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Strategies for Supporting Solar Adoption in Your Community and on Your Own Properties

July 10, 2024

Session 4 agenda

- Welcome
- Cohort Progress and Session Overview
- Peer Check-In
- Community-Facing Opportunities to Support Solar
- Municipal Procurement Best Practices
- Breakouts
- Next Steps

Who you'll hear from

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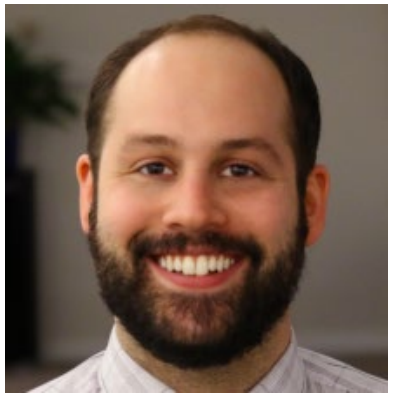

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Cohort Progress and Session Overview

Cohort structure & timeline

1-on-1 check-ins

Session #1: Setting the stage for solar development

Overview of regional and state energy context

Session 3: Permitting & inspection for solar

Training on best practices for permitting and inspecting solar arrays

Session 5: Wrap up & next steps

Address any outstanding questions and chart a pathway forward

April 2024

May 2024

June 2024

July 2024

July/August 2024

Session 2: Planning for solar

Best practice guidance for planning and zoning of small and large-scale solar arrays

Session 4: Community engagement & municipal operations

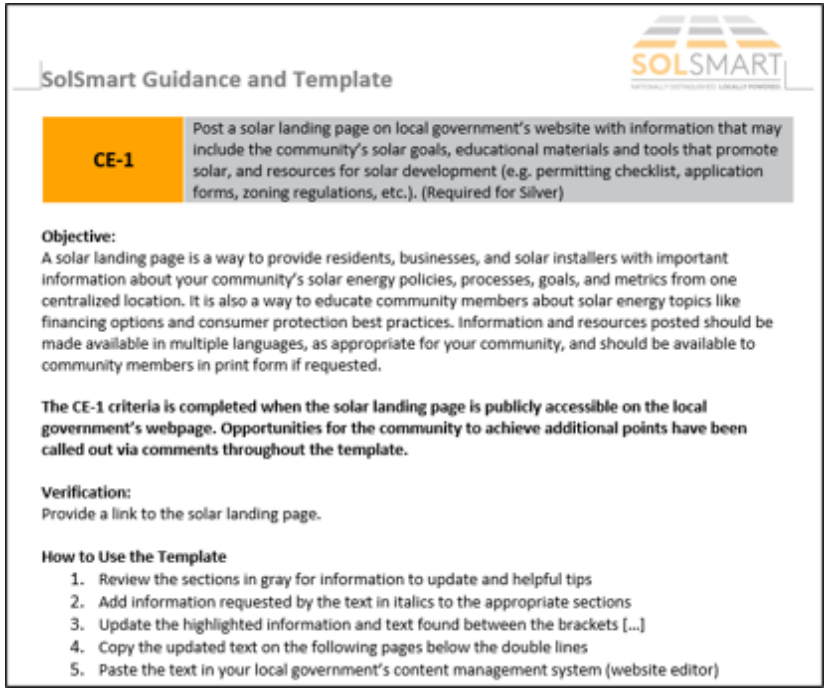
Guidance on how to support residents, businesses, and your own operations teams as they consider adopting solar

Access to 1-on-1 technical assistance support

Session 4 overview

- This session will focus on elements across multiple SolSmart categories, including “Government Operations”, “Community Engagement”, and “Market Development”.
- Attendees do not earn specific criteria solely by attending today’s session, but the session will cover multiple pre-requisite criteria (for Silver and Platinum designation tiers) and other relevant criteria that can support both designation and your broader solar efforts.
- As a reminder, your community will need to earn 20 points from criteria in any of the aforementioned categories to achieve Bronze designation.

Solar Landing Page Template



SolSmart Guidance and Template

CE-1	Post a solar landing page on local government’s website with information that may include the community’s solar goals, educational materials and tools that promote solar, and resources for solar development (e.g. permitting checklist, application forms, zoning regulations, etc.). (Required for Silver)

Objective:
A solar landing page is a way to provide residents, businesses, and solar installers with important information about your community’s solar energy policies, processes, goals, and metrics from one centralized location. It is also a way to educate community members about solar energy topics like financing options and consumer protection best practices. Information and resources posted should be made available in multiple languages, as appropriate for your community, and should be available to community members in print form if requested.

