Is Your County Solar Ready?

Strategies for Removing Local Barriers to Solar Energy

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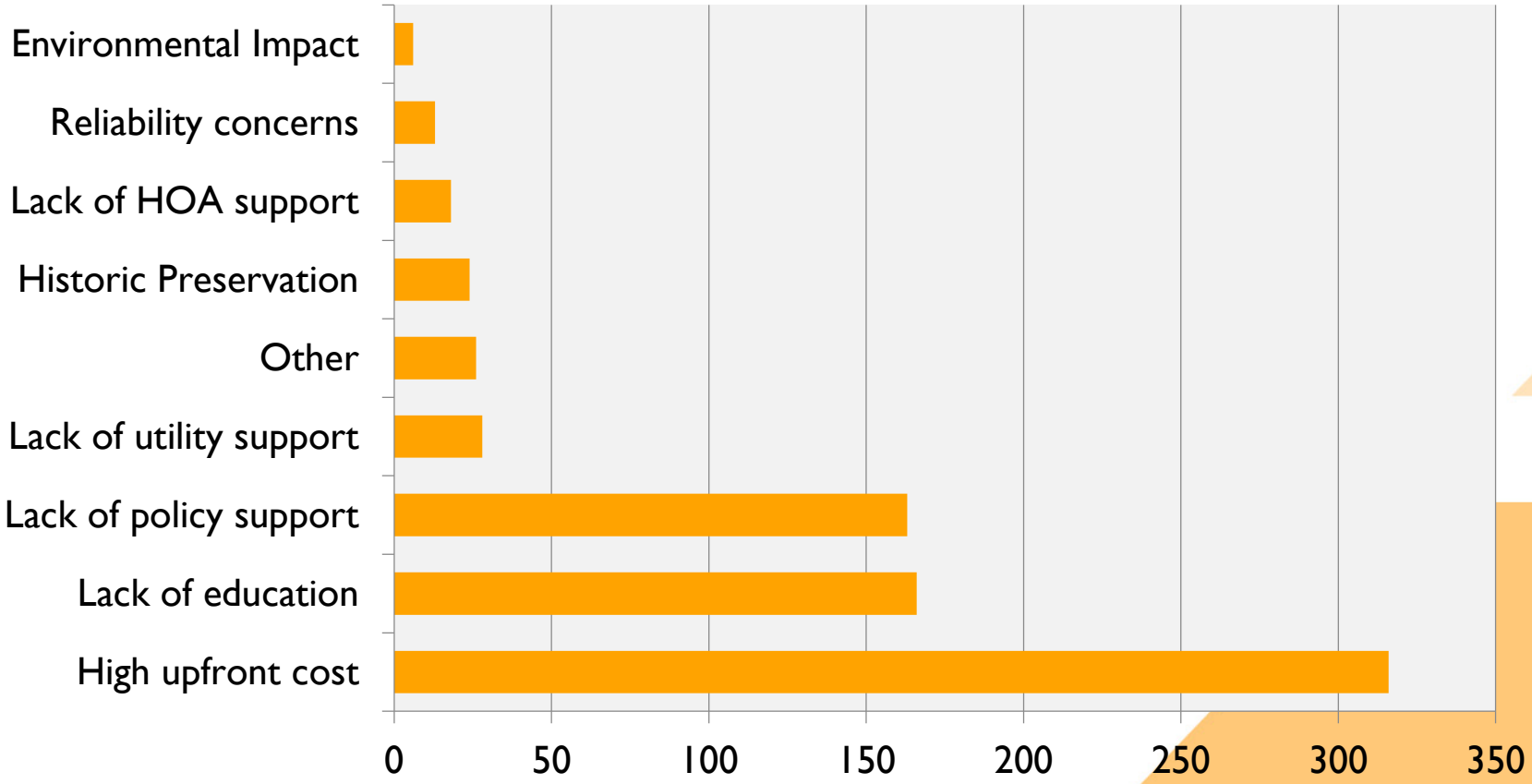
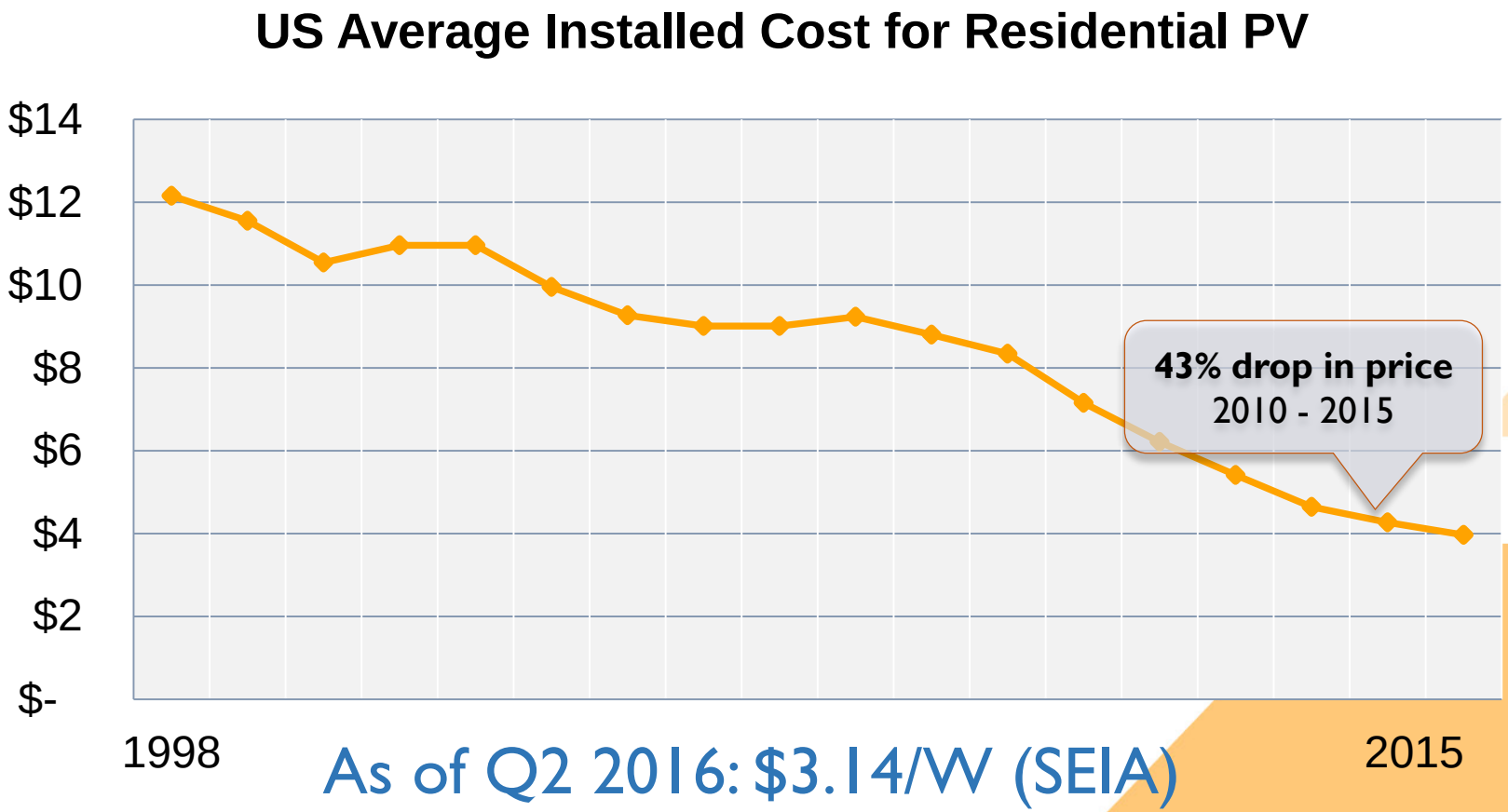
The SOLAR FOUNDATION™

Common Barriers to Solar



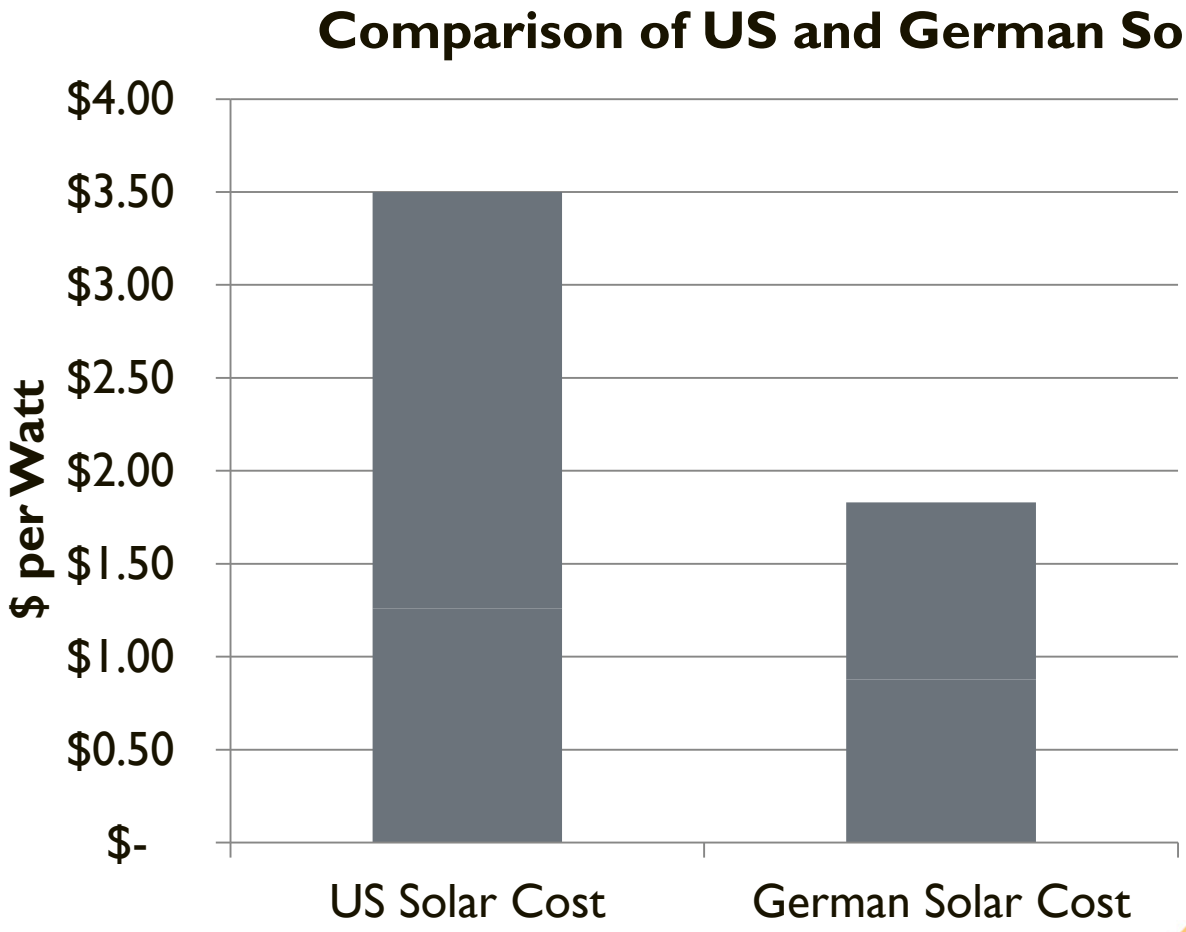
The Cost of Solar PV



As of Q2 2016: $3.14/W (SEIA)

