Solar Action Webinar Series:
Innovation and Solar Permitting and Inspections
June 26, 2013

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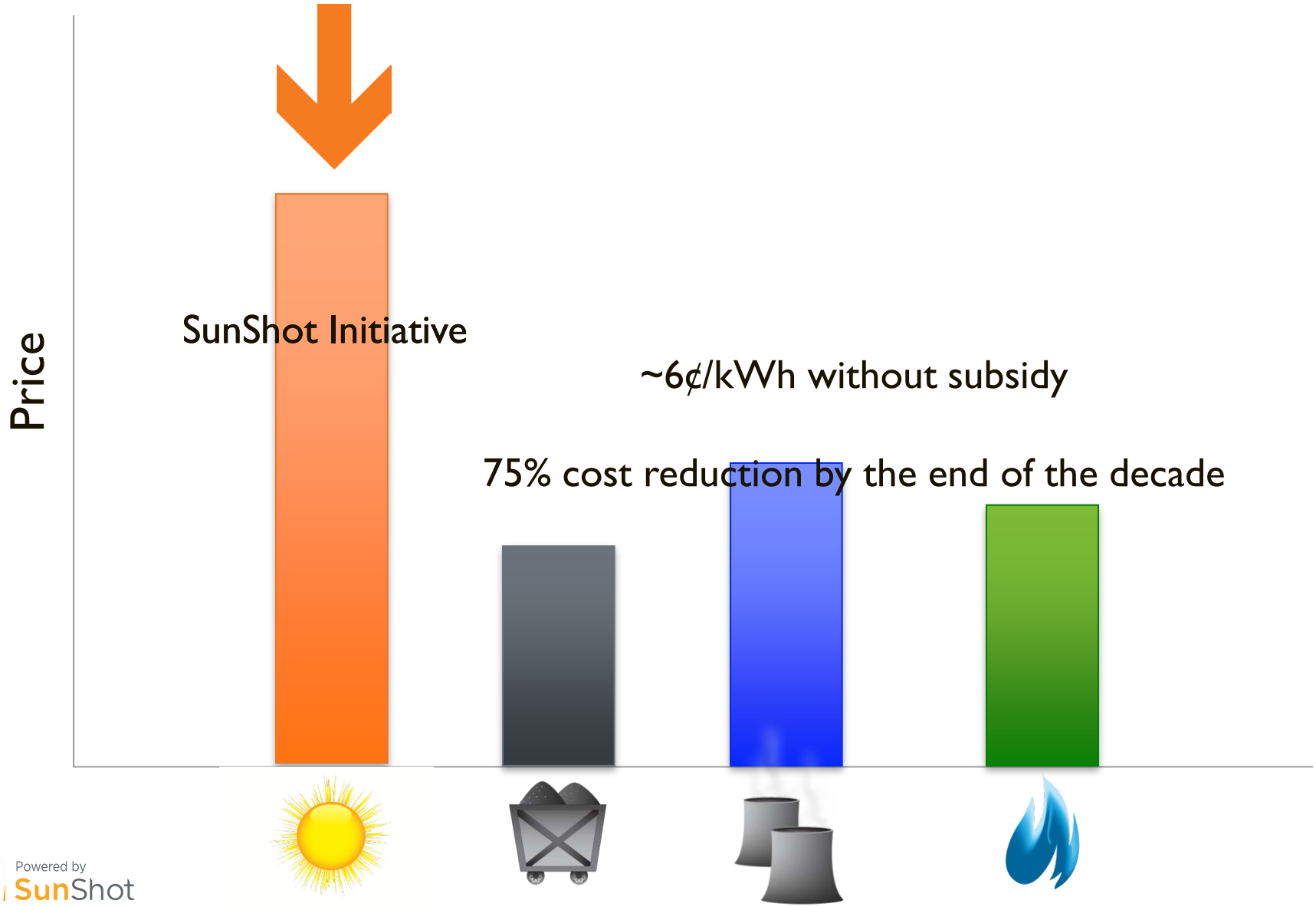
Why We're Here: The Big Picture