The CE-1 criteria is completed when the solar landing page is publicly accessible on the local government’s webpage. Opportunities for the community to achieve additional points have been called out via comments throughout the template.

Verification:
Provide a link to the solar landing page.

How to Use the Template

1. Review the sections in gray for information to update and helpful tips
2. Add information requested by the text in italics to the appropriate sections
3. Update the highlighted information and text found between the brackets [...]
4. Copy the updated text on the following pages below the double lines
5. Paste the text in your local government’s content management system (website editor)

A solar landing page can earn your community between 10 – 50 points

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Peer Check-in

Peer check-in prompts

Please share:

- Your name and community
- How are conversations going with other departments involved in the SolSmart process, such as colleagues in the planning and building departments?
- Do you have any updates related to your progress to achieve SolSmart criteria (e.g., the permitting checklist) or to solar energy broadly (e.g., grants won, projects advancing, etc.)

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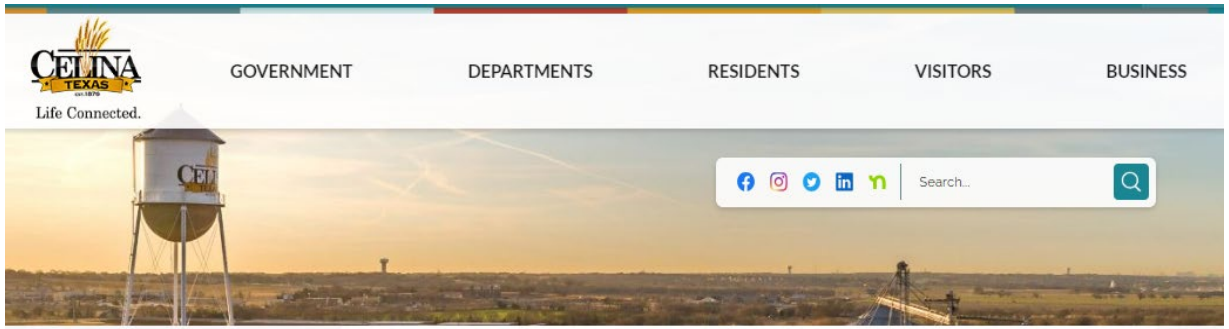
Community-Facing Opportunities to Support Solar

Creating a “solar landing page” consolidates all important solar-related information into a centralized location

Celina, TX Solar Landing Page



Building Permits and Inspections

Permit Applications

Downtown Programs

Backflow & Customer Service Program

Solar Information

Home › Departments › Development Services › Building Services › Solar Information

Solar Information

Welcome to Celina's solar resource webpage. Celina is seeking ways to encourage solar energy development in our community. This webpage represents a collection of solar information and resources for the community. For more information about the basics of solar energy, your solar options, and questions to ask solar professionals, read the Residential Consumer Guide to Solar Power and visit the Department of Energy's Homeowner's Guide to Going Solar.

Celina has become a SolSmart designated community by implementing best practices to make it easier for residents and businesses to install and access solar energy.

Policies and Processes

- Residential solar permit applications will receive a streamlined review. Our permitting process is done online through your MyGov account.
- A Solar Panel - Photovoltaic Checklist has been provided to assist the customer with complete application submittals.
- We offer an inspection appointment time for solar inspections.
- There are two inspections for solar projects. The Solar Rough-In and the Solar Final. These inspections can be scheduled and completed together on the same day.

Our Solar Commitment

The City of Celina's Building & Planning Departments are committed to exceptional customer services as it relates to solar processes. To promote the continued advancement of solar in our community we are committed to the following:

- Providing clear guidelines about the solar permitting and inspection process in our Solar Panel - Photovoltaic Checklist and outlining solar requirements in our planning and zoning Solar Fact Sheet.
- Processing small rooftop solar PV permits applications in less than 10 business days.
- Offering inspection appointment times for solar projects.
- The City of Celina has incorporated solar in our 2040 Comprehensive Plan outlined in our Planning and Zoning Handbook .
- We have indicated that Alternate Energy/Solar Panels & Devices, as both primary and, more specifically, accessory uses, are interpreted to be permitted by right in all zoning districts and is clarified in the Advisory Determination of Use Letter.

