



## **Call for Participation:**

### **Multifamily Affordable Housing Shared Solar Pilot Program**

#### **A. Background and Objectives**

In the City of Austin, renters in multifamily buildings make up over 50% of the City's residents. Overall, renters are more likely to have lower incomes than those who own homes. The U.S. Census Bureau's data shows that about 64% of renter households in Austin have income under \$50,000 per year.<sup>1</sup> Median household income for renters is \$37,538 compared to \$85,246 for homeowners.<sup>2</sup> While residential solar installations within Austin Energy's service territory have soared with a total installed capacity of 29 MW as of the end of fiscal year 2017, the majority of them are on the roofs of single-family homes. Renters and residents living in affordable multifamily housing that qualify as low-to-moderate-income have been largely omitted from accessing this clean energy option due to various financial, physical, educational, market and other barriers.

The City recognizes that innovative solar programs for multifamily properties are essential to serving the low-to-moderate-income community. In October 2017, the City Council approved a resolution (No. 20171005-033) to set a goal of \$500,000 in the fiscal year 2018 budget towards incentives and solar programming for increasing solar energy adoption and access for underserved markets including multifamily affordable housing, low-income residents, renters, and non-profits. With the passage of this resolution, it creates a great opportunity for Austin Energy and other stakeholders to implement solar projects and increase access for low-income communities, in particular, multifamily buildings.

In support of the City's resolution, Austin Energy is developing an innovative metering and billing Shared Solar solution that enables more cost-effective solar installations on multi-tenant properties for low-to-moderate-income customers. Currently, a solar photovoltaic (PV) system must be electrically connected behind the meter for an electric account to receive the power and associated Value of Solar credits. For multifamily properties with individually metered units, this can mean many separate PV systems, with separate wiring, meters, and interconnections for each unit, adding complexity and cost. The Shared Solar program aims to alleviate this problem by allowing a single PV system to serve multiple units in the building. By enabling virtual fractional metering of a single PV meter, using the utility's Meter Data Management System, multiple residential electric accounts in a multifamily property will be able to receive a prorated portion

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<sup>1</sup> U.S. Census Bureau, American FactFinder, S2503 Financial Characteristics.

<sup>2</sup> *Ibid.*



of Value of Solar credits from the on-site solar PV system. All Value of Solar credits from the PV system's production will be allocated to the residential units in the property, in proportion to the unit's square footage, and will lower the tenants' electric bills.

Austin Energy is seeking properties to participate in a low-income Multifamily Affordable Housing (MFAH) Shared Solar pilot program in support of this resolution. The experience and lessons obtained from this pilot program will help Austin Energy in various aspects, including to:

- understand technical, financial and programmatic barriers and challenges on solar deployment to underserved communities and multifamily properties;
- examine different metering and billing configurations for shared solar before implementing full retail programs for low-to-moderate-income customers and other customers;
- help Austin Energy develop grid interconnect protocols for projects participating in shared solar, and serve as baseline for developing interconnection guidelines for shared solar for future retail programs; and
- ensure solution is functioning as designed in Austin Energy's meter data management system and billing system.

Austin Energy also seeks to better understand feasibility and costs to achieve net zero energy in a low-rise multifamily construction (four stories or fewer), particularly under newer codes, and better understand behavioral aspects that affect achievement of net zero energy performance in an apartment context.

## **B. Award and Timeline**

In support of this Shared Solar pilot, Austin Energy is offering a limited term incentive. Participants will receive financial incentives to help cover the upfront costs of installing solar PV systems. The total amount of funding allocated for these incentives is \$600,000. Up to three projects are expected to be funded. While there is no cap on the maximum system size allowed in the program, the amount of incentives for an individual project will be limited to \$200,000. Austin Energy reserves the right to make more or fewer (or even no awards) depending on the quality of the applications.