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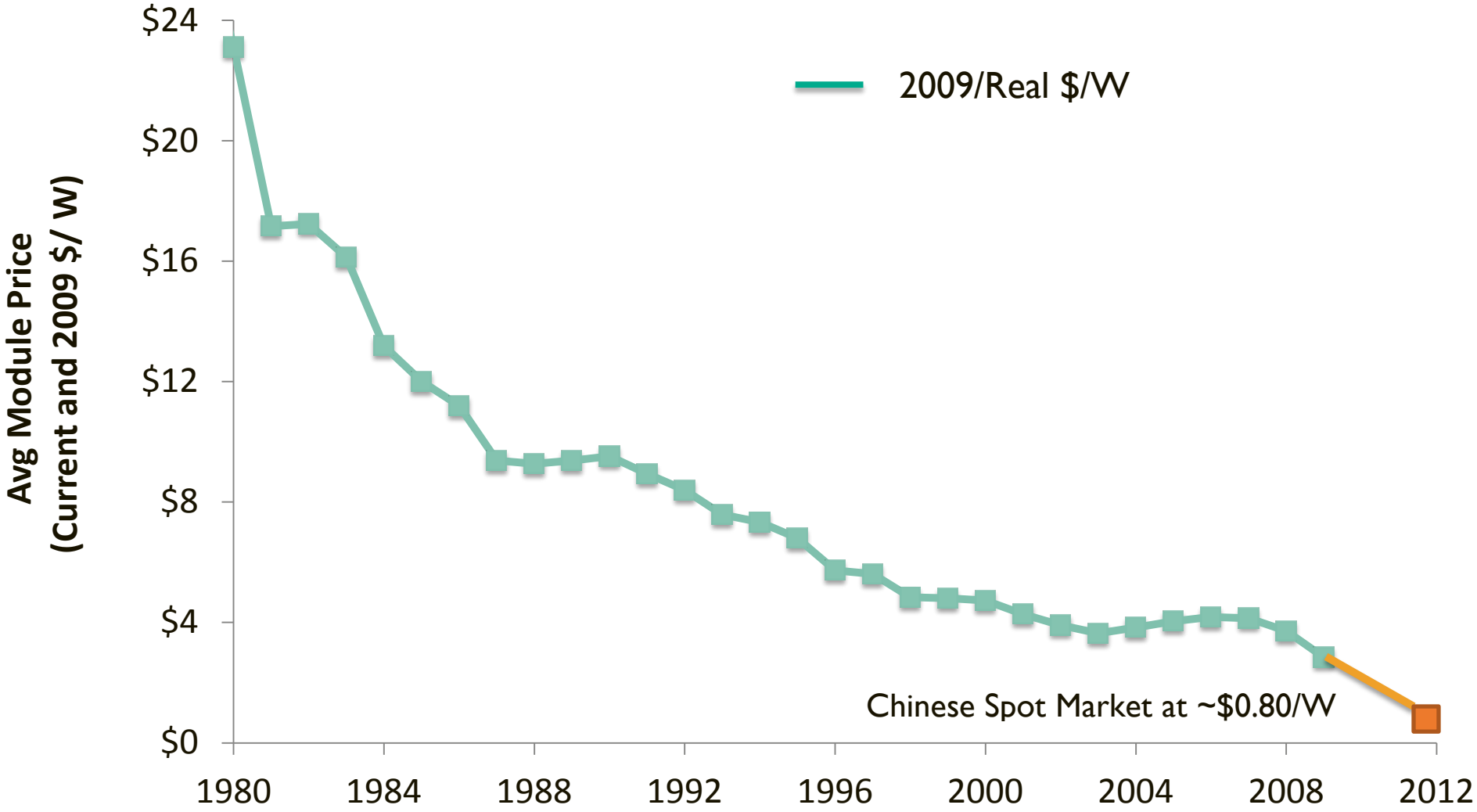
Panel Prices Plummeted



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Source: Mints, P. (2011). *Photovoltaic Manufacturer Shipments, Capacity, & Competitive Analysis 20010/2011*. Report # NPS-Supply6. Palo Alto, CA: Navigant Consulting Photovoltaic Service Program.