Solar Benefits

Solar energy uses a renewable energy source – the sun – and provides many benefits for individuals and the community. It improves environmental quality by reducing carbon emissions and air pollution, supports local solar companies in Texas, saves money on energy costs as the price continues to drop from technological developments, and improves electric grid resilience during peak demand and other stresses to the system.

Solar Potential

Investigate your property's solar potential by clicking here. You can also estimate the performance of potential PV projects using the National Renewable Energy Laboratory's PVWatts Calculator.

Finding a Contractor and Going Solar

Find a solar contractor (or two) to assess your home for solar energy and provide a quote.

- Certified practitioners can be found through NABCEP.
- Visit EnergySage to learn about solar energy and submit for solar quotes from a network of pre-screened, local solar installers.
- Consumer Solar Checklist – a checklist for residential consumers considering solar energy from IREC, the Interstate Renewable Energy Council.
- Clean Energy Consumer Bill of Rights – ensure a positive consumer experience by addressing important issues from IREC, the Interstate Renewable Energy Council.
- Solar Customer Resource Portal – various resources from SEIA, the Solar Energy Industries Association.

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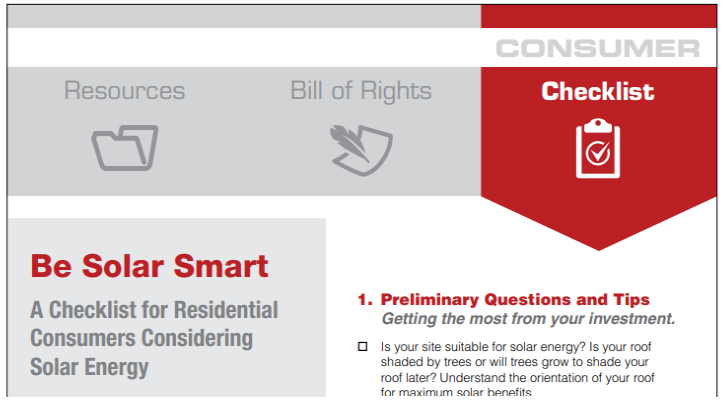
Residents and community-based organizations may turn to the local government for information on solar energy

Local governments can consider including the following information on a solar landing page:

- Permitting, inspection, and zoning requirements
- Community-wide goals (and relevant progress)
- Map of installations and/or solar potential
- Local, state, and federal incentives for solar (and storage) deployment
- Consumer protection considerations
- Local contractors and solar-related job training opportunities
- Information on ownership and financing options
- Other key links to programs, projects, and resources

Consumer Bill of Rights



Solar Potential Calculation Tool

Residents and businesses have a chance to benefit from federal incentives and programs