Tracking the Sun VIII: The Installed Cost of Photovoltaics in the US from 1998-2014 (LBNL)

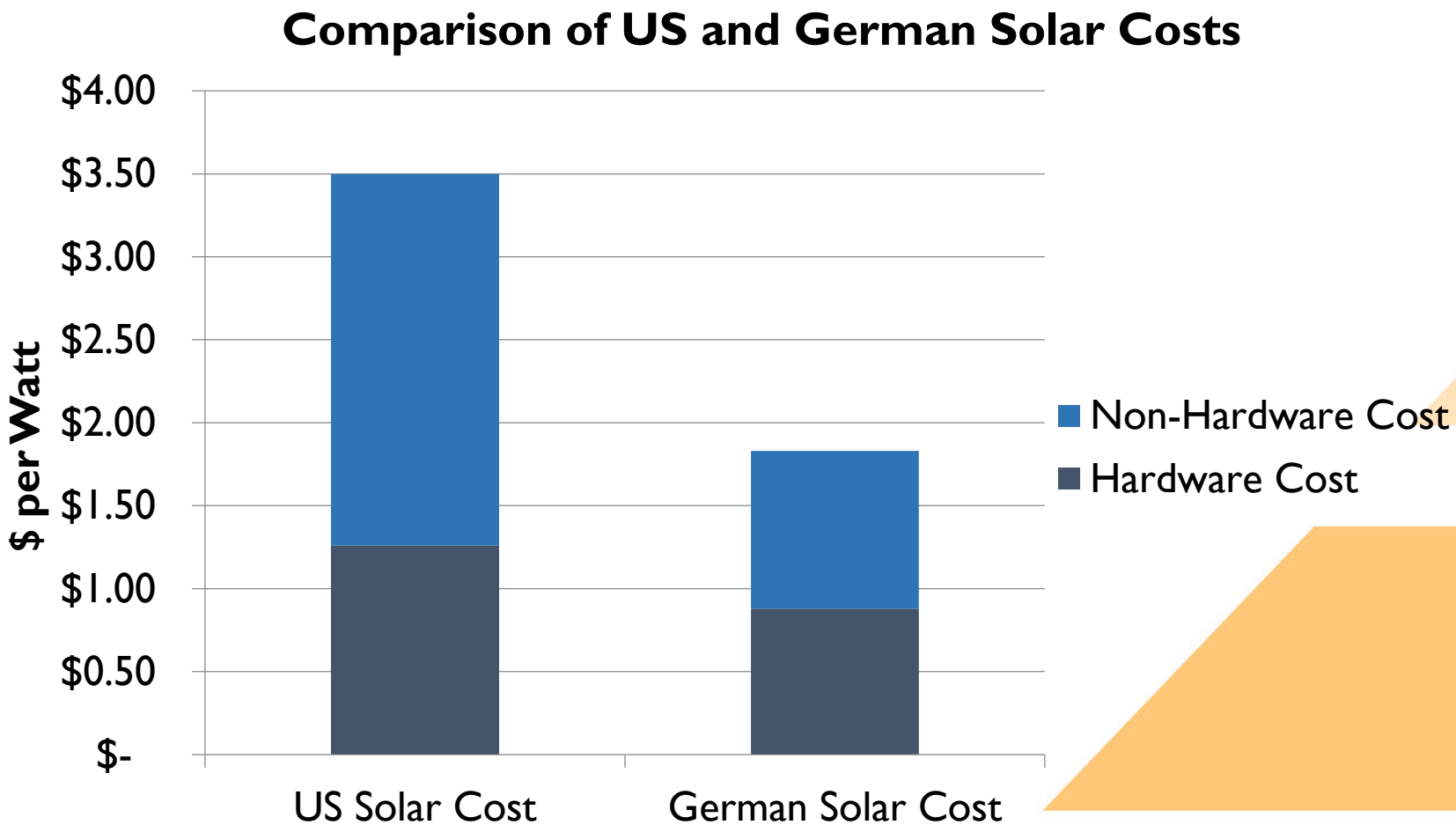
The Cost of Solar in the US



Source: NREL (http://www.nrel.gov/docs/fy14osti/60412.pdf)

LBNL (http://emp.lbl.gov/sites/all/files/lbnl-6350e.pdf)(http://www1.eere.energy.gov/solar/pdfs/sunshot_webinar_20130226.pdf

The Cost of Solar in the US



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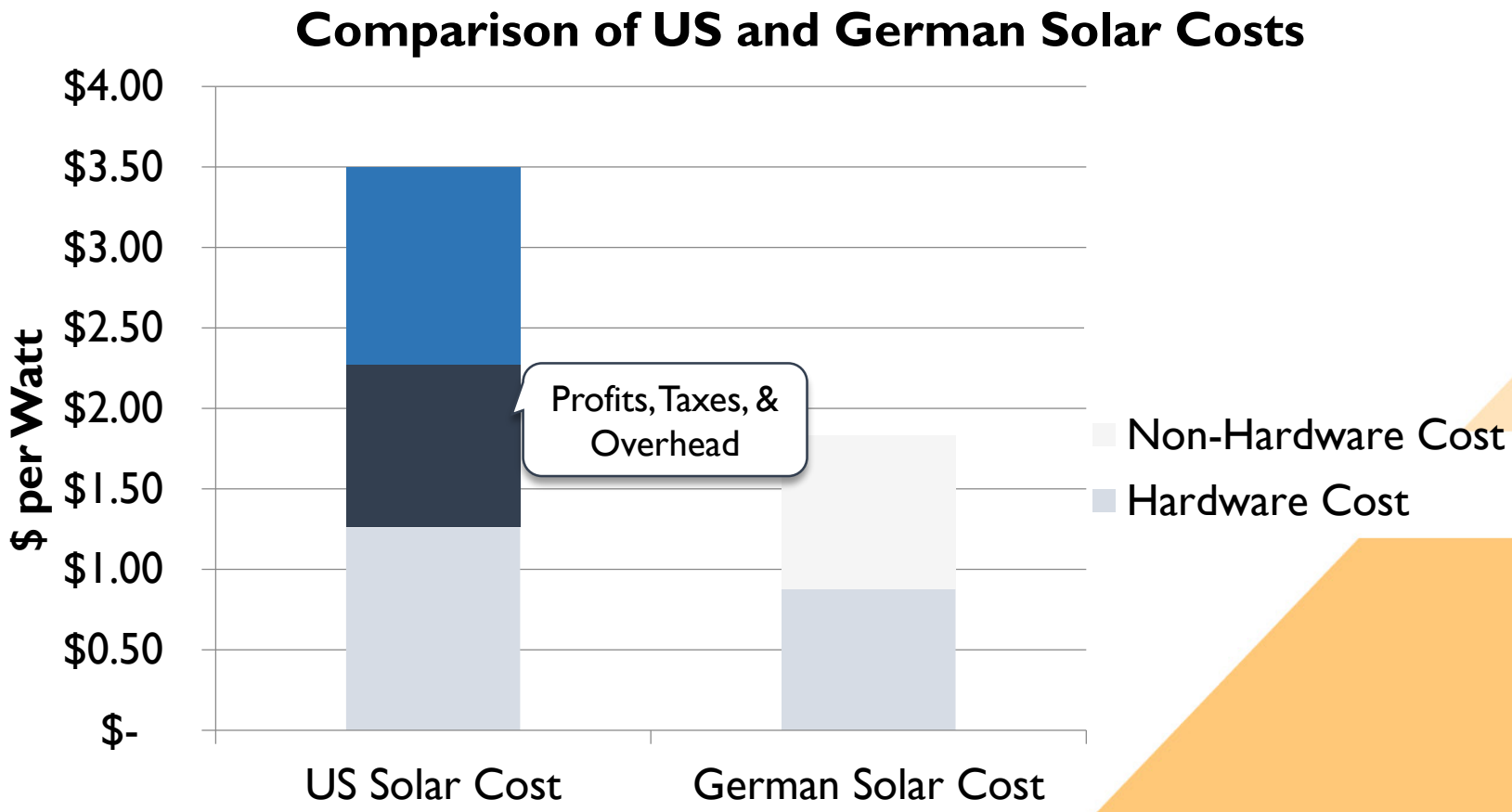

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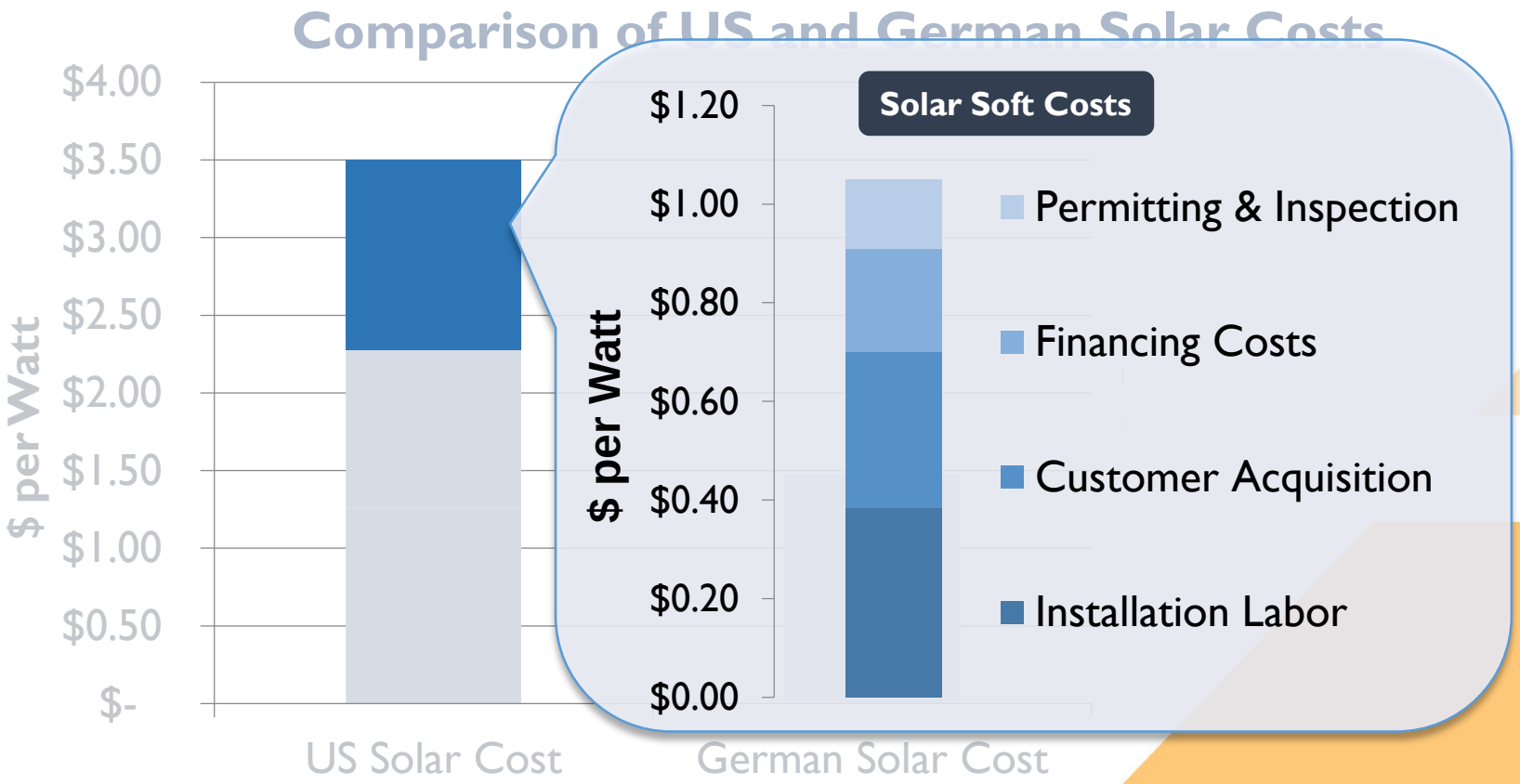