However…

"Even if you paid nothing for the hardware, you'd still pay thousands of dollars to install a residential solar power system."

- Former Secretary Chu

What is SunShot Targeting?

Soft Costs

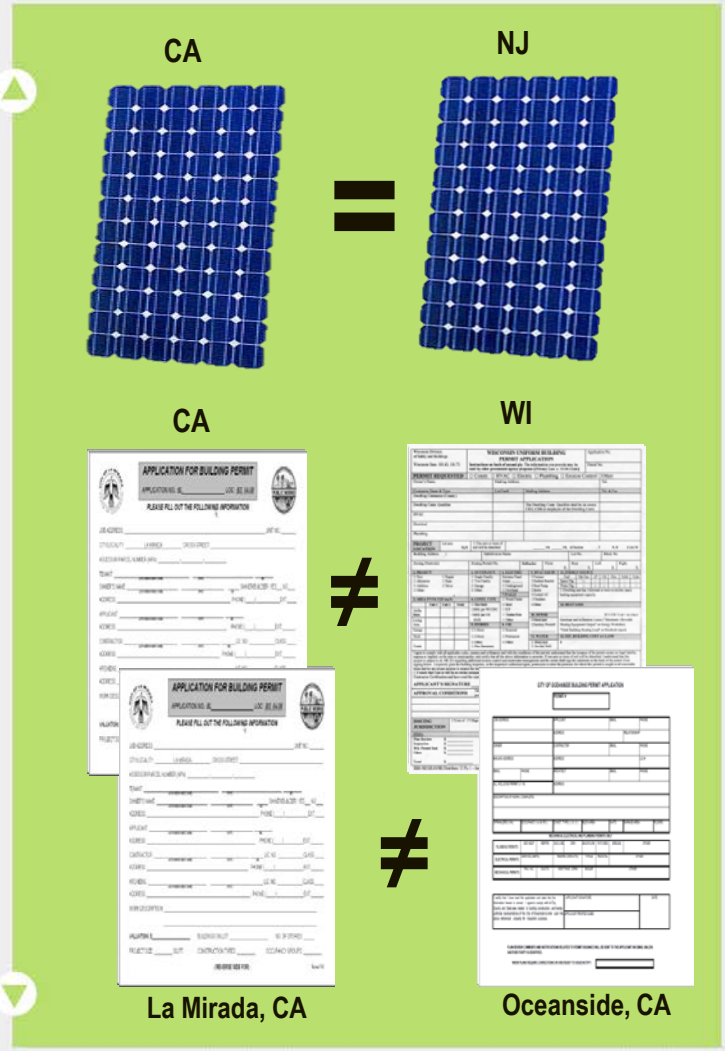
=

Up to **50%** of the cost of a solar installation

A Fragmented Marketplace

The Problem:

- 18,000+ local jurisdictions with authority over PV permitting requirements, land use codes and zoning ordinances
- 5,000+ utilities implementing interconnection standards and net metering programs
- 50 states developing interconnection standards and net metering rules



Southeast
12,500,000 People

Midwest
5,000,000 People

47M TOTAL

Northeast
10,200,000 People

Southwest
20,500,000 People

Northwest
790,000 People

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Rooftop Solar Challenge Successes

Permitting

- 40% Faster
- 12% Cheaper

Overall Time Saved: One Week Per Install

What Does One Week of Time Mean?

PV Installed in RSC locales:

Residential: 225 MW

Commercial: 357 MW

37,960 Residential Systems

3,148 Commercial Systems

Average Business Days Saved Per Install = 5.1

Average Business Days Saved Per Install = 4.1

Which means the RSC saved Americans from an estimated…

792 YEARS OF RED TAPE

Growing Solar Friendly Communities

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Public-Private Partnership: Cities, Counties, Nonprofits, & Industry

- An innovative partnership launched to address ‘soft costs’ in 2012 as part of DOE SunShot’s Rooftop Solar Challenge
- Goal: to make it easier, faster and more affordable for citizens to go solar
- Involves cities, counties, industry, non-profits
- Focused on best practices & education
- Helps local governments prepare for the rapid increase in citizens who want to go solar
- Recognition for local governments who take steps