The incentive will be provided in the form of a rebate which is based on the total installed solar system capacity for an individual project. The incentive level under this program is \$1/Watt-DC installed. An additional incentive of \$0.80/Watt-DC is offered as an adder to projects that can demonstrate net-zero energy in low rise multifamily construction. The incentive will be calculated using the formula: [number of PV modules] x [Standard Test Condition (STC) per PV module (Watts)] x [Incentive level]. All incentives, including the net zero adder, are capped at



\$200,000 per project. Projects under this program will NOT be eligible for any additional solar incentives for installing solar PV systems from Austin Energy.

Expected Timeline

Program Activity	Date
Request for Participation issuance	January 25, 2018
Optional informational meeting	1-2 PM, February 7, 2018
Application submission deadline	February 26, 2018
Issuance of Letter of Intent (LOI)	March 30, 2018
Approved Distributed Generation Planning Application and signed installation contract	June 30, 2018
Solar PV system installed and passes final inspections	September 30, 2018

**C. Eligible Applicants**

Austin Energy is seeking applications from those entities which meet **ALL** of the following criteria to participate in the MFAH Shared Solar Pilot Program:

- The multifamily building where the solar PV system will be installed must be in Austin Energy's service territory;
- The multifamily building must have no less than five (5) residential units;
- One hundred percent (100%) of all residential units within the multifamily building must be reserved for households earning no more than eighty percent (80%) HUD median family income (MFI) for a minimum 20-year affordability period with at least 10 years remaining; and
- Each residential unit within the multifamily building must be individually metered and have an Austin Energy electric utility account at the service address where the solar PV system will be installed.
- The multifamily building is NOT registered with the City's Repeat Offender Program.

**D. Key Requirements**

- The size of the proposed system must be designed to meet a minimum value of 1.5 kW-DC per residential unit. Furthermore, no incentives are available for a PV system sized to produce more than one hundred and ten percent (110%) of the actual or estimated annual energy consumption by all residential units in the multifamily building.
- The participant must procure and pay for the proposed solar PV system. Leased systems do not qualify for incentives.
- The participant must use a participating solar contractor in good standing with Austin Energy's solar program. The list of all participating solar contractors can be found on Austin Energy's website (<https://austinenenergy.com/ae/green-power/solar-solutions/participating-solar-contractors>).



- The participant must apply and receive a Letter of Intent (LOI) prior to system installation in order to be eligible for incentives. Austin Energy makes no financial commitment until a signed LOI is issued.
- All solar PV systems must be connected to Austin Energy’s electrical grid at the participant’s expense.
- The participant must assign all rights to environmental attributes and credits resulting from the solar production to Austin Energy. This includes renewable energy credits and carbon offset credits.
- All solar PV systems need to be installed and pass the final inspection by September 15, 2018.

**E. Solar Access Requirements**

- Austin Energy retains the right to deny incentives based on excessive shading and or poor orientation of the solar array.
- Contractor must design the system to ensure that the minimum performance of each string in the PV system shall be at least 1000 kWh/kW-DC per year.
- Contractors must submit an analysis which includes azimuth, tilt, and shading to show this requirement.

**F. Net Zero Capable Study Requirements (optional)**

The following requirements ONLY apply to projects which intend to demonstrate net-zero energy capability:

- The multifamily building must be a low-rise building which is defined as four (4) stories or fewer for this program’s purpose;
- The multifamily building must be all electric;
- The proposed solar PV system must be sized to produce at least eighty percent (80%) but no more than one hundred and ten percent (110%) of the actual or estimated annual energy consumption by all residential units in the multifamily building.
- The property owner must agree to secure the written consent of tenants to allow Austin Energy reasonable access to individual residential units for installing and collecting data loggers used to monitor temperature and humidity; and
- The property owner must agree to allow Austin Energy to publish project case studies including photos and aggregated net energy results.