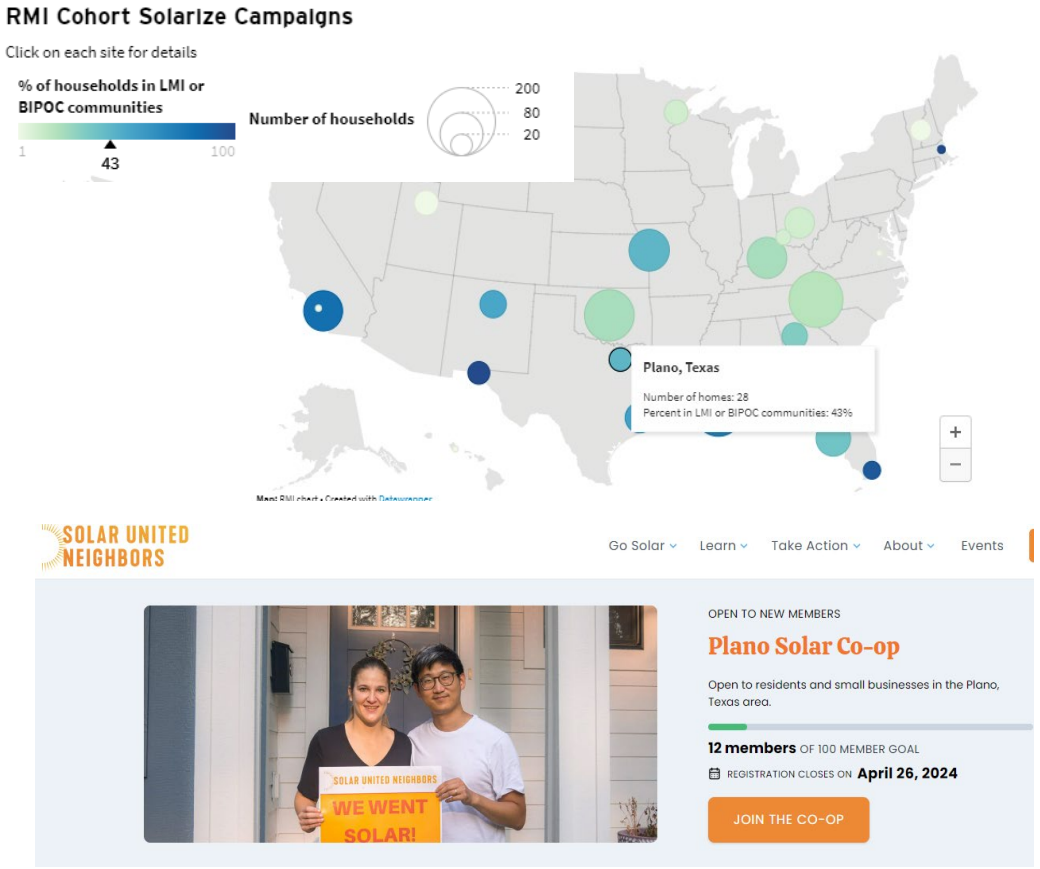
Significant tailwinds are supporting solar energy development and making it more affordable than ever to go solar. For example, the Inflation Reduction Act (IRA) and Bipartisan Infrastructure Law (BIL) provide:

- Tax credits for residents and businesses that install solar (and other clean energy resources) and make upgrades to their homes/businesses.
- Grants and programs that support specific applications of solar, such as brownfield development and community solar.
- Funding to support uptake by low- and moderate-income residents, such as through the EPA's **Greenhouse Gas Reduction Fund (GGRF).**

One component of the GGRF is the "Solar for All" program, which will deploy $7 billion to enable over 900,000 households in low-income and disadvantaged communities to benefit from distributed solar energy. A coalition of local governments in Texas will receive $249,700,000 and there are other non-profits working across multiple states (including Texas) to deploy even more projects.

A bulk purchase campaign can both educate consumers and support solar deployment

- Local government can support bulk purchase campaigns by amplifying communications around them, helping to launch them, or developing strong partnerships with community-based organizations that run them.
- The benefits of bulk purchase campaigns can be enhanced and made accessible to a more diverse array of residents by:
  - Deploying credit enhancements, such as interest rate buy downs, loan loss reserves, or revolving loan funds.
  - Offering loan options targeted at low-income residents or residents with poor or no credit.
  - Leveraging local, state, and/or federal funding streams to cover certain costs.



Developing and participating in community-centric events around solar can ensure residents have access to staff support

- Being able to see solar and talk to people who have adopted it is critical. Localities can sponsor solar tours to help people see solar in action in their community.
  - (CE-13) Support a solar informational session and/or solar tour explaining solar PV opportunities and policies.
- Local governments can also attend and table at various events, from street fairs and festivals to other types of gatherings, and present on solar-related opportunities in the community.
- In addition to participating in external events, local governments can start task forces and other committees to further explore opportunities to advance solar locally.
  - (CE-12) Discuss solar PV goals and/or strategies for increasing solar PV development, including large-scale solar plans, solar access, and/or solar adoption in disadvantaged communities, within an appropriate committee, commission, taskforce, and/or working group.

Solar Tours Video

Engaging with schools can support solar education and workforce development

While school districts may be independent from local governments, they remain an important constituent on solar-related issues:

- Consider approaching school districts on incorporating solar and other energy-related issues within curriculums
- Technical high schools may be able to develop a workforce development program around solar to provide education and job placement for more solar workers
- School buildings can be excellent candidates for on-site solar, but staff may not have the relevant expertise. Consider sharing any lessons learned and best practices to support their efforts.