SOLAR FRIENDLY COMMUNITIES

Solar Friendly Communities Offers Benefits to Local Governments

- An easy-to-follow roadmap of Best Practices
- Individual outreach, education, coaching
- A menu of options giving choice to local communities
- Recognition as a Solar Friendly Community with a relatively low entry bar. Includes road sign, plaque, media attention, public ceremony
- Eligibility for residents to get $500 discounts

Denver and Aurora Recognition: First of 8 Communities So Far

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Four Levels of Recognition for Adopting Best Practices

Earn enough points to win designation as a Solar Friendly Community

Designation	Points Required
Bronze	700
Silver	900
Gold	1100
Platinum	1400

The program is flexible and allows participation by both **large** and **small** jurisdictions

12 Best Practices: A Roadmap to a Solar Friendly Community

Take a trip on the roadmap! Click on each wedge to learn more.

1. Provide a checklist of all permitting requirements in a single location (275 Points)

Reasoning

Hosting up to date solar requirements in a single online location is one of the simplest, easiest ways to make sure installers and customers submit the right information on the right forms the first time. This will save everyone involved in the process time and money.

Example

The cities of Philadelphia of Denver offer simple and easy to use permitting checklists that represent different approaches to this best practice.

How to make it happen

Check out the permitting checklists online. Then, see where your current solar-related documentation is hosted and map out the different web pages, if applicable. Talk to your community's webmaster about consolidating the information.

2. Offer a standard permit form that is eligible for streamlined review (275 Points)

Reasoning

Permitting processes can add time and money to the installation of solar PV. By standardizing solar permitting, jurisdictions can streamline and expedite the process.

Example

Solar ABC's Expedited Permit Process for PV Systems provides a national standard of procedures developed by industry experts.

How to make it happen

Check out Solar ABCs on the SFC website and see how it compares to your existing permitting process. If not possible, designate one primary point of contact for installers for standard permits.

3. Offer electronic or over-the-counter submittal and review options for standard systems (150 points)

Reasoning

Electronic or over-the-counter submittal procedures can significantly cut down the time necessary for approval of permits, freeing up time for departments and installers.

Example

Santa Clara offers over the counter permitting, enabling installers to walk in with an application and walk out with approval in one visit.

How to make it happen

Initially, designate a point of contact who is well versed in PV permitting that will be able to turn around approvals or denials in a timely fashion. At the very least, authorize plan checkers to electronically communicate with contractors if an issue comes up.

4. Issue permits within a specified timeframe (100 points)

Reasoning

If a jurisdiction establishes and states a timeframe for permitting application decisions, installers have a better opportunity to plan their projects. This frees up time and enables installers to clearly communicate project timelines with customers.

Example

For a project that meets established criteria, the City of Philadelphia will issue an over-the-counter permit. In special cases, a standard permit will be issued with a 20-day approval timeline.

How to make it happen

Strive to issue permits the same day or within three days of application submittal. If this is not possible, state a firm policy on how long permits will take on your jurisdiction's permitting website.

5. Charge actual costs for permits and inspections with a cap on the total (200 Points)

Reasoning

Fees and costs associated with permitting and inspecting solar PV can create significant barriers to adoption. In some cases, these costs do not reflect the actual time and work associated with the process. By capping the fees and/or charging actual costs, the economics of solar improve.

Example

In Sacramento, California, installers pay a graduated flat fee for all commercial and residential systems. In the year since the city started cutting solar fees, permits more than doubled.

How to make it happen

Understand the specifics of your jurisdiction's cost methodology for setting permitting and inspection fees. Some jurisdictions create exemptions for systems that meet standard engineering calculations.

6. Replace community-specific solar licenses, if required, with standard certification for installers (25 Points)

Reasoning

Community- specific solar licenses can add unnecessary bottlenecks. Replacing them with nationally accredited standards is simpler and helps establish a national standard of competency for the solar industry.

Example

The North American Board of Certified Energy Practitioners has established a national standard for solar installations.