**G. Selection Criteria**

Applications will be ranked based on the following selection criteria (100 points possible):

Criteria	Maximum Number of Points
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Project cost calculated as total \$/Watt-dc	20
Number of residential units served	20
Affordability level	10
Affordability period	10
Energy efficiency of units as shown by energy model or bill data	20
Availability and willingness to share construction cost data for building	10
Austin Energy Green Building rating	10

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**H. Required Documentation**

1) At Time of Application

- a) A completed and signed *Multifamily Affordable Housing Shared Solar Pilot Program Application* form.
- b) Signed SMART Housing letter or financing agreement verifying the MFI levels of affordability and that these affordability criteria will be verified through a financing or other agency for the required time period.
- c) Proposed system layout developed by a participating solar contractor, including quoted total solar installation cost, system size, estimated generation.
- d) For projects which intend to demonstrate net-zero energy capability ONLY: an energy simulation using appropriate common energy modelling software. Provide input reports for the buildings envelope, HVAC systems, hot water systems, miscellaneous zone loads, and schedules. Also, provide simulation output reports showing annual energy consumption broken-out by major end uses. If an energy model is not available, with the assistance of Austin Energy, provide a summarized spreadsheet of the most recent 12 months utility bills for each residential unit by monthly usage and cost. Annual total needs to be calculated for each residential unit too.

2) Within 90-days of LOI issued to selected participants

- a) The Distributed Generation Planning Application (DGPA) approved by Austin Energy.
- b) Signed Installation Contract, including:
  - Customer name and installation address.
  - Participating solar contractor name and contact address.
  - Make, model, and quantities of all solar module and inverter equipment included in costs.
  - Installation 10-year warranty statement.



- Total solar installation cost. Costs that are not eligible for federal tax credits or local incentives must be itemized separately.
  - Rebate amount and assigned recipient.
  - Shared solar Value of Solar allocation form.
  - For projects which intend to demonstrate net-zero energy capability ONLY:  
Signed written consent agreement to allow Austin Energy reasonable access to individual dwelling units to install and collect data loggers to monitor temperature and humidity.
- 3) At the time of final inspection request:
- a) Final system layout, if changed from proposed.
  - b) Wire diagram, including a NABCEP-certified PV installer's endorsement.
  - c) String sizing calculations for all string inverter configurations; in the case of micro inverters or optimizers a compatibility statement.
  - d) Equipment serial numbers; including all string inverters, and at minimum one serial number (plus qty.) for all batch purchased equipment (PV modules, micro inverters, or AC modules).
  - e) Customer signed final contract(s) and amendments.
  - f) Customer signed Microgenerator Listing Form.
  - g) Photograph(s) of completed array including racking (prior to panel installation), the back one panel, and conduit runs.
  - h) Photograph(s) of wall mounted equipment.
  - i) Electronic signatures must not be a type font unless they include a verifiable tracking method.

## **I. Installation and Warranty Requirements**

- 1) In order to qualify for the low-income MFAH shared solar incentive, the participant must have a contract directly with a participating solar contractor.
- 2) Systems must be permitted and installed by a participating solar contractor in good standing, listed on Austin Energy's solar program website.
- 3) Equipment must be listed by the California Energy Commission on its website, [www.gosolarcalifornia.org](http://www.gosolarcalifornia.org), to be eligible.
- 4) The PV system must be electrically interconnected and attached to permanent, non-mobile structures.
- 5) All major solar energy system components eligible for incentives must be new and have a minimum 10-year warranty to protect against defects and undue degradation of



electrical generation output. The participating solar contractor must warrant the PV system installation for a minimum of 10 years.