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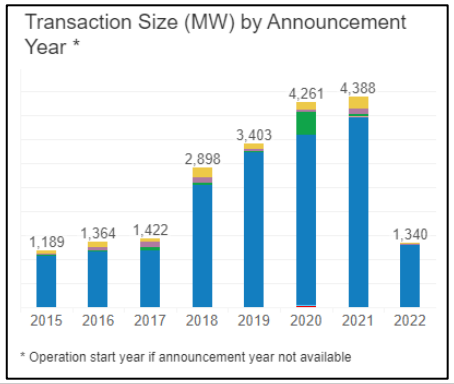
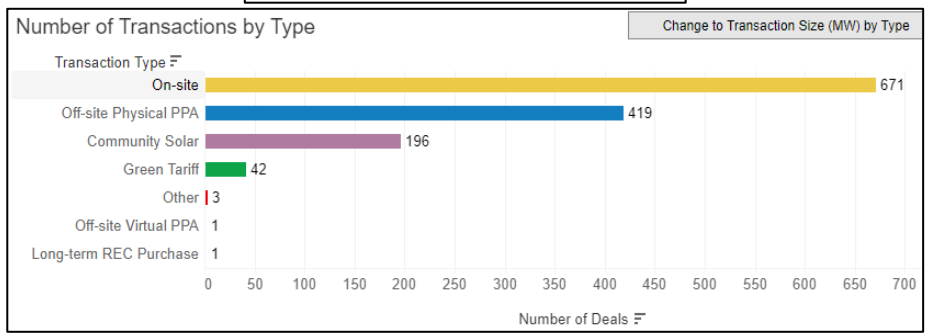
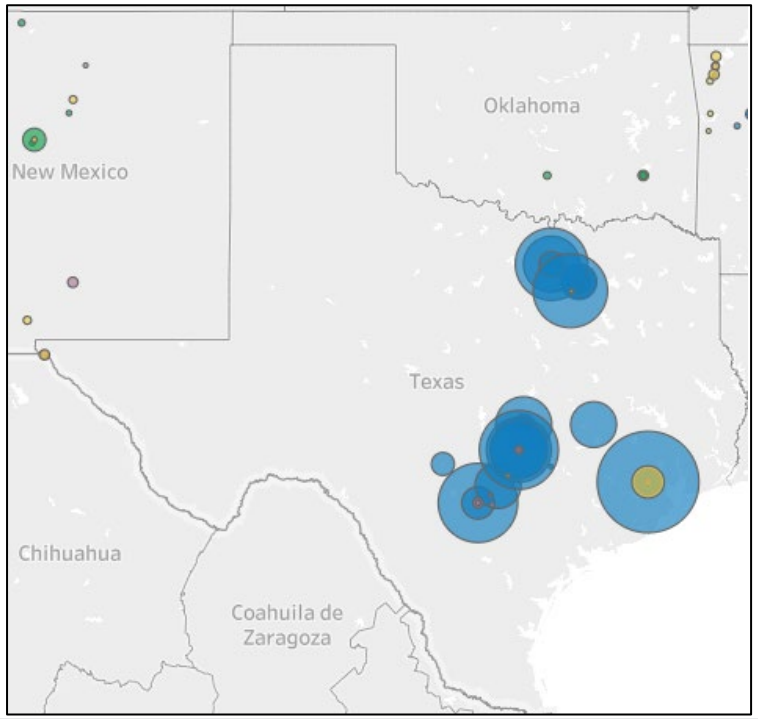
Municipal Procurement Best Practices

Local governments can lead by example and procure solar energy for their facilities

Local governments nationwide have participated in transactions for over 20,200 MW of solar since 2015 (~966 MW on-site solar)







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Local governments have several options when considering solar for municipal operations

Unbundled Renewable Energy Certificates

AND/ OR

Renewable Energy Produced On-site

AND/ OR

Renewable Energy Purchased from Off-site Sources

Renewables Developer/Generator

Off-site power purchase agreement (PPA)

Traditional Utility

- Green pricing programs
- Green tariffs
- One-off utility deals

Community solar

Local governments have several options when considering solar for municipal operations

Environmental Impact

- Reduce enterprise, municipal and/or community-wide GHG emissions
- Decrease vulnerability to climate change impacts
- Improve air quality and public health

Local Economic Impact

- Support local workforce development and job creation
- For public entities, increased tax revenue
- For private enterprises, advancing beneficial CSR/ESG impact

Financial Impact

- Reduce organizational energy expenditures
- Hedge against future energy price increases
- Identify opportunities for economies of scale

Scalability & Contribution to Goals

- Demonstrating commitment to organizational and/or community goals

Local governments have several options when considering solar for municipal operations

