



ORGANIZATIONAL SOLAR READINESS ASSESSMENT



HOW CAN THIS ASSESSMENT PROCESS HELP YOU?

The purpose of this document is to help increase deployment of economically- and environmentally-beneficial solar projects on affordable housing sites by providing organizations with a tool to evaluate their current understanding of the opportunities for solar project development and determine where they need guidance.

AT WHAT STEP IN THE PROCESS OF DEVELOPING SOLAR PROJECTS IS YOUR ORGANIZATION?

Knowing where you stand in the solar development lifecycle and answering necessary questions as you proceed will lead to lower costs, lower risks, and improved project timelines. Organizations should become familiar with solar development best practices, challenges, and opportunities – and tap into technical assistance resources from HUD and others to ensure successful outcomes from your efforts.

NAME OF ORGANIZATION

CONTACT NAME/EMAIL

TYPE OF MULTIFAMILY FEDERAL ASSISTANCE *[HUD Public Housing, HUD Multifamily Assisted, USDA Rural Development Multifamily Program, Low Income Housing Tax Credit (LIHTC), Other]*

ADVANCING SMARTLY THROUGH THE PROCESS

Review the guidance for these four steps and complete all of the relevant questions internally and/or seek technical assistance before proceeding to subsequent steps to ensure project success.

SOLAR DEVELOPMENT LIFECYCLE



1 Establishing renewable energy goals.



2 Determining the scale of what can be accomplished.



3 Figuring out options for technologies, sizing, financing, and vendors.



4 Preparing Request for Proposals (RFP) through contract:

- Preparing an RFP and related documents.
- Issuing RFP and waiting for responses.
- Evaluating proposals and/or vendors.
- Final contract negotiations.
- Under contract, but system construction has not started.



○ FOR ORGANIZATIONS THAT ARE IN THE EARLY STAGES OF SOLAR PROJECT REVIEW

- Use this self assessment as a reference for understanding the overall solar development process, planning efforts, and setting goals.
- Familiarize yourself with the questions, guidance, and references, but completing all questions and sections is not necessary until later in the process.

○ FOR ORGANIZATIONS THAT HAVE MADE SOME PROGRESS BUT WANT TO REFINE AND FOCUS THEIR EFFORTS

- Start reviewing the assessment from the beginning and identify how far your efforts have reached along the process lifecycle.
- Review the guidance on completed steps to identify opportunities for refinement and fill in gaps now that will improve project outcomes.
- Look ahead to future steps and utilize the assessment as a working document to assist with planning and organizational alignment.

○ FOR ORGANIZATIONS WITH WELL-DEFINED GOALS AND PROJECTS THAT ARE UNDERWAY

- Make sure that valuable information collected earlier in the process is informing your procurement process and decisions.
- Use this assessment to organize your data and findings and then engage with stakeholders to accelerate project action.



1

Establishing renewable energy goals.

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A. WHAT ARE YOUR RENEWABLE ENERGY GOALS?

Achievable goals can be based on total installed capacity, energy offset percentages or cost savings targets. For example, the target may be to reach 25% renewable energy usage on average across all facilities through a combination of economically viable on-site and off-site solar power. Development of the goals should be done among internal leaders at the beginning of the effort to ensure alignment of resources and projects, then communicated broadly to encourage action at all levels of the organization.

B. HOW MANY FACILITIES ARE BEING CONSIDERED FOR SOLAR PROJECT INSTALLATIONS?

When possible, a portfolio approach to development will generally yield better results and attract more interested solution providers. For example, all of the facilities in a certain utility territory or state may be pursued first due to favorable incentives for solar projects. All opportunities should be screened, but only those that have some realistic potential should be included in an initial round of development.

C. WHO WITHIN YOUR ORGANIZATION WILL BE HEAVILY INVOLVED IN RENEWABLE ENERGY DECISIONS?

Identifying key internal personnel will enable better engagement, information sharing, and decision making. This typically includes the asset manager, legal department, finance department, facilities managers, and ultimate property owner. Engage with these stakeholders early in the process to build knowledge and skills and maintain ongoing discussions to review and revise approach.

D. WHAT ARE YOUR POTENTIAL CONSTRAINTS OR CONCERNS?

Capturing these potential issues early in the process enables better planning and development of appropriate solutions. Reviewing common problems and risk mitigation approaches can help to dispel early concerns and overcome organizational barriers to developing these projects successfully. For example, internal financing may be challenging for some affordable housing properties due to capital constraints.



Please visit the following links for more information on these topics.

- Renew300 Program Information. <https://www.hudexchange.info/programs/renewable-energy/>
- Getting Started with Multifamily Solar Projects. <https://www.hudexchange.info/resource/4839/getting-started-solar-for-multifamily-affordable-housing/>
- Green Energy Retrofit Toolkit. <https://www.hudexchange.info/resource/4836/enterprise-multifamily-green-retrofit-toolkit/>
- DOE Better Buildings Resources. <http://betterbuildingssolutioncenter.energy.gov/>



ADVANCING SMARTLY THROUGH THE PROCESS: Review the guidance for each step and complete all of the relevant questions internally and/or seek technical assistance before proceeding to subsequent steps to ensure project success.



2 Determining the scale of what can be accomplished.



A. WHAT IS THE AVERAGE SIZE FOR THE FACILITIES IN SQUARE FEET AND ANNUAL ENERGY USAGE?

These statistics will provide input into the planning for project development and quantify the opportunity. In general, facilities with a larger footprint will have greater potential for solar power and energy offset than taller buildings with extensive interior square footage relative to the roofspace. For example, campus-style facilities with a large main building can often be very attractive for developers due to the proximity and size of available roof space near common area loads.