- 6) The roof on which the PV system is to be installed must have a minimum of ten years of usable or warrantied life remaining.
- 7) All roof penetrations must be flashed. Unflashed roof penetrations must be pre-approved by Austin Energy. Requests for approval should be accompanied by compatibility documentation from the racking system manufacturer specific to the roof type that it is to be installed on, and written acknowledgement by the owner that they have been notified that the roof will be penetrated and what method of attachment will be used.
- 8) Clamping attachments (such as S-5 Clamps) must be rated by the manufacturer to be compatible with the roofing system.
- 9) AC and DC surge protection are required.
- 10) Solar PV systems must be interconnected to Austin Energy's electrical grid, at the entity's expense, in accordance with Austin Energy's Austin Energy Design Criteria Manual and Distribution Interconnection Guide, which can be found at the Electric Service Design & Planning section of the Austin Energy website.
- 11) Contractor must include all costs, including any required service upgrades (such as service panel, weatherhead, wiring, etc.), in the original bid. Costs that are not eligible for federal tax credits or local incentives must be itemized separately.
- 12) An electric permit and a separate building permit are required for all commercial PV installations within the City of Austin's jurisdiction. A separate building permit may be required for structural engineering review in other regions. If the commercial PV installation is on a property located outside of the City of Austin's jurisdiction, and not requiring a building permit, Austin Energy will require an engineer stamped structural drawing for final incentive approval.
- 13) The work must be performed in accordance with all applicable federal, state, and local regulations, codes, and permitting jurisdictions, along with equipment manufacturer's standards.
- 14) The Texas Department of Licensing and Regulation requires electrical contractors to obtain appropriate permits and perform all electrical work.
- 15) The STC rating of the system [STC rating of panels X number of panels] shall not exceed 125% of the associated inverter rating. Exceptions may be granted at Austin Energy's discretion on a case by case basis with the submittal of documentation from the manufacturer stating that the design is approved and will not void the warranty.
- 16) NABCEP certified installer must review the layout and system design prior to submittal, and include NABCEP certification number and signature on each document.
- 17) **AUSTIN ENERGY IS NOT A MANUFACTURER, SUPPLIER, OR GUARANTOR OF PV EQUIPMENT OR CONTRACTORS. AUSTIN ENERGY, WHETHER BY**



City of Austin  
**Austin Energy**

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MAKING AVAILABLE A LIST OF REGISTERED CONTRACTORS AND EQUIPMENT SOURCES OR OTHERWISE, MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY NATURE, DIRECTLY OR INDIRECTLY, EXPRESS OR IMPLIED, AS TO PERFORMANCE OF THE CONTRACTOR OR RELIABILITY, PERFORMANCE, DURABILITY, CONDITION, OR QUALITY OF ANY PV SYSTEM.

**J. Submission and Informational Meeting**

All submissions must be received by **5PM on February 26, 2018**. Applications should be signed by an authorized representative and be mailed or delivered in person to the following address:

**Austin Energy**  
**Attn: Solar Energy Services – MFAH Shared Solar Pilot**  
**721 Barton Springs Road**  
**Austin, TX 78704-1194**

All questions concerning the Call for Participation should be submitted in writing via e-mail or mail to the name below. You are encouraged to submit your questions via email early. An informational meeting will be held to provide an overview of the program and to answer any questions pertaining to the Call for Participation. Interested parties may attend the meeting in-person or via conference call on the date and at the time and location listed below. For those who plan to attend the meeting in-person, please email to the name below for planning purposes.

Informational Meeting Date and Time: Wednesday, February 7, 2018, 1-2 PM

Location: Austin Energy, 811 Barton Springs Rd, Room 309

Conference call toll-free number: (888) 808-6929; Access code: 7044923

Any oral responses to any questions shall be unofficial and not binding on Austin Energy. An Addendum to this Call for Participation providing Austin Energy's official response may be issued if necessary to all known prospective respondents.