Source: NREL (http://www.nrel.gov/docs/fy14osti/60412.pdf)

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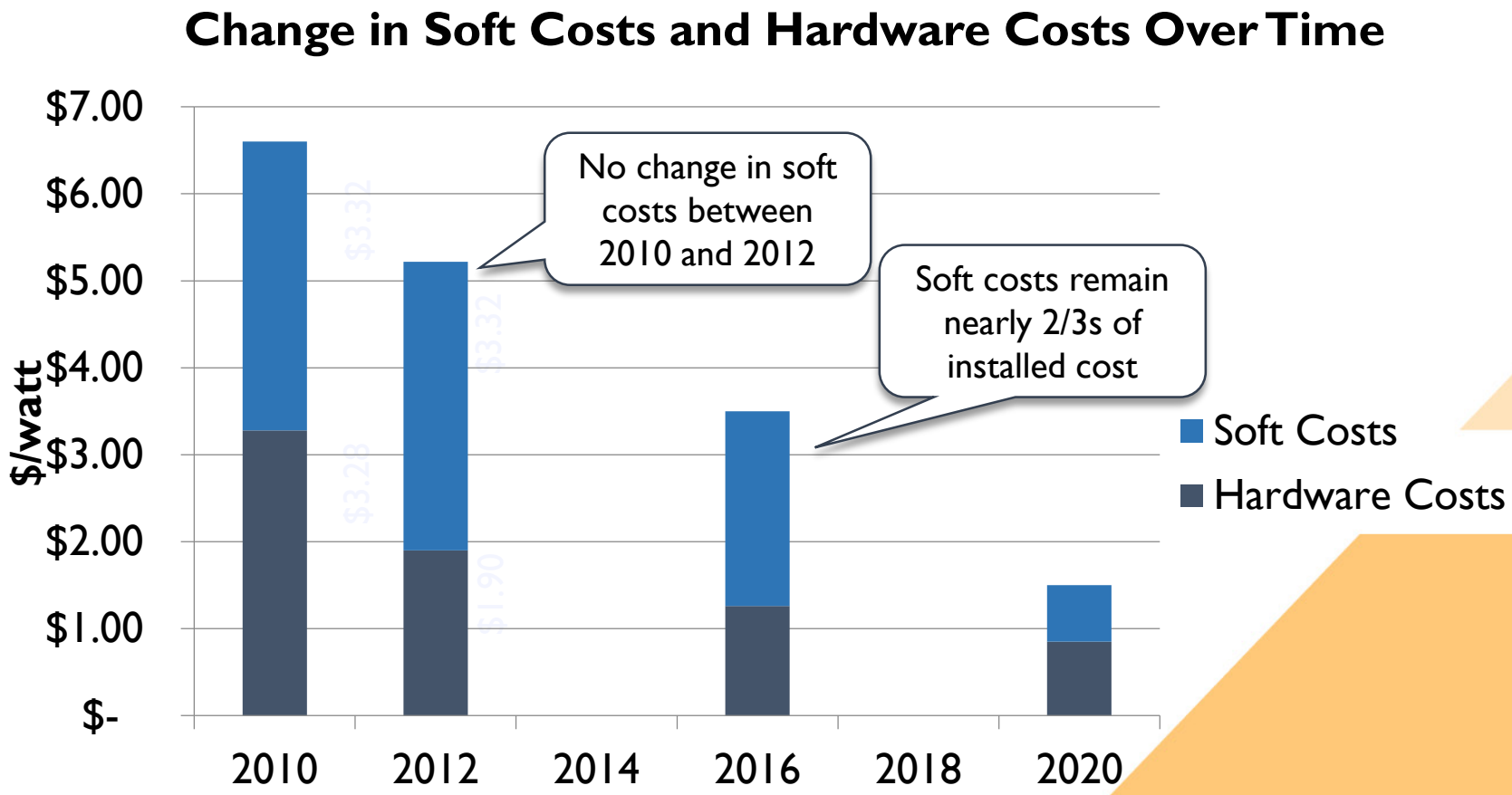


Soft Cost Takeaways

1. They often comprise a larger share of total installed cost than hardware.
2. They slow solar market growth and artificially shrink number of places in US where solar is financially viable.
3. Local governments have a big role to play in reducing barriers.

Benefits of Reducing Soft Costs

Reduced Installation Costs = Increased Return on Investment for System Owners

Permitting processes alone can impose significant cost increases. For a typical 5-kW residential PV installation, **onerous permitting procedures can add $700 to the price of an installation**. When considering permitting along with other local regulatory processes, the **total price impact can be up to $2,500** for a typical system.

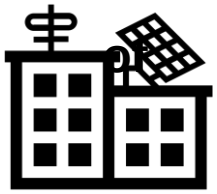
Streamlined processes can deliver a time and cost savings for local government staff.

Increased and readily available access to information about technical and procedural requirements can reduce staff time and costs due to fewer requests for information, questions from installers, and incomplete permit applications, all of which can be a drain on limited local resources.

Benefits of Reducing Soft Costs

Reducing red-tape for solar can result in **improved business prospects for solar companies**.

More than 1 in 3 installers **avoid selling solar in an average 3.5 areas** because of associated permitting difficulties.



Opening your community for solar business can have **positive impacts on jobs and economic development**.

For each megawatt of installed capacity (approximately 200 average-sized residential systems):

29.4 construction jobs are created for residential solar

15.8 construction jobs are created for non-residential solar

2.8 construction jobs are created for utility-scale solar

Sources: Clean Power Finance (Spruce); The Solar Foundation

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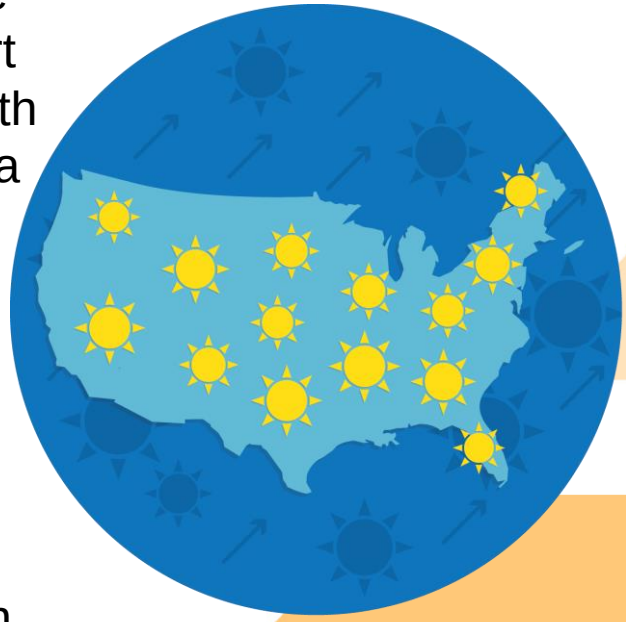
U.S. Department of Energy

www.solsmart.org

SolSmart Goals

- In order to make it faster, easier, and more affordable for more Americans to choose solar energy, SolSmart will recognize at least 300 U.S. local governments with a nationally prestigious solar designation that sends a catalytic market signal that designated communities are “open for solar business.”
- SolSmart designation will make designated communities more attractive to solar industries, allowing them to share in the economic development benefits of the new energy economy.
- SolSmart will provide targeted technical assistance in critical soft cost reduction areas to help communities achieve the goals above, including soft cost reduction and SolSmart designation.



SolSmart Overview

DESIGNATION

- Communities self-assess soft cost best practice attainment in 8 categories through a "SolSmart Application."
- SolSmart designation team awards communities SolSmart Bronze, Silver, or Gold based on criteria scorecard and documentation.

TECHNICAL ASSISTANCE

- Communities that do not meet designation criteria are eligible receive technical assistance in designation criteria areas.
- Designated communities that wish to pursue a higher tier of designation can receive no-cost technical assistance, but at a lower level of program priority than non-designees.
- All SolSmart TA is program-funded.

SolSmart Program Structure

SolSmart Program

TA Delivery

The SOLAR FOUNDATION™

NREL NATIONAL RENEWABLE ENERGY LABORATORY

MEISTER CONSULTANTS GROUP

RAP®

EPRI ELECTRIC POWER RESEARCH INSTITUTE

BROOKS ENGINEERING

Designation Program Expertise

ICMA Leaders at the Core of Better Communities

All-America City NATIONAL CIVIC LEAGUE

Home Innovation RESEARCH LABS™

TA Pipeline

NATIONAL ASSOCIATION of COUNTIES NACo

NLC NATIONAL LEAGUE OF CITIES CITIES STRONG TOGETHER

SEIA Solar Energy Industries Association®

Solar Outreach Experience

MEISTER CONSULTANTS GROUP

The SOLAR FOUNDATION™

Designation Program

- **Tiered designation program** with different levels of achievement: SolSmart Bronze, Silver, and Gold.

- **Ongoing competitions** to reward success in real-time

- **Annual awards** recognizing outstanding achievement in soft cost, market growth, community engagement, other categories

SolSmart Designation Structure

- ❑ Address Bronze prerequisites
  - ❑ Solar statement
  - ❑ Permitting checklist
  - ❑ Zoning barrier review
- ❑ Earn 20 points in the Permitting category
- ❑ Earn 20 points in the Planning, Zoning, & Development Regulations category
- ❑ Earn 20 total points across "Special Focus" categories

- ❑ Earn SolSmart Bronze
- ❑ Address Silver prerequisites
  - ❑ Solar by-right in all major zones
  - ❑ Cross-train inspection and permitting staff
- ❑ Earn 100 total points from actions taken across any combination of categories

- ❑ Address Gold prerequisites
  - ❑ PV permitting turnaround for small systems ≤ 3 days
- ❑ Earn 200 total points from actions taken across any combination of categories

Special Awards: Communities **that earn 60%+ of the points in a given category** are eligible for special recognition.

First Designees

SolSmart Gold

- Austin, Texas
- Boulder, Colorado
- Columbia, Missouri
- Fremont, California
- Fort Collins, Colorado
- Gladstone, Missouri
- Hartford, Connecticut
- Kansas City, Missouri
- Milwaukee, Wisconsin
- Minneapolis, Minnesota
- San Carlos, California
- Santa Monica, California
- Santa Rosa, California
- Satellite Beach, Florida

SolSmart Silver

- Boulder County, Colorado

SolSmart Bronze

- Burlington, Vermont
- Claremont, California
- Denver, Colorado
- Philadelphia, Pennsylvania
- Redwood City, California
- Saint Paul, Minnesota
- Somerville, Massachusetts

First Designees

SOLSMART ANNOUNCED THE FIRST 22 COMMUNITIES TO RECEIVE DESIGNATION AT THE BRONZE, SILVER, AND GOLD LEVELS.

