBIT B**

**APPROVED VENDOR LIST**

**EXHIBIT C**

**BID SPECS AND PRICING**

**EXHIBIT D**

**EPC CONTRACT TEMPLATE**