Equity

- Expand RE access to low- and moderate-income or other disadvantaged communities
- RE impacts on improving environmental justice
- Utilize underdeveloped sites

Grid Resilience

- Increase local energy resilience
- Renewable energy systems and storage are one solution(s) in mitigating risk exposure from energy system disruption (infrastructure failure from natural disasters and other system shocks)

Clean Energy Leadership

- Generate positive press for your organization (public and private entities) and city and/or city leadership
- Develop innovative or novel solutions (wow factor!)
- Go beyond business as usual
- Increase renewable energy access for all

Ease of Procurement

- Reduce risk and complexity of the transaction
- Align development and contract length with local goals (e.g., quick win vs. long-term strategy)
- Provide flexibility

Local governments can lead by example and procure solar energy for their facilities

Build Your Team

- Energy Manager(s)
- Facility/Site Manager(s)
- Financial Departments
- Procurement Officers

Evaluate On-Site Solar Opportunities

- Compile an inventory of buildings, parking lots, and land near municipal facilities
- Use tools like Project Sunroof and PVWatts to evaluate solar potential

Decide on Ownership and Financing

- Understand what ownership, funding and financing options are available

Run Your Solicitation

- Develop your RFP and evaluate proposals
- Negotiate terms and award your contract

Monitor Results and Learn

- Record lessons learned from the procurement process

Develop a procurement team that will support an efficient and durable outcome

- Identify the group of staff that will help you lead this clean energy procurement.
- Your internal team should include the necessary staff who understand your local facilities, can help you acquire funding for your project, have the legal expertise to review contracts, and know the procurement process.
- Notify team members and critical stakeholders well in advance of important deadlines to avoid significant delays and setbacks.

Local governments have multiple siting options available to deploy distributed solar

Rooftops

- Screen to identify roofs with highest potential
- Determine accurate avoided costs and net metering rules
- Aggregate buildings to realize scale

Parking Lots/Garages

- Typically cover ~20% of a city's surface
- Higher upfront costs relative to rooftop PV but offer co-benefits (e.g. shade, rain protection, EV-ready, land-use)

Ground-Mounted

- Large PV arrays on municipally-owned property such as
  - Landfills
  - Brownfields
  - Water treatment
- Identify local virtual net metering rules

Selecting your site will take careful analysis of techno-economic potential

Site Characteristics

- Structural and electrical evaluation
- Building orientation
- Shading from trees, buildings, power lines
- Roof type, age, weight bearing ability
- HVAC or other rooftop obstacles
- Location of interconnection points
- Damage or theft hazards
- Construction concerns and design considerations
- Site use planning and parcel ownership
- Additional uses/benefits for solar carports

Economic impact

- Utility rates
- Net Energy Metering (NEM)
- Funding and incentives
- Comparison of systems pricing
- Levelized Cost of Energy (LCOE) analysis to determine savings
- Local workforce and economic development

American Cities Climate Challenge
RENEWABLES ACCELERATOR

Municipal Solar Site Selection Tool (MSSST)

For rooftop, carport, open field, brownfield, and landfill sites.
Tutorial video: https://youtu.be/DPIf7XcyTrM
Created by: Amanda Farthing and Madeline Tyson, Rocky Mountain Institute
Updated: January 2020

RMI's Municipal Solar Site Selection Tool (MSSST) is an effective tool for identifying and screening possible sites and provides information on steps necessary to conduct preliminary site evaluations.