B. WHERE ARE THE FACILITIES LOCATED?

Locations of the facilities will impact project economics due to differing energy usage profiles, rate schedules, incentives, and construction costs. Determining where they are located in advance will provide better visibility into project development opportunities and potential for aggregation. For example, high-rise apartments in urban areas can be more difficult to develop due to their small rooftop size and potential shading from surrounding buildings.

C. DO YOU OWN, LEASE, OR OPERATE YOUR FACILITIES?

The ownership structure impacts project development and financing complexity. Document the structure at each facility and begin engaging with all parties to educate them on the solar development process and gather input on their willingness to participate. For example, property management companies will need to involve the property owner(s) in decisions for on-site solar projects.

D. IF YOU ARE NOT THE OWNER, WHO IS?

Property owners will always need to be part of the project evaluation and decision-making process. If the owner is a non-profit organization or municipality, then certain tax credits for renewable projects would not be directly available but may be accessible through 3rd party solar ownership arrangements.



Please visit the following links for more information on these topics.

- Renew300 Program Information. <https://www.hudexchange.info/programs/renewable-energy/>
- Database of state policies and efforts to support renewable energy. <http://spotforcleanenergy.org/>
- Database of rebates and incentives to solar power projects. <http://www.dsireusa.org/>
- NREL PVWATTS solar project estimation tool. <http://pvwatts.nrel.gov/>
- Case Study – Baltimore, MD. <https://www.hudexchange.info/resource/4842/clean-energy-for-resilient-communities-expanding-solar-generation-in-baltimores-low-income-neighborhoods/>





3 Figuring out options for technologies, sizing, financing, and vendors.



FAMILIARITY WITH SOLAR PROJECT ECONOMICS, TECHNICAL CONSIDERATIONS, AND FINANCING

Understanding current skill levels and experience within the organization will provide direction on what external resources may be necessary to reduce risks and improve project outcomes. Review the list below and select your internal experience level from **1 (no experience or knowledge)** to **5 (direct prior experience)**.

A. TO WHAT EXTENT DOES YOUR ORGANIZATION HAVE A WORKING KNOWLEDGE OF THESE TOPICS?

- _____ Utility rate schedule and energy usage analysis.
- _____ Solar energy production analysis and cost savings forecasting.
- _____ Community solar and virtual net metering projects.
- _____ Power Purchase Agreement (PPA) models.
- _____ Solar leasing, property-assessed clean energy (PACE) or other project financing.
- _____ Rooftop solar system design and sizing.
- _____ Carport and/or ground-mount solar system design and sizing.
- _____ Solar system components and warranties.
- _____ Solar system performance monitoring.
- _____ Evaluation of solar project development partners and/or vendors.

Based on your experience level, create internal working groups to build awareness and understanding of these topics as your organization pursues the development of solar projects



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- Renew300 Program Information. <https://www.hudexchange.info/programs/renewable-energy/>
- DOE Solar Power Learning Resources. <http://energy.gov/eere/solarpoweringamerica/solar-powering-america-home>
- EPA Renewable Energy Ready Homes Learning Resources. https://www.energystar.gov/index.cfm?c=rerh.rerh_index
- Case Study – Santa Barbara, CA. <https://www.hudexchange.info/onecpd/assets/File/Renewables-in-Practice-Case-Study-Santa-Barbara-County-Housing-Authority.pdf>
- Solar and Storage for Resiliency Report. <https://www.hudexchange.info/resource/4841/solar-storage-101-an-introductory-guide-to-resilient-solar-power-systems/>



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4 Preparing Request for Proposals (RFP) through contract.



A. WHAT IS YOUR ORGANIZATION'S PROCUREMENT PROCESS FOR CAPITAL PROJECTS?

Documenting and understanding how typical retro-fit projects are developed and approved provides insight into how to plan for solar-related project activity and which steps might need to be adjusted or added to incorporate best practices to accelerate development while reducing uncertainty.

B. WHAT FINANCING OPTIONS MAY BE AVAILABLE AND WHICH HAVE YOU CONSIDERED?

Various financing options may be available to your organization but each has its own relative benefits and costs that should be considered.

C. WHAT ARE YOUR ON-SITE CONSTRUCTION, MAINTENANCE, AND INSURANCE REQUIREMENTS FOR CONTRACTORS?

Solar projects can utilize typical contracting requirements, but are usually adapted to the specific type of development model and financing structure.

D. WHAT ARE THE KEY CRITERIA FOR SELECTING QUALIFIED AND COST-EFFECTIVE SOLAR VENDORS?

Planning for vendor and financing partner evaluation prior to issuing the RFP is critical to ensuring that the right information is being requested and that the organization can move effectively through the selection process.



Please visit the following links for more information on these topics.

- Renew300 Program Information. <https://www.hudexchange.info/programs/renewable-energy/>
- HUD Solar RFP Process Guide. <https://www.hudexchange.info/resource/4505/solar-requests-for-proposals-overview/>
- DOE Community/Shared Solar Resources. <http://energy.gov/eere/sunshot/community-and-shared-solar>
- HUD Technical Assistance Program. <https://www.hudexchange.info/programs/renewable-energy/technical-assistance/>
- Case Study - Denver, CO. <https://www.hudexchange.info/onecpd/assets/File/Renewables-in-Practice-Case-Study-Denver-Housing-Authority.pdf>

ASSESSMENT COMPLETE

Now that you have completed an initial review of this assessment, potential next steps to accelerate your solar development efforts include:

- ✓ Circulate this assessment with additional stakeholders to get their input and guidance.
- ✓ Develop a plan to formalize actions that will achieve solar project development goals.
- ✓ Utilize this assessment as part of a HUD Technical Assistance request, as appropriate.