How to make it happen

Learn about NABCEP certification by exploring the website. Consider allowing NABCEP certified installers to bypass unique certification and inspection requirements within your jurisdiction.

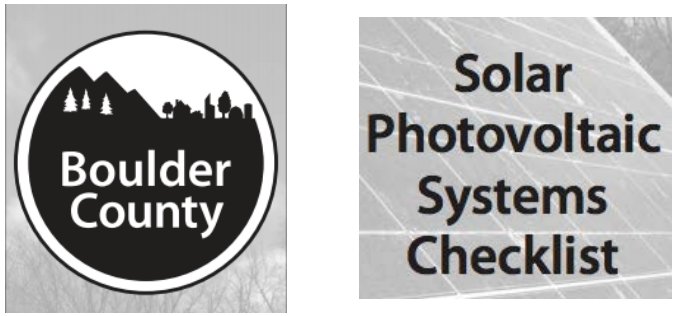
7. Provide inspection checklist that explains unique requirements beyond applicable codes (50 Points)

Reasoning

Some jurisdictions have unique priorities or interests that are not necessarily clarified by referring to adopted electric or building codes. Specifying these exceptional requirements upfront can help the jurisdiction avoid repeat inspections and allow installers to pass inspections more often.

Example

Boulder County's checklist for PV systems clearly states its requirements for rough inspections.



How to make it happen

Work with your building department to see if local inspection staff have any "unique" requirements or interpretations of existing code. Reach out to local installers for feedback to understand any confusion that exists and publish a checklist on the jurisdiction's website.

8. Specify a narrow time window for system inspection (75 Points)

Reasoning

Many communities have unpredictable timelines for when an inspector will come to a job site. That makes it hard for solar installers to plan their projects. By narrowing the window for a system inspection, installers can spend less time waiting on job sites—and that directly translates to cost savings.

Example

Denver has a two-hour inspection window, making the city one of the most efficient and timely for PV projects.

DENVER
THE MILE HIGH CITY

How to make it happen

Start the conversation with the building department and assess the current inspection window. Reach out to local solar contractors to see what's working well and what can be improved upon.

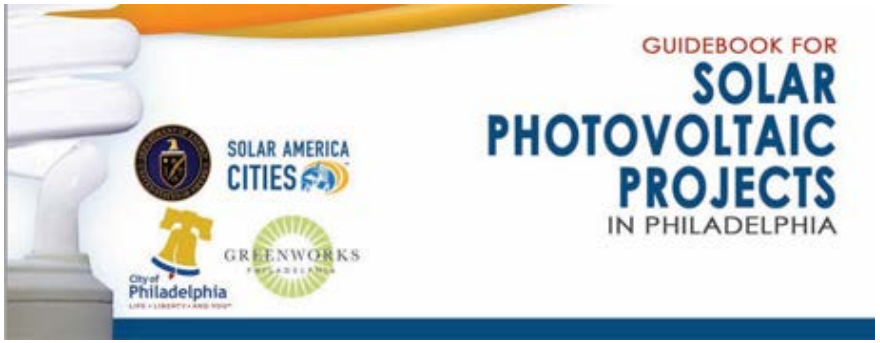
9. For efficiency, require only one inspection for standard rooftop systems on existing homes and businesses (100 points)

Reasoning

Multiple inspections add time to PV installations, requiring additional visits and hours on the the job site. Requiring a single inspection—rough or comprehensive—can significantly cut this time.

Example

The City of Philadelphia requires a single field inspection for residential projects.



How to make it happen

If your jurisdiction requires multiple inspections for a PV installation, reassess existing requirements and compare your jurisdiction to analogous communities with fewer requirements. Work with chief engineer and building officials to discuss feasibility of a single inspection.

10. Adopt ordinances that encourage distributed solar generation and protect solar rights and access including reasonable roof setback requirements (150 points)

Reasoning

Various policies can create a more favorable environment for solar PV. By implementing policies that allow installations and ensure access to solar access, fewer conflicts will emerge in the future.

Example

Fort Collins Colorado has developed an integrated approach to sustainability and solar programs .