Ming Xu

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## Multifamily Affordable Housing Shared Solar Pilot Program Application

### I. APPLICANT INFORMATION

1. ORGANIZATION NAME			
2. STREET ADDRESS		3. CITY	4. ZIP+4
5. CONTACT NAME	6. TITLE	7. PHONE NUMBER	8. E-MAIL ADDRESS

### II. BASIC PROJECT INFORMATION

9. PROJECT NAME		10. NUMBER OF RESIDENTIAL UNITS	
11. PROJECT STREET ADDRESS		12. CITY	13. ZIP+4
14. PROPOSED PROJECT COST	15. ESTIMATED PROJECT START DATE	16. ESTIMATED PROJECT COMPLETION DATE	
17. SOLAR SYSTEM SIZE (KW-DC)		18. ESTIMATED ELECTRICITY PRODUCTION (KWH/YR)	
19. DEMONSTRATE NET-ZERO ENERGY CAPABILITY? <input type="checkbox"/> Yes <input type="checkbox"/> No If you answer <i>yes</i> , please complete Section V.		20. MODELLED OR ESTIMATED TOTAL ELECTRICITY CONSUMPTION OF RESIDENTIAL UNITS (KWH/YR)	

### III. ELIGIBILITY

<input type="checkbox"/> Yes <input type="checkbox"/> No	• The multifamily building is in Austin Energy’s service territory;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The multifamily building has at least five (5) residential units;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• All units are reserved for households earning no more than 80% HUD MFI for a minimum 20-year affordability period with at least 10 years remaining;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• Each unit is individually metered and has an Austin Energy electric utility account;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The multifamily building is NOT registered with the City’s Repeat Offender Program.

### IV. KEY REQUIREMENTS

<input type="checkbox"/> Yes <input type="checkbox"/> No	• The solar PV system has been designed to meet a minimum value of 1.5 kW-DC per unit;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The solar PV system has been designed to meet no more than 110% of the actual or estimated annual energy consumption by all units in the MFAH Building;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The participant will procure and pay for the solar PV system;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The solar PV system will be connected to Austin Energy’s electrical grid at the participant’s expense;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The solar PV system will be installed by a participating solar contractor in good standing with Austin Energy’s solar program;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The participant understands that no funds will be provided without a Letter of Intent (LOI) from Austin Energy, and that the LOI must be received prior to system installation;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The customer will assign all rights to environmental attributes and credits resulting from the solar production to Austin Energy;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The participant understands that the solar energy and related Value of Solar credits for generation from the system will be allocated to the residential units on site, and not to common area or commercial accounts on site;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The solar PV system must be installed and pass the final inspection by September 15, 2018.
If you answer <i>No</i> to any questions above, please explain:	

### V. NET ZERO CAPABLE STUDY REQUIREMENTS (OPTIONAL)

<input type="checkbox"/> Yes <input type="checkbox"/> No	• The multifamily building has no more than four (4) stories;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The multifamily building is ALL electric (no natural gas service for heating, cooking, or clothes dryers);
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The Solar PV system has been designed to meet at least 80% of the actual or estimated annual energy consumption by all units in the multifamily Building;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The property owner will sign a written consent agreement to allow Austin Energy reasonable access to individual residential units for installing and collecting data loggers used to monitor temperature and humidity;
<input type="checkbox"/> Yes <input type="checkbox"/> No	• The property owner agrees to allow Austin Energy to publish project case studies including photos and aggregated net energy results.
If you answer <i>No</i> to questions above, please explain:	

**VI . PROJECT SUMMARY**

*Please provide a complete and concise summary of the proposed projects at least including the project scope, the potential impact of the project (i.e., benefits, outcomes), major participants and stakeholders with respective responsibilities and address specifically how the applicant meets eligibility and requirements stated in Section C, D, E and F of Call for Participation. Please also review Section G for selection criteria and provide most relevant information which can help application review and project selection.*

***Please attach the following documentation (refer to Section H.1 of Call for Participation for details):***

- Quote from a participating solar contractor, including system size (kW-DC), installed cost and estimated generation;
- Proposed solar layout and wiring diagram;
- Energy modeling or summary of aggregated residential units' annual electric use;
- Proof of the property's affordability commitments;
- Other relevant documentation that can help application review and project selection.

PRINT NAME AND TITLE OF AUTHORIZED OFFICIAL

SIGNATURE OF AUTHORIZED OFFICIAL

DATE