No-Cost Technical Assistance

- All communities pursuing SolSmart designation are **eligible for no-cost technical assistance** from national solar experts.
- On average, a community can expect **100 hours** of technical assistance.
- Technical assistance is designed to **help a community achieve the requirements for designation.**
- TA may also be available to help designated communities achieve higher levels of designation.

No-Cost Technical Assistance

TA is tied to the eight SolSmart criteria areas and their associated actions:

Criteria Areas	
Foundational Categories	**Special Focus Categories**
Permitting	Solar Rights
Planning, Zoning, and Development Regulations	Inspection
	Construction Codes
	Community Engagement
	Utility Engagement
	Market Development & Finance
Innovative Actions	

SolSmart Advisors

- **Program-funded temporary staff** to help communities achieve designation.
- Advisors will **evaluate existing local government processes** and **apply industry leading best practices** that will move a community toward designation.
- SolSmart Advisors will assist communities through **engagements lasting up to six months**.
- Equates to **hundreds of hours** of in-person technical assistance for communities receiving an Advisor
- Advisors serve as **independent contractors** to The Solar Foundation and receive **stipends of up to $1,250/week.**

SolSmart Advisor Candidates

- Accepting applications for Advisor candidates in Fall 2016.
- Candidate requirements:
  - Graduate degree or equivalent
  - 2+ years work experience related to one or more key criteria topic areas
  - Demonstrated leadership skills
  - Experience in successfully managing projects
  - Ability to work well with limited supervision
- Advisors will receive training from SolSmart TA providers (first training session week of Jan. 9, 2017)
- In communities, Advisors will work with staff and elected officials to take actions that will lead to designation.
  - Advisors will also work to generate more knowledge of SolSmart.
- SolSmart seeking matching funds to help expand the number of Advisors.

SOLSMART ADVISOR HOST COMMUNITIES

- Communities and regional entities had to apply and are chosen through a highly competitive process.
- The first 11 Host Communities will be publicly announced soon.
- Advisors will start their engagements within communities in January 2017.

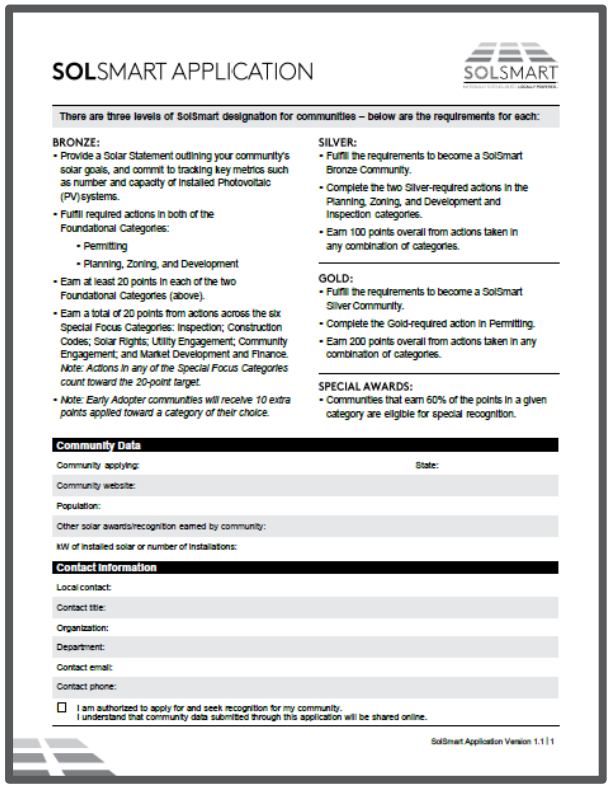
Path to SolSmart Bronze

Getting Started

WHAT FORMS DO I NEED TO COMPLETE?

- **The SolSmart "Application" is the only form** your community needs to complete to participate in the program and to receive no-cost technical assistance.

- **It's not really an "application" in the usual sense.** All communities are eligible for participation. Think of it as an iterative benchmarking exercise that tracks your community's progress toward designation.



SOLSMART APPLICATION

There are three levels of SolSmart designation for communities – below are the requirements for each:

BRONZE:
- Provide a Solar Statement outlining your community's solar goals, and commit to tracking key metrics such as number and capacity of installed Photovoltaic (PV) systems.
- Fulfill required actions in both of the Foundational Categories:
  - Permitting
  - Planning, Zoning, and Development
- Earn at least 20 points in each of the two Foundational Categories (above).
- Earn a total of 20 points from actions across the six Special Focus Categories: Inspection; Construction Codes; Solar Rights; Utility Engagement; Community Engagement; and Market Development and Finance. *Note: Actions in any of the Special Focus Categories count toward the 20-point target.*
- *Note: Early Adopter communities will receive 10 extra points applied toward a category of their choice.*

SILVER:
- Fulfill the requirements to become a SolSmart Bronze Community.
- Complete the two Silver-required actions in the Planning, Zoning, and Development and Inspection categories.
- Earn 100 points overall from actions taken in any combination of categories.

GOLD:
- Fulfill the requirements to become a SolSmart Silver Community.
- Complete the Gold-required action in Permitting.
- Earn 200 points overall from actions taken in any combination of categories.

SPECIAL AWARDS:
- Communities that earn 60% of the points in a given category are eligible for special recognition.

Community Data

Community applying: State:

Community website:

Population:

Other solar awards/recognition earned by community:

kW of installed solar or number of installations:

Contact Information

Local contact:

Contact title:

Organization:

Department:

Contact email:

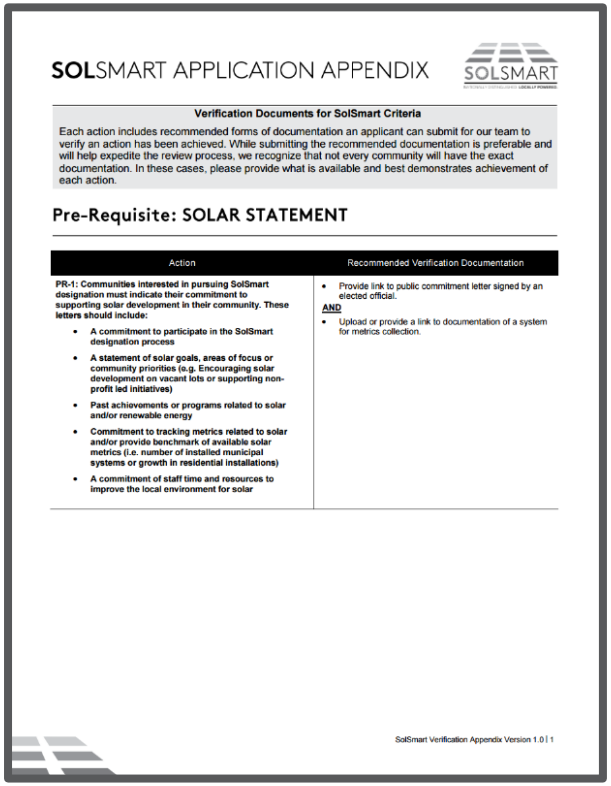
Contact phone:

☐ I am authorized to apply for and seek recognition for my community.
I understand that community data submitted through this application will be shared online.

SolSmart Application Version 1.1 | 1

Points Verification

- Communities “check off” the actions they’ve taken to reduce soft costs through the SolSmart Application.
- In order to be awarded points for the actions indicated as complete, communities must submit evidence via a hyperlink or document attachment.
- SolSmart provides an “Application Appendix,” which provides examples of acceptable documentation.



SOLSMART APPLICATION APPENDIX

Verification Documents for SolSmart Criteria

Each action includes recommended forms of documentation an applicant can submit for our team to verify an action has been achieved. While submitting the recommended documentation is preferable and will help expedite the review process, we recognize that not every community will have the exact documentation. In these cases, please provide what is available and best demonstrates achievement of each action.

Pre-Requisite: SOLAR STATEMENT

Action	Recommended Verification Documentation
PR-1: Communities interested in pursuing SolSmart designation must indicate their commitment to supporting solar development in their community. These letters should include: • **A commitment to participate in the SolSmart designation process** • **A statement of solar goals, areas of focus or community priorities (e.g. Encouraging solar development on vacant lots or supporting non-profit led initiatives)** • **Past achievements or programs related to solar and/or renewable energy** • **Commitment to tracking metrics related to solar and/or provide benchmark of available solar metrics (i.e. number of installed municipal systems or growth in residential installations)** • **A commitment of staff time and resources to improve the local environment for solar**	• Provide link to public commitment letter signed by an elected official. **AND** • Upload or provide a link to documentation of a system for metrics collection.

SolSmart Verification Appendix Version 1.0 | 1

Path to SolSmart Bronze

- ✓ **STEP 1**: Cut critical red tape via prerequisites.
- ✓ **STEP 2**: Earn 20 points in the Permitting category.
- ✓ **STEP 3**: Earn 20 points in the Planning, Zoning, and Development Regulations category.
- ✓ **STEP 4**: Earn 20 points across any of the six “Special Focus” categories.

The first 35 SolSmart designees receive a decorative SolSmart panel to display in a public building!

Path to SolSmart Bronze

STEP 1: Cut critical red tape via prerequisites

- ✓ **Provide a statement of your community's solar goals, including commitments to earn designation and to track key solar metrics.**
- ❑ Create and put your community's solar permitting checklist online.
- ❑ Review zoning requirements and remove PV prohibition if applicable. Commit to reducing other barriers during next review.

SOLAR STATEMENT

Thursday, June 30, 2016

International City/County Management Association
777 North Capitol St. NE, Ste. 500
Washington, DC 20002

The Solar Foundation
600 14th St. NW, Ste. 400
Washington, DC 20005

Dear Emily Dodson and Philip Haddix:

On behalf of **community name**, I am proud to announce our commitment to become a SolSmart-designated community. In partnership with the SolSmart team, **community name's** dedicated staff members will work to improve solar market conditions, making it faster, easier, and more affordable for our residents and businesses to install solar energy systems. These efforts will also increase the efficiency of local processes related to solar development, which may save our local government time and money.

OPTIONAL: SolSmart builds upon our community's participation in the **relevant proram(s) participation**, which resulted in **enter relevant outcomes**.

Community name will leverage SolSmart to achieve the following goals:

- **Choose an item or enter a custom description.**
- **Choose an item or type a custom description.**
- **Choose an item or type a custom description.**

These efforts demonstrate that our community is committed to driving continual improvement in our solar market, and in the process of doing so, all the related areas identified as community priorities in our **relevant plans or initiatives**.

In order to measure progress along the way, **Community name** will track key metrics related to solar energy deployment, such as installed solar capacity the and number of installations across sectors.

OPTIONAL: In these efforts, we call on our residents, businesses, non-profits, and others to get involved, and we invite everyone to stay tuned by visiting **solar landing page URL**.

Inquiries related to **community name's** SolSmart participation can be directed to **communications contact** at **E-mail address** or **phone number**.