How to make it happen

Work with the local sustainability office, historic preservation advocates, fire officials, and your urban forester to assess the feasibility of adopting policies that explicitly balance potentially competing community desires such as urban forestry, historic preservation and solar access.

11. Educate residents on solar energy by providing information on financing options and projected economic benefits (125 points)

Reasoning

Improving education and consumer awareness remains critical to the success of solar adoption. Many potential customers lack adequate information on the options available.

Example

The City of Santa Monica houses a best-in-class customer education website for interested residents. They also provide educational materials on financing options.

How to make it happen

Develop tools and resources for website to educate consumers on value of solar and options available. Also consider outreach events.

12. Track community solar development and provide tools showing solar access in your community (75 points)

Reasoning

Keeping tabs on solar installations helps communities track progress toward becoming a Solar Friendly Community, but it can also be used as an educational tool, showing momentum and potential to customers.

Example

Arizona has a state-wide program to track applications for solar installations.

SOLAR One Stop
southern arizona's connection to a solar energy future

How to make it happen

Work with your permitting office and utility to quantify solar installations and publicize them through communications channels, such as your website.

What's Next?

- Working on refinements to scale program nationally
- Expanding Solar Friendly Communities Discount Program
- Adjusting to make program applicable to wide variety of communities including small ones
- Discussing ways to align with similar efforts

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June 26, 2013

Broward County and Partners Go SOLAR

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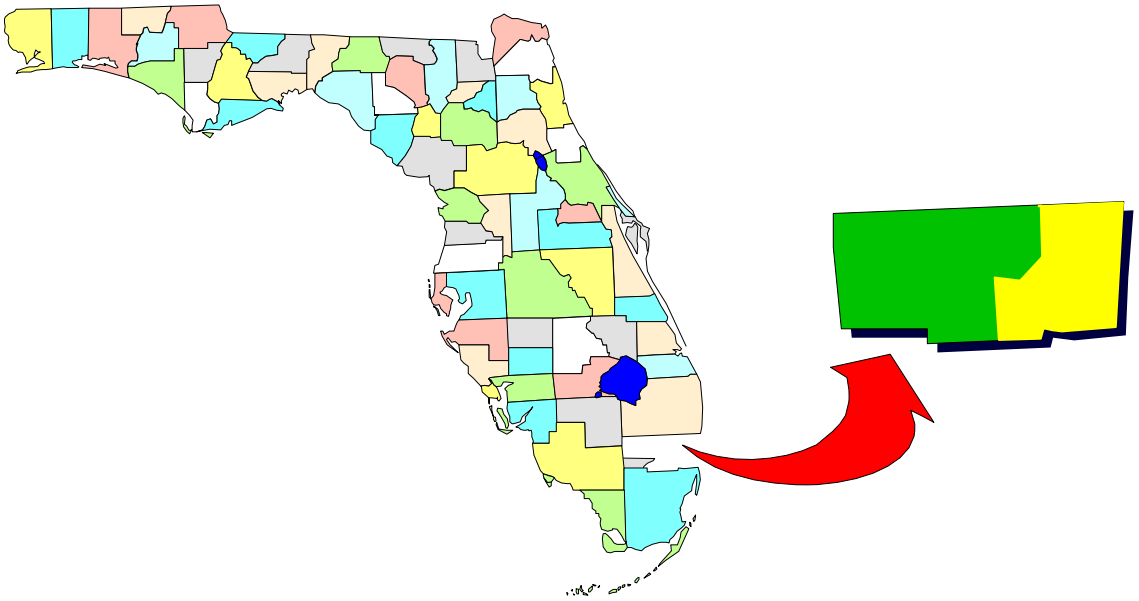
Partnership Emphasis

What is Go SOLAR?