EPA - Solar Site Assessment and Utility Data Spreadsheet

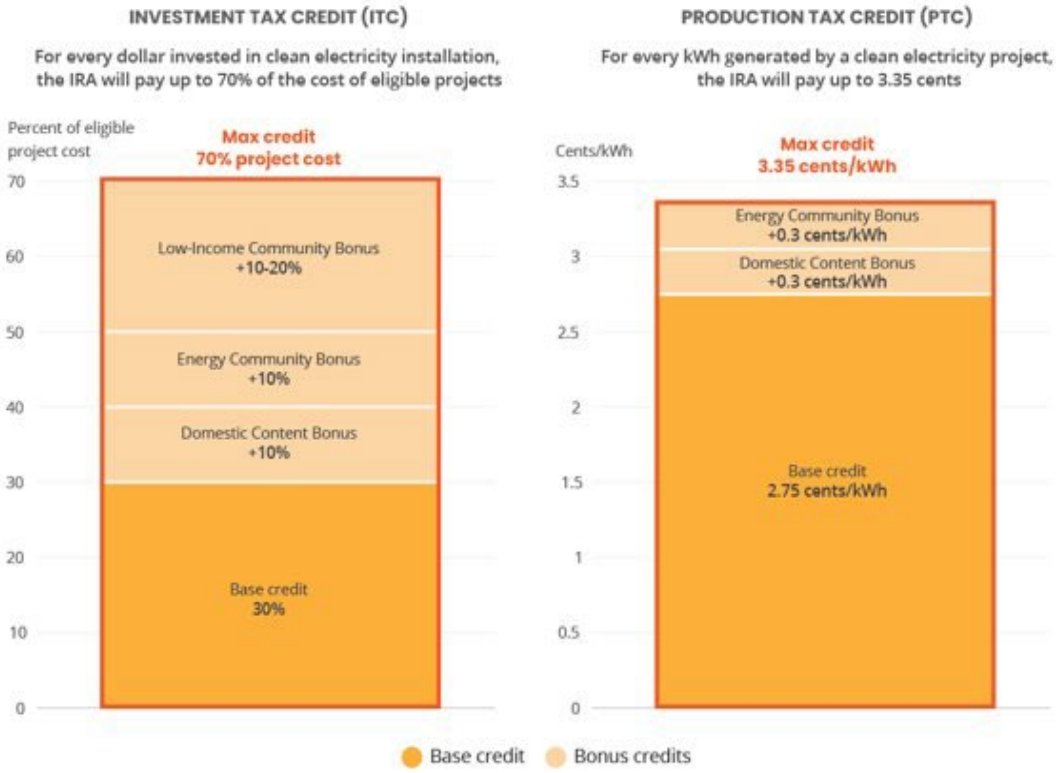
This template is designed to help users collect information about potential solar project sites.

Multiple ownership models also exist to support local government procurements

	Ownership	Third Party Ownership	Energy Performance Contract
	The city purchases the installed PV system, typically through a loan	A third-party purchases and installs the PV system and the city pays the third party for either through a power purchase agreement or a solar lease.	An ESCO purchases and installs the PV system along with other energy efficiency measures and the buyer pays the ESCO a percentage of verified energy cost savings.
Pros	• Typically more lifetime savings • Buyer may access low-cost debt • Buyer inherently owns RECs • Buyer may be able to take advantage of tax incentives	• No upfront cost to the buyer • Buyer has less operational risk • Buyer can take advantage of tax incentives	• No upfront cost to the buyer • Guaranteed energy savings • Low risk • Can be combined with energy efficiency projects
Cons	• Buyer must pay/finance upfront costs • More operational risk • Buyer may not be able to utilize tax incentives • May need approval for municipal debt	• May have lower long-term economic returns • May have more restrictive clauses • Buyer likely pays a premium for RECs	• May have lower long-term economic returns • Requires a robust measurement and verification process • Buyer likely pays a premium for RECs

Federal tax credits can reduce the cost of systems and local governments can now take advantage of these credits

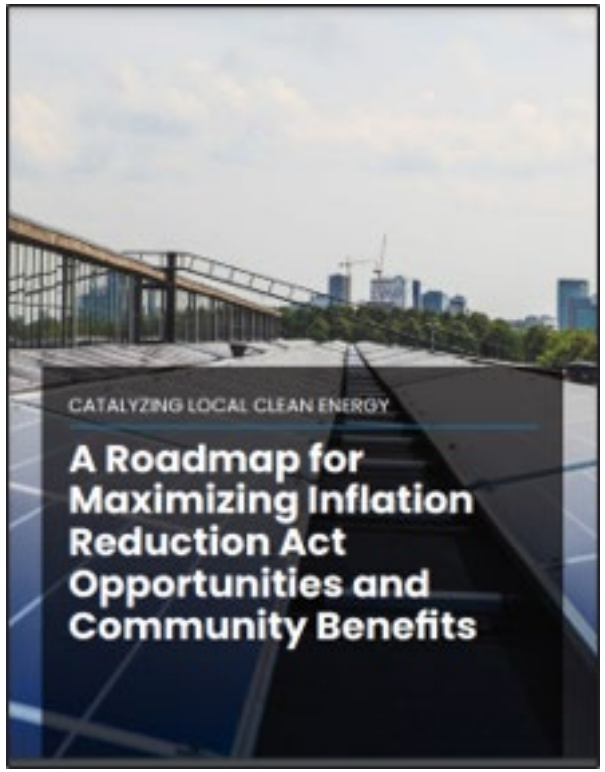
- The Investment Tax Credit (ITC) and Production Tax Credit (PTC) are longstanding tax credits that incentivize clean energy development and the IRA made significant changes by extending the lifetime of these credits and expanding the scope of what they cover.
- Elective pay is a means of delivering **12 climate and clean energy tax credits** to eligible **tax-exempt entities** as **direct payments**.
- Eligibility includes most tax-exempt entities, including:
  - State, local, tribal, and territorial governments
  - Any agency or instrumentality of an eligible government (school districts, public power utilities, fire departments, libraries, etc.)
  - Any organization exempt from taxes under section 501, including 501(c)(3) organizations and religious institutions