Sincerely,

Printed name
Title

Path to SolSmart Bronze

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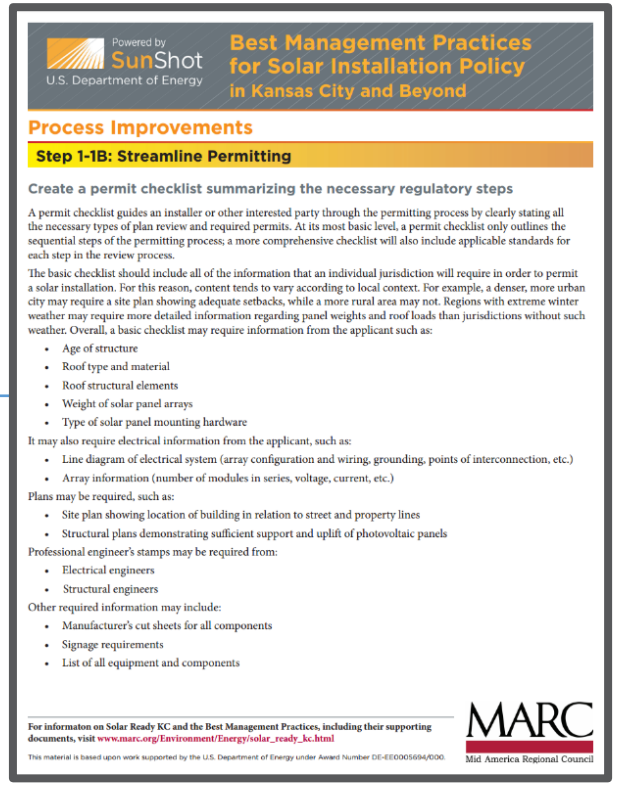

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Best Management Practices for Solar Installation Policy in Kansas City and Beyond

Process Improvements

Step 1-1B: Streamline Permitting

Create a permit checklist summarizing the necessary regulatory steps

A permit checklist guides an installer or other interested party through the permitting process by clearly stating all the necessary types of plan review and required permits. At its most basic level, a permit checklist only outlines the sequential steps of the permitting process; a more comprehensive checklist will also include applicable standards for each step in the review process.

The basic checklist should include all of the information that an individual jurisdiction will require in order to permit a solar installation. For this reason, content tends to vary according to local context. For example, a denser, more urban city may require a site plan showing adequate setbacks, while a more rural area may not. Regions with extreme winter weather may require more detailed information regarding panel weights and roof loads than jurisdictions without such weather. Overall, a basic checklist may require information from the applicant such as:

- Age of structure
- Roof type and material
- Roof structural elements
- Weight of solar panel arrays
- Type of solar panel mounting hardware

It may also require electrical information from the applicant, such as:

- Line diagram of electrical system (array configuration and wiring, grounding, points of interconnection, etc.)
- Array information (number of modules in series, voltage, current, etc.)

Plans may be required, such as:

- Site plan showing location of building in relation to street and property lines
- Structural plans demonstrating sufficient support and uplift of photovoltaic panels

Professional engineer's stamps may be required from:

- Electrical engineers
- Structural engineers

Other required information may include:

- Manufacturer's cut sheets for all components
- Signage requirements
- List of all equipment and components

For informaton on Solar Ready KC and the Best Management Practices, including their supporting documents, visit www.marc.org/Environment/Energy/solar_ready_kc.html

This material is based upon work supported by the U.S. Department of Energy under Award Number DE-EE0005694/000.

MARC Mid America Regional Council

Path to SolSmart Bronze

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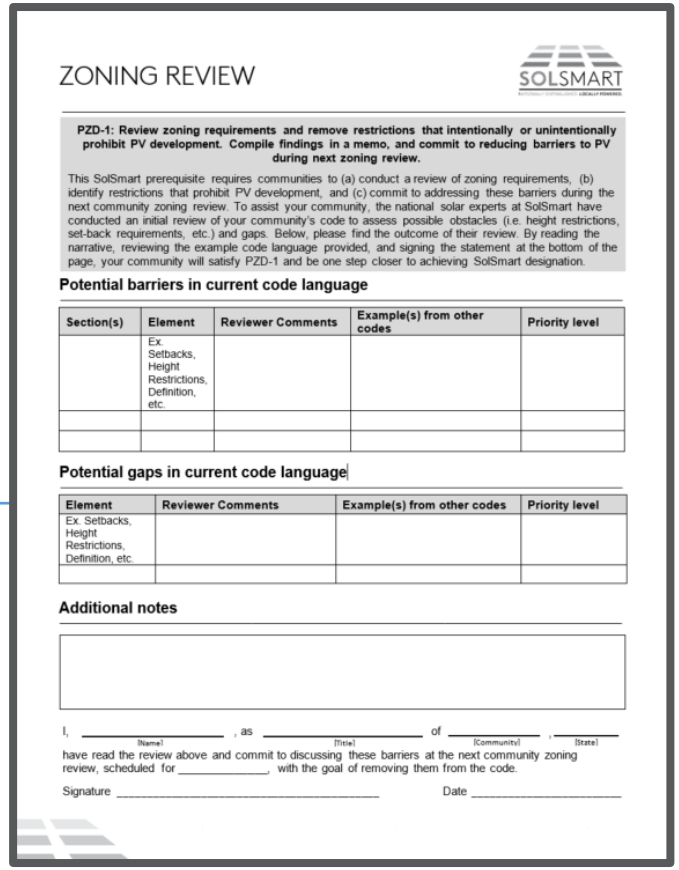


ZONING REVIEW

SOLSMART

PZD-1: Review zoning requirements and remove restrictions that intentionally or unintentionally prohibit PV development. Compile findings in a memo, and commit to reducing barriers to PV during next zoning review.

This SolSmart prerequisite requires communities to (a) conduct a review of zoning requirements, (b) identify restrictions that prohibit PV development, and (c) commit to addressing these barriers during the next community zoning review. To assist your community, the national solar experts at SolSmart have conducted an initial review of your community's code to assess possible obstacles (i.e. height restrictions, set-back requirements, etc.) and gaps. Below, please find the outcome of their review. By reading the narrative, reviewing the example code language provided, and signing the statement at the bottom of the page, your community will satisfy PZD-1 and be one step closer to achieving SolSmart designation.

Potential barriers in current code language

Section(s)	Element	Reviewer Comments	Example(s) from other codes	Priority level
	Ex. Setbacks, Height Restrictions, Definition, etc.			

Potential gaps in current code language

Element	Reviewer Comments	Example(s) from other codes	Priority level
Ex. Setbacks, Height Restrictions, Definition, etc.			

Additional notes

I, _____ [Name], as _____ [Title] of _____ [Community], _____ [State] have read the review above and commit to discussing these barriers at the next community zoning review, scheduled for _____, with the goal of removing them from the code.

Signature _____ Date _____

Path to SolSmart Bronze

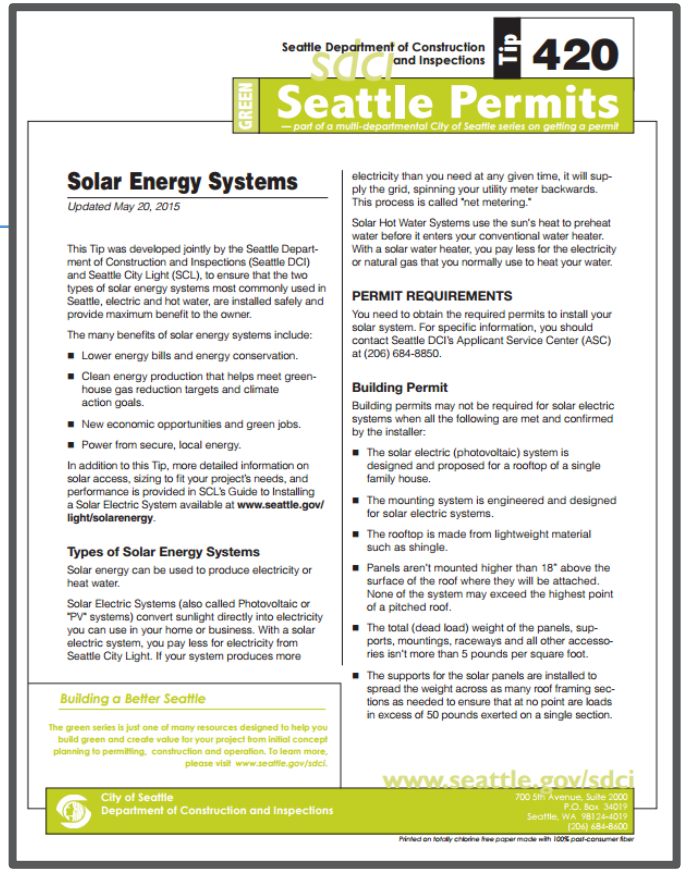
STEP 2: Earn 20 points in the Permitting category.

- ✓ **Require no more than one application form for a residential rooftop PV project. (5 PTS)**
- ❑ Review solar permit fees for residential and commercial solar. **(5 PTS)**
- ❑ Train fire and safety staff on solar PV. **(10 PTS)**

OR

- ❑ Review permitting process for efficiency improvements and reduce processing time to 10 days or fewer. **(10 PTS)**
- ❑ Train permitting staff on best practices for permitting solar PV and/or solar and storage systems. **(10 PTS)**

NOTE: This is not a prescribed path, just an example.



Seattle Department of Construction and Inspections

Tip 420

GREEN

Seattle Permits

— part of a multi-departmental City of Seattle series on getting a permit

Solar Energy Systems

Updated May 20, 2015

This Tip was developed jointly by the Seattle Department of Construction and Inspections (Seattle DCI) and Seattle City Light (SCL), to ensure that the two types of solar energy systems most commonly used in Seattle, electric and hot water, are installed safely and provide maximum benefit to the owner.

The many benefits of solar energy systems include:

- Lower energy bills and energy conservation.
- Clean energy production that helps meet greenhouse gas reduction targets and climate action goals.
- New economic opportunities and green jobs.
- Power from secure, local energy.

In addition to this Tip, more detailed information on solar access, sizing to fit your project's needs, and performance is provided in SCL's Guide to Installing a Solar Electric System available at **www.seattle.gov/light/solarenergy**.

Types of Solar Energy Systems

Solar energy can be used to produce electricity or heat water.

Solar Electric Systems (also called Photovoltaic or "PV" systems) convert sunlight directly into electricity you can use in your home or business. With a solar electric system, you pay less for electricity from Seattle City Light. If your system produces more electricity than you need at any given time, it will supply the grid, spinning your utility meter backwards. This process is called "net metering."

Solar Hot Water Systems use the sun's heat to preheat water before it enters your conventional water heater. With a solar water heater, you pay less for the electricity or natural gas that you normally use to heat your water.

PERMIT REQUIREMENTS

You need to obtain the required permits to install your solar system. For specific information, you should contact Seattle DCI's Applicant Service Center (ASC) at (206) 684-8850.

Building Permit

Building permits may not be required for solar electric systems when all the following are met and confirmed by the installer:

- The solar electric (photovoltaic) system is designed and proposed for a rooftop of a single family house.
- The mounting system is engineered and designed for solar electric systems.
- The rooftop is made from lightweight material such as shingle.
- Panels aren't mounted higher than 18" above the surface of the roof where they will be attached. None of the system may exceed the highest point of a pitched roof.
- The total (dead load) weight of the panels, supports, mountings, raceways and all other accessories isn't more than 5 pounds per square foot.
- The supports for the solar panels are installed to spread the weight across as many roof framing sections as needed to ensure that at no point are loads in excess of 50 pounds exerted on a single section.

Building a Better Seattle

The green series is just one of many resources designed to help you build green and create value for your project from initial concept planning to permitting, construction and operation. To learn more, please visit www.seattle.gov/sdci.

www.seattle.gov/sdci

City of Seattle
Department of Construction and Inspections

700 5th Avenue, Suite 2000
P.O. Box 34019
Seattle, WA 98124-4019
(206) 684-8600

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Path to SolSmart Bronze

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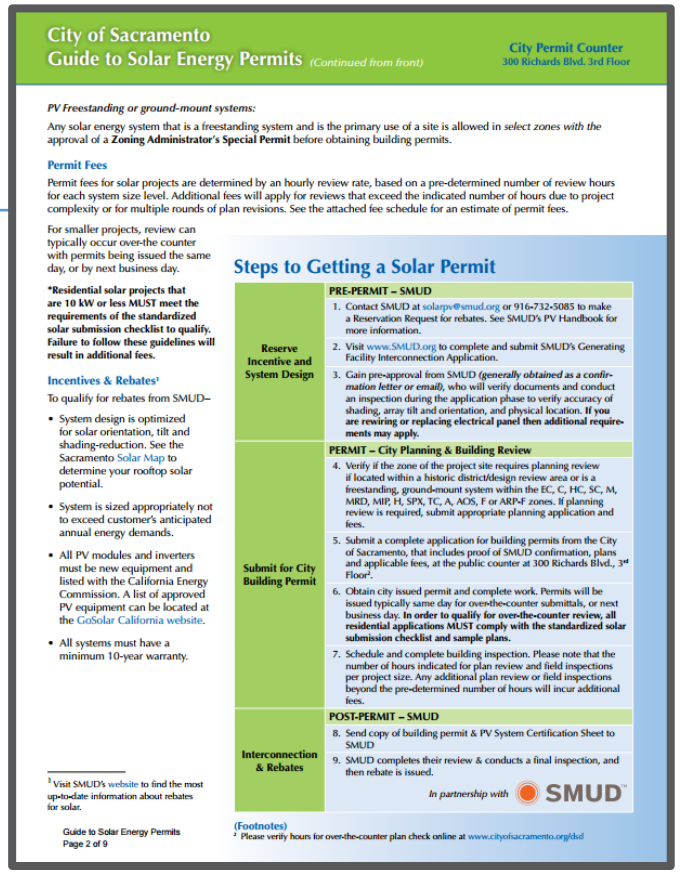

City of Sacramento
Guide to Solar Energy Permits *(Continued from front)*

City Permit Counter
300 Richards Blvd. 3rd Floor

PV Freestanding or ground-mount systems:

Any solar energy system that is a freestanding system and is the primary use of a site is allowed in *select zones with the* approval of a **Zoning Administrator's Special Permit** before obtaining building permits.

Permit Fees

Permit fees for solar projects are determined by an hourly review rate, based on a pre-determined number of review hours for each system size level. Additional fees will apply for reviews that exceed the indicated number of hours due to project complexity or for multiple rounds of plan revisions. See the attached fee schedule for an estimate of permit fees.

For smaller projects, review can typically occur over-the counter with permits being issued the same day, or by next business day.

***Residential solar projects that are 10 kW or less MUST meet the requirements of the standardized solar submission checklist to qualify. Failure to follow these guidelines will result in additional fees.**

Incentives & Rebates[1]

To qualify for rebates from SMUD–

- System design is optimized for solar orientation, tilt and shading-reduction. See the Sacramento Solar Map to determine your rooftop solar potential.
- System is sized appropriately not to exceed customer's anticipated annual energy demands.
- All PV modules and inverters must be new equipment and listed with the California Energy Commission. A list of approved PV equipment can be located at the GoSolar California website.
- All systems must have a minimum 10-year warranty.

[1] Visit SMUD's website to find the most up-to-date information about rebates for solar.

Guide to Solar Energy Permits
Page 2 of 9

Steps to Getting a Solar Permit

Reserve Incentive and System Design	**PRE-PERMIT – SMUD** 1. Contact SMUD at solarpv@smud.org or 916-732-5085 to make a Reservation Request for rebates. See SMUD's PV Handbook for more information. 2. Visit www.SMUD.org to complete and submit SMUD's Generating Facility Interconnection Application. 3. Gain pre-approval from SMUD *(generally obtained as a confirmation letter or email)*, who will verify documents and conduct an inspection during the application phase to verify accuracy of shading, array tilt and orientation, and physical location. **If you are rewiring or replacing electrical panel then additional requirements may apply.**
Submit for City Building Permit	**PERMIT – City Planning & Building Review** 4. Verify if the zone of the project site requires planning review if located within a historic districtdesign review area or is a freestanding, ground-mount system within the EC, C, HC, SC, M, MRD, MIP, H, SPX, TC, A, AOS, F or ARP-F zones. If planning review is required, submit appropriate planning application and fees. 5. Submit a complete application for building permits from the City of Sacramento, that includes proof of SMUD confirmation, plans and applicable fees, at the public counter at 300 Richards Blvd., 3rd Floor[2]. 6. Obtain city issued permit and complete work. Permits will be issued typically same day for over-the-counter submittals, or next business day. **In order to qualify for over-the-counter review, all residential applications MUST comply with the standardized solar submission checklist and sample plans.** 7. Schedule and complete building inspection. Please note that the number of hours indicated for plan review and field inspections per project size. Any additional plan review or field inspections beyond the pre-determined number of hours will incur additional fees.
Interconnection & Rebates	**POST-PERMIT – SMUD** 8. Send copy of building permit & PV System Certification Sheet to SMUD 9. SMUD completes their review & conducts a final inspection, and then rebate is issued.

In partnership with SMUD

(Footnotes)
[2] Please verify hours for over-the-counter plan check online at www.cityofsacramento.org/dsd

Path to SolSmart Bronze

STEP 2: Earn 20 points in the Permitting category.

- ✓ Require no more than one application form for a residential rooftop PV project. (5 PTS)
- ✓ Review solar permit fees for residential and commercial solar. (5 PTS)
- ✓ **Train fire and safety staff on solar PV. (10 PTS)**

OR

- ❑ Review permitting process for efficiency improvements and reduce processing time to 10 days or fewer. **(10 PTS)**
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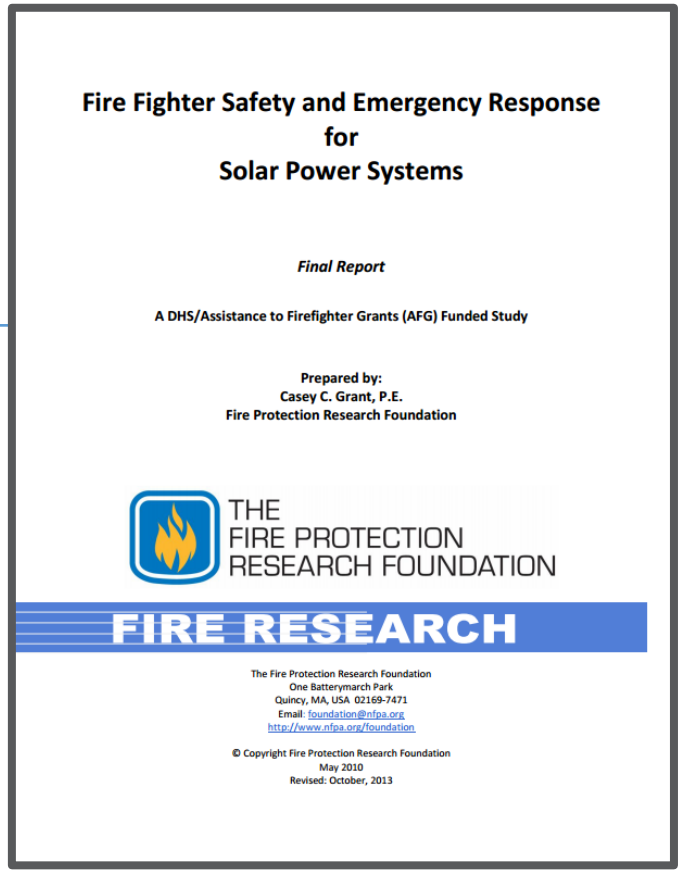
Fire Fighter Safety and Emergency Response
for
Solar Power Systems

Final Report

A DHS/Assistance to Firefighter Grants (AFG) Funded Study

Prepared by:
Casey C. Grant, P.E.
Fire Protection Research Foundation

THE
FIRE PROTECTION
RESEARCH FOUNDATION

FIRE RESEARCH

The Fire Protection Research Foundation
One Batterymarch Park
Quincy, MA, USA 02169-7471
Email: foundation@nfpa.org
http://www.nfpa.org/foundation

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May 2010
Revised: October, 2013

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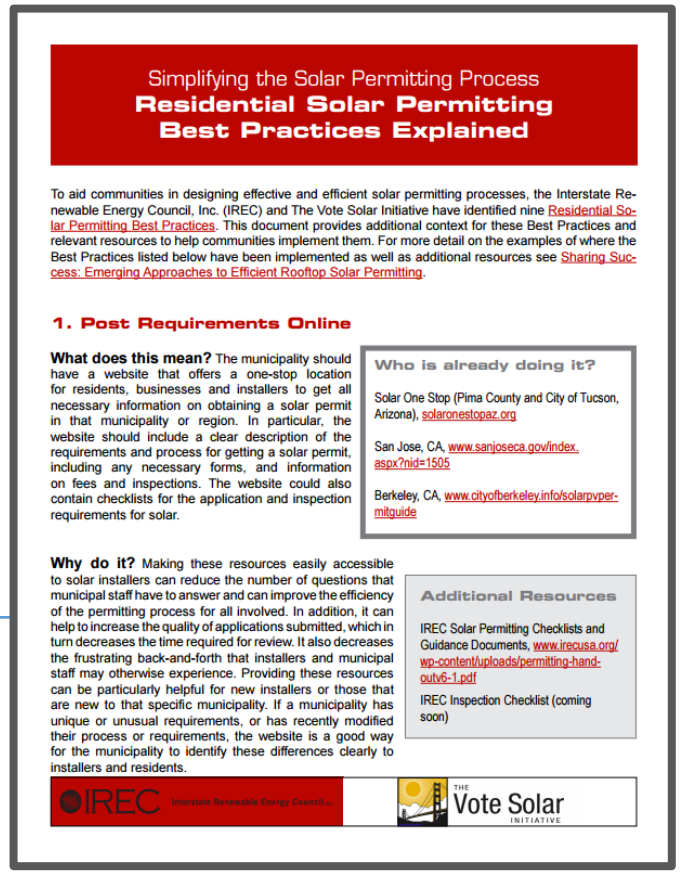

Simplifying the Solar Permitting Process

Residential Solar Permitting Best Practices Explained

To aid communities in designing effective and efficient solar permitting processes, the Interstate Renewable Energy Council, Inc. (IREC) and The Vote Solar Initiative have identified nine Residential Solar Permitting Best Practices. This document provides additional context for these Best Practices and relevant resources to help communities implement them. For more detail on the examples of where the Best Practices listed below have been implemented as well as additional resources see Sharing Success: Emerging Approaches to Efficient Rooftop Solar Permitting.