Tools and resources that can support your efforts for developing onsite solar

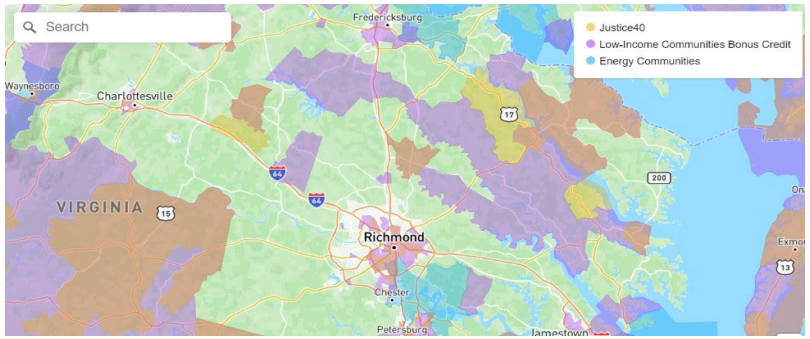
Federal Funding Guide

IRA/Elective Pay Guide

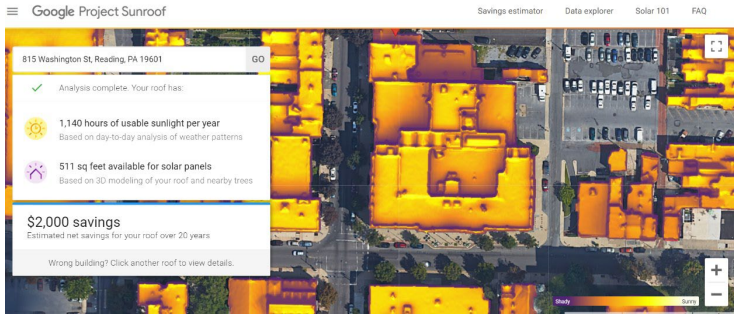


NREL Solar Potential Calculation Tool

Map for Tax Adder Eligibility



Google Project Sunroof



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Breakouts

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Next Steps

Supporting activities post workshop 4

1. Determine the feasibility of and process for developing a solar landing page.
2. If it's feasible to create the landing page, determine what content you want to include on it.
3. Research and find resources that address these content areas; the SolSmart template and the landing pages of peer local governments are the best places to start.
4. Launch the webpage and highlight it through relevant media channels (e.g., newsletters and social media).

Workshop 5 Focus Area(s)

- Please share in the chat areas that you want to learn more about and/or discuss at our final workshop. Topics could include anything from across the SolSmart categories of:
  - Permitting and Inspection
  - Planning and Zoning
  - Government Operations
  - Community Engagement
  - Market Development

A reminder about the actions necessary outside of cohort meetings to achieve designation

- For Bronze Designation:
  - PI-1: Post an online permitting checklist
  - Submittal of a signed PZ-1 (zoning review) document
  - 10 additional points in the "Planning and Zoning" category
  - 10 additional points in either the "Government Operations", "Community Engagement" or "Market Development" categories
- For Silver Designation:
  - CE-1: Post a solar landing page on the local government website
  - Either PZ-4 (zoning determination letter) or PZ-5 (codified by-right accessory use for rooftop solar)
  - 30 additional points from any of the categories (may come from solar landing page)

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Thank You!

- If you want to **have questions about the cohort**, please reach out to Joaquin Escalante (energy@nctcog.org)
- If you have **questions about SolSmart or external TA**, please reach out to Zach Greene (zach.greene@wri.org)