1. Post Requirements Online

What does this mean? The municipality should have a website that offers a one-stop location for residents, businesses and installers to get all necessary information on obtaining a solar permit in that municipality or region. In particular, the website should include a clear description of the requirements and process for getting a solar permit, including any necessary forms, and information on fees and inspections. The website could also contain checklists for the application and inspection requirements for solar.

Who is already doing it?

Solar One Stop (Pima County and City of Tucson, Arizona), solaronestopaz.org

San Jose, CA, www.sanjoseca.gov/index.aspx?nid=1505

Berkeley, CA, www.cityofberkeley.info/solarpvpermitguide

Why do it? Making these resources easily accessible to solar installers can reduce the number of questions that municipal staff have to answer and can improve the efficiency of the permitting process for all involved. In addition, it can help to increase the quality of applications submitted, which in turn decreases the time required for review. It also decreases the frustrating back-and-forth that installers and municipal staff may otherwise experience. Providing these resources can be particularly helpful for new installers or those that are new to that specific municipality. If a municipality has unique or unusual requirements, or has recently modified their process or requirements, the website is a good way for the municipality to identify these differences clearly to installers and residents.

Additional Resources

IREC Solar Permitting Checklists and Guidance Documents, www.irecusa.org/wp-content/uploads/permitting-hand-outv6-1.pdf

IREC Inspection Checklist (coming soon)

IREC Interstate Renewable Energy Council, Inc. | The Vote Solar Initiative

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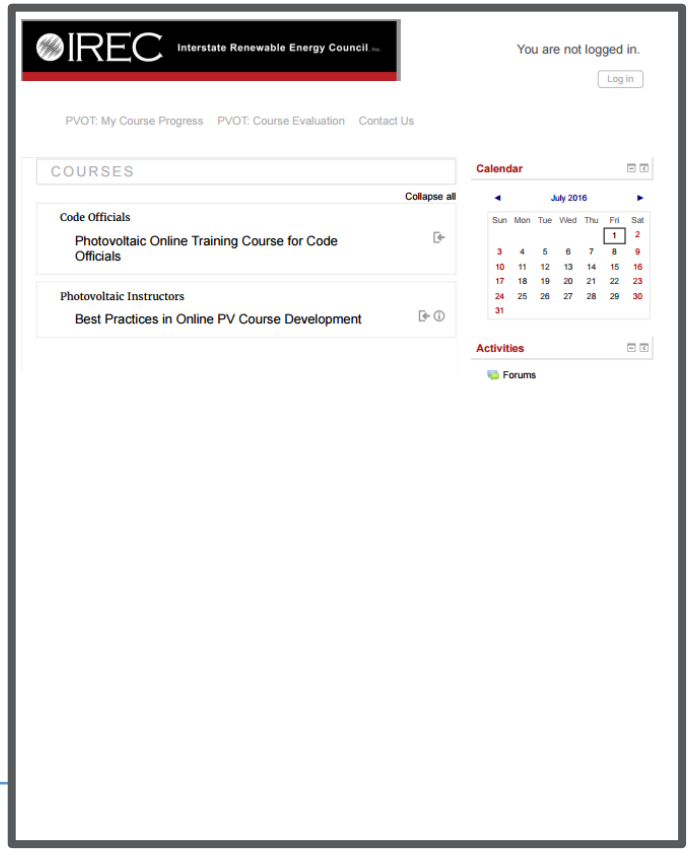

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Path to SolSmart Bronze

STEP 3: Earn 20 points in the PLANNING, zoning, and development regulations category.

- ✓ **Provide clear guidance for solar in historic and special-use districts. (10 PTS)**
- ❑ Include considerations for active and passive solar in development regulations (e.g. providing guidance for orientation of structures in subdivision regulations). **(10 PTS)**

OR

- ❑ Allow solar by-right and as an accessory use in all major zones, and implement any zoning ordinance adjustments identified through the zoning review to improve solar-friendliness. **(20 PTS, SILVER+GOLD PREREQ.)**

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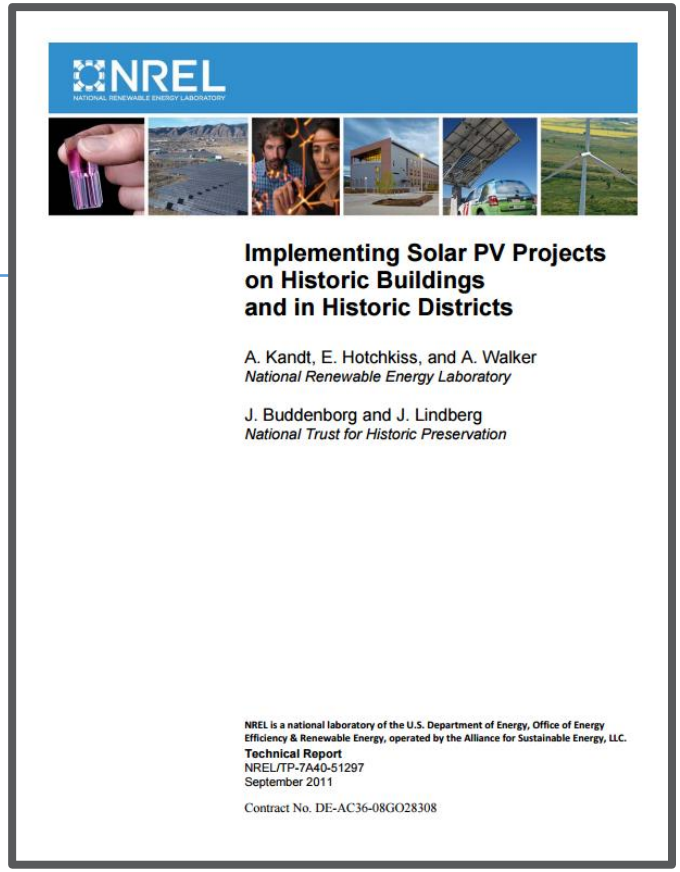
NREL
NATIONAL RENEWABLE ENERGY LABORATORY

Implementing Solar PV Projects on Historic Buildings and in Historic Districts

A. Kandt, E. Hotchkiss, and A. Walker
National Renewable Energy Laboratory

J. Buddenborg and J. Lindberg
National Trust for Historic Preservation

NREL is a national laboratory of the U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy, operated by the Alliance for Sustainable Energy, LLC.
Technical Report
NREL/TP-7A40-51297
September 2011

Contract No. DE-AC36-08GO28308

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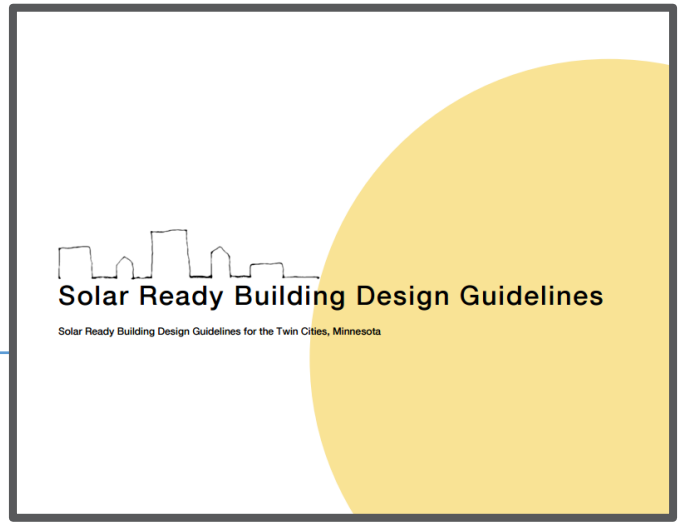

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Path to SolSmart Bronze

STEP 4: Earn 20 points in SPECIAL FOCUS categories.

- ✓ **Create a solar landing page on local government website with goals and local resources for solar development. (10 PTS)**
- ❑ Discuss community or shared solar programs with the local utility. **(U-2: 10 PTS)**

OR

- ❑ Provide consumer protection resources on solar. **(5 PTS)**
- ❑ Make inspection requirements for PV available online. **(10 PTS)**
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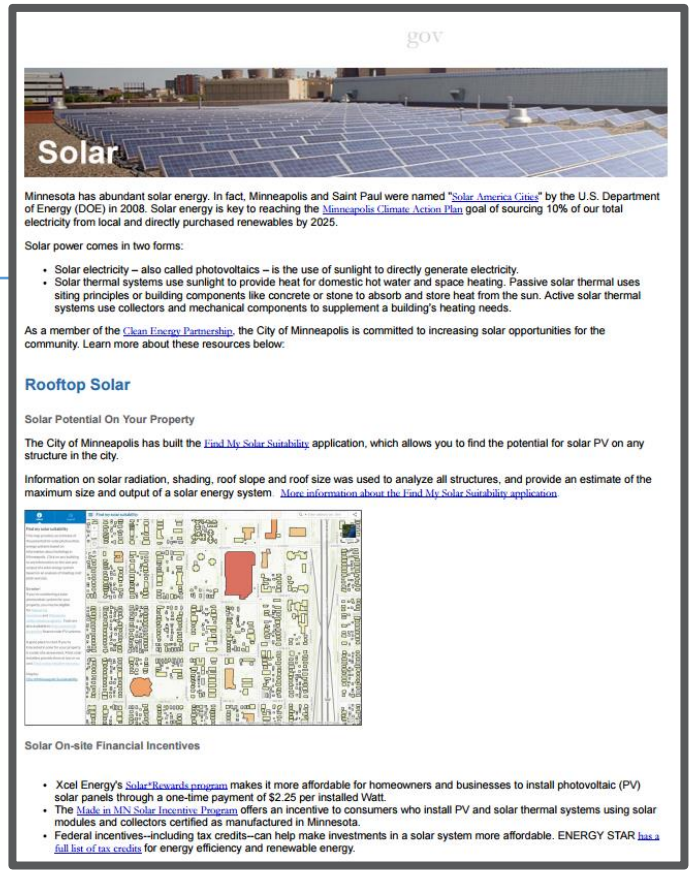

gov

Solar

Minnesota has abundant solar energy. In fact, Minneapolis and Saint Paul were named "Solar America Cities" by the U.S. Department of Energy (DOE) in 2008. Solar energy is key to reaching the Minneapolis Climate Action Plan goal of sourcing 10% of our total electricity from local and directly purchased renewables by 2025.

Solar power comes in two forms:

- Solar electricity – also called photovoltaics – is the use of sunlight to directly generate electricity.
- Solar thermal systems use sunlight to provide heat for domestic hot water and space heating. Passive solar thermal uses siting principles or building components like concrete or stone to absorb and store heat from the sun. Active solar thermal systems use collectors and mechanical components to supplement a building's heating needs.

As a member of the Clean Energy Partnership, the City of Minneapolis is committed to increasing solar opportunities for the community. Learn more about these resources below:

Rooftop Solar

Solar Potential On Your Property

The City of Minneapolis has built the Find My Solar Suitability application, which allows you to find the potential for solar PV on any structure in the city.

Information on solar radiation, shading, roof slope and roof size was used to analyze all structures, and provide an estimate of the maximum size and output of a solar energy system. More information about the Find My Solar Suitability application.

Solar On-site Financial Incentives

- Xcel Energy's Solar*Rewards program makes it more affordable for homeowners and businesses to install photovoltaic (PV) solar panels through a one-time payment of $2.25 per installed Watt.
- The Made in MN Solar Incentive Program offers an incentive to consumers who install PV and solar thermal systems using solar modules and collectors certified as manufactured in Minnesota.
- Federal incentives--including tax credits--can help make investments in a solar system more affordable. ENERGY STAR has a full list of tax credits for energy efficiency and renewable energy.

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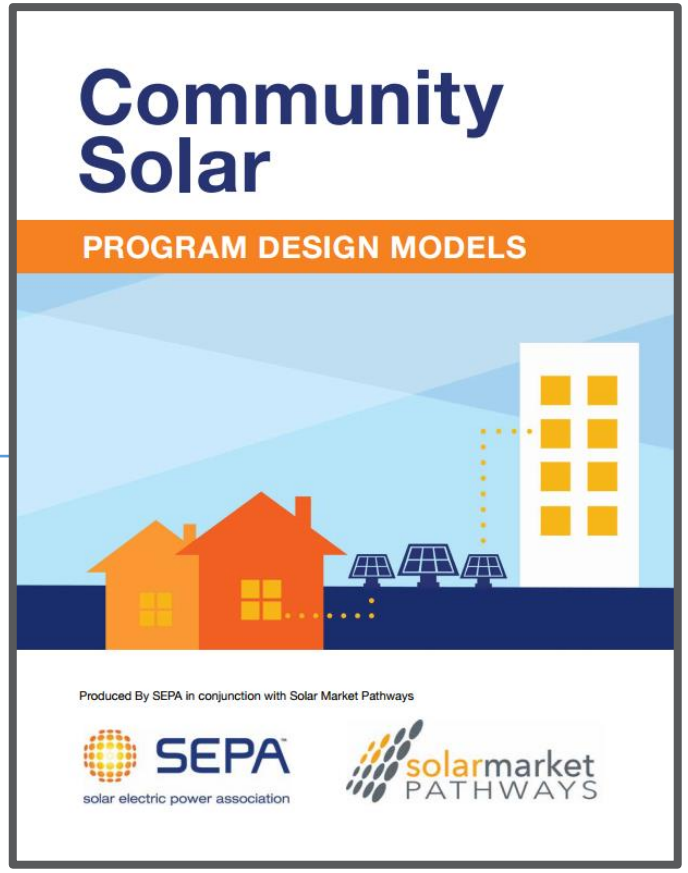

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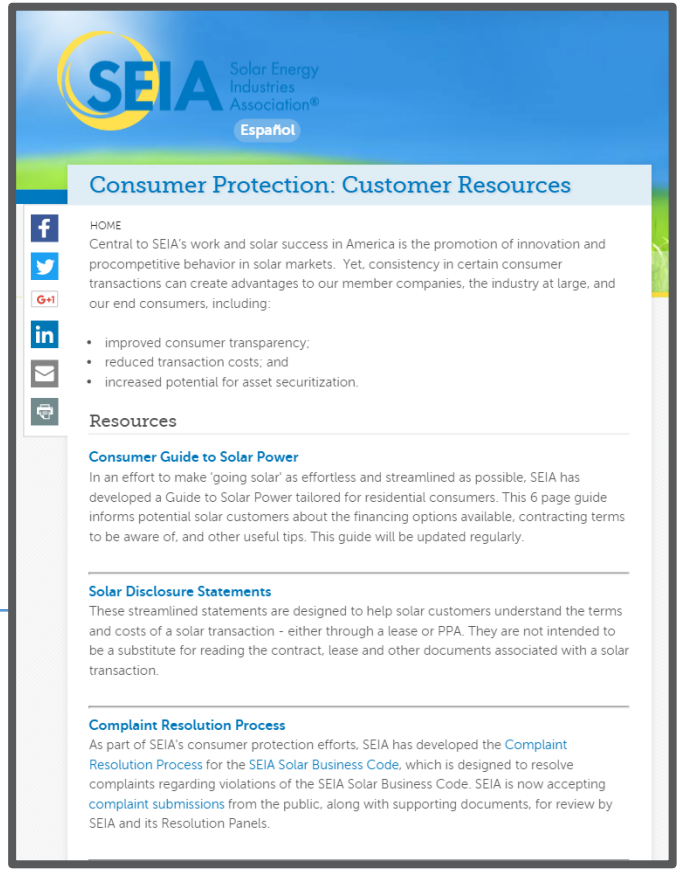

SEIA Solar Energy Industries Association®

Español

Consumer Protection: Customer Resources

HOME

Central to SEIA's work and solar success in America is the promotion of innovation and procompetitive behavior in solar markets. Yet, consistency in certain consumer transactions can create advantages to our member companies, the industry at large, and our end consumers, including:

- improved consumer transparency;
- reduced transaction costs; and
- increased potential for asset securitization.

Resources

Consumer Guide to Solar Power

In an effort to make 'going solar' as effortless and streamlined as possible, SEIA has developed a Guide to Solar Power tailored for residential consumers. This 6 page guide informs potential solar customers about the financing options available, contracting terms to be aware of, and other useful tips. This guide will be updated regularly.

Solar Disclosure Statements

These streamlined statements are designed to help solar customers understand the terms and costs of a solar transaction - either through a lease or PPA. They are not intended to be a substitute for reading the contract, lease and other documents associated with a solar transaction.

Complaint Resolution Process

As part of SEIA's consumer protection efforts, SEIA has developed the Complaint Resolution Process for the SEIA Solar Business Code, which is designed to resolve complaints regarding violations of the SEIA Solar Business Code. SEIA is now accepting complaint submissions from the public, along with supporting documents, for review by SEIA and its Resolution Panels.

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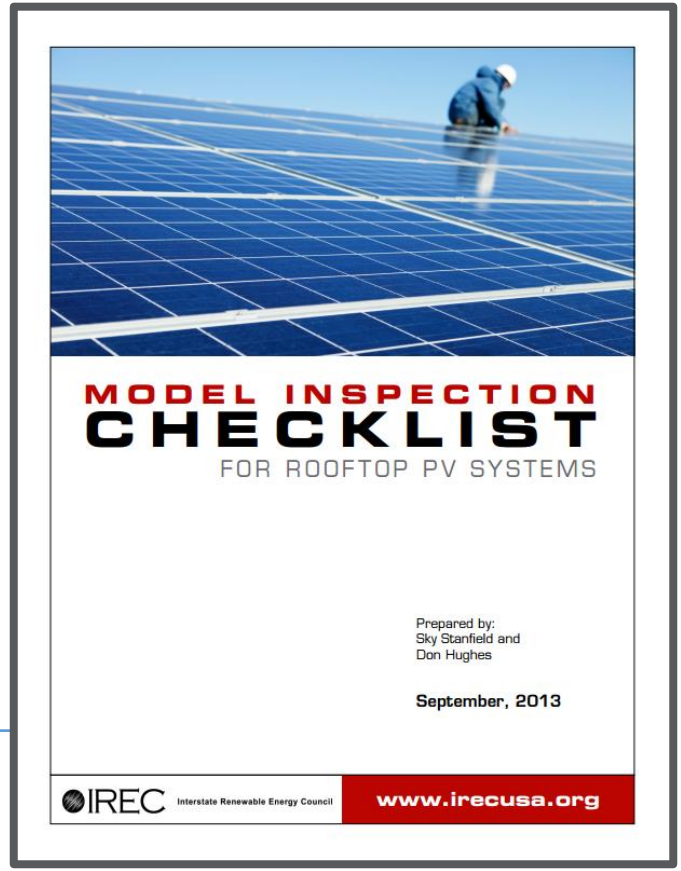

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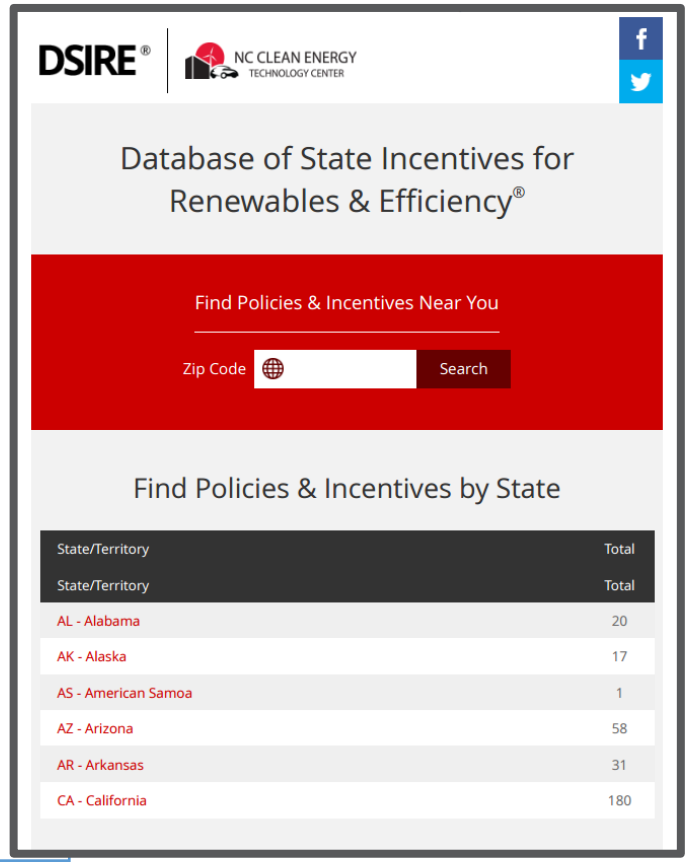

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Path to SolSmart Bronze

- ✓ **STEP 1**: Cut critical red tape via prerequisites.
- ✓ **STEP 2**: Earn 20 points in the Permitting category.
- ✓ **STEP 3**: Earn 20 points in the Planning, Zoning, and Development Regulations category.
- ✓ **STEP 4**: Earn 20 points across any of the six “Special Focus” categories.

The first 35 SolSmart designees receive a decorative SolSmart panel to display in a public building!

Questions?

g

SOLSMART COUNTY CHALLENGE

NATIONAL ASSOCIATION of COUNTIES NACo

SOLSMART COUNTY CHALLENGE

- **1st Place:** *Charleston County, South Carolina*

- **2nd Place:** *Inyo County, California*

Charleston County, S.C.

- *"Solar Power is a great example of how Charleston County strives to be on the cutting edge of providing the best to our citizens. This award is an excellent opportunity to shine a light on our efforts to provide our citizens, businesses, and industry the best support and tools they need to invest in solar power."*
  -- Charleston County Council Chairman Elliott Summey.

NEW NACo Resilient Counties Webinar!

- ***Energizing Counties: Strategies and Tools to Improve Your County's Energy Efficiency***
  - ***December 1, 2pm-3:15pmEastern***
  - ***http://www.naco.org/events/energizing-counties-strategies-and-tools-improve-your-county%E2%80%99s-energy-efficiency***

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