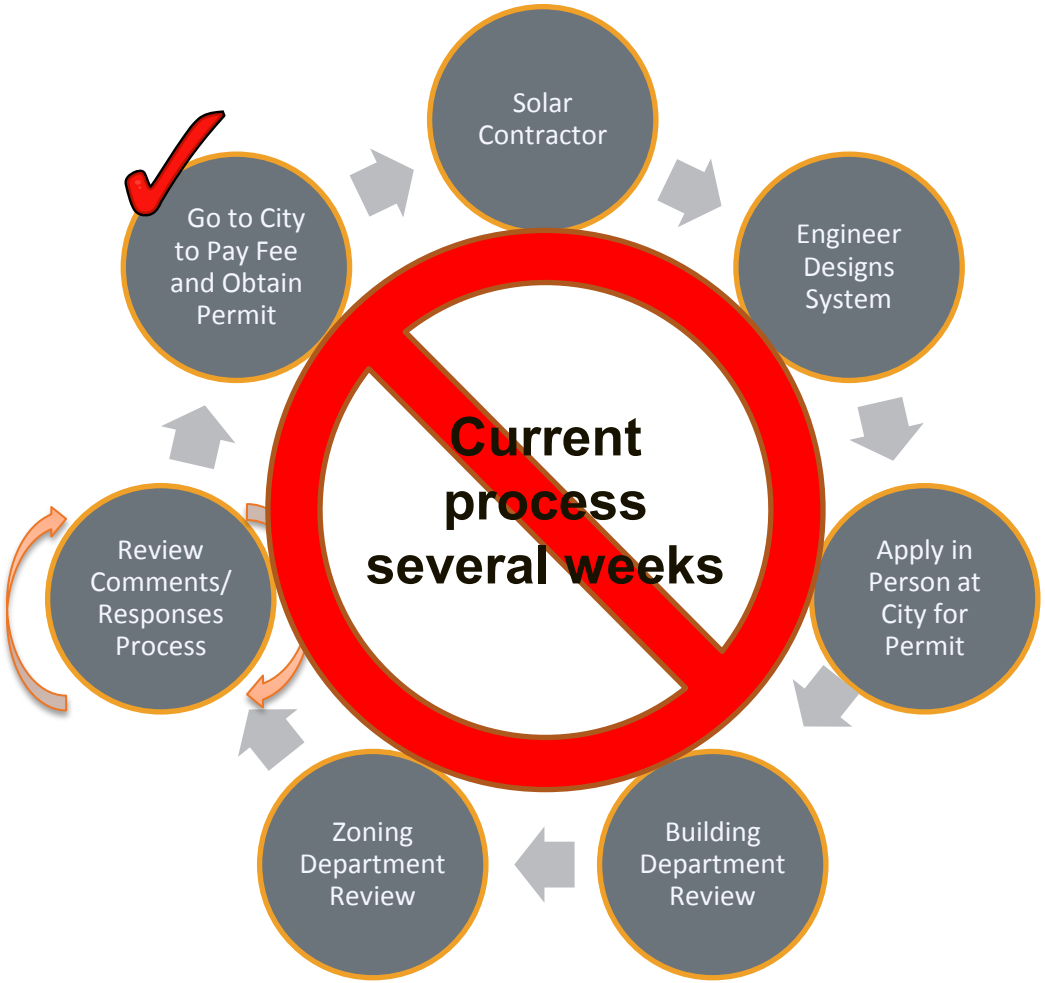
- Partnership between Broward County, Florida and 14 of its 31municipalities
- Create a fully electronic permitting system for rooftop solar photovoltaic installations

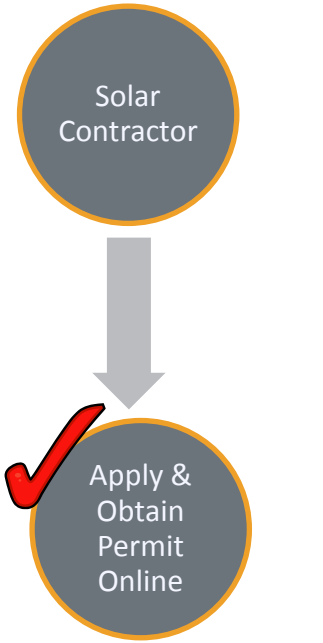


Go SOLAR Solution

- 1 Year to Implement
- WEB site used by all partners
- Access to selection of pre-approved design plans
  - Designed for majority of roof types in South Florida
- A single permit fee
- Immediate issuance of electronic permit
- Coordination of inspections with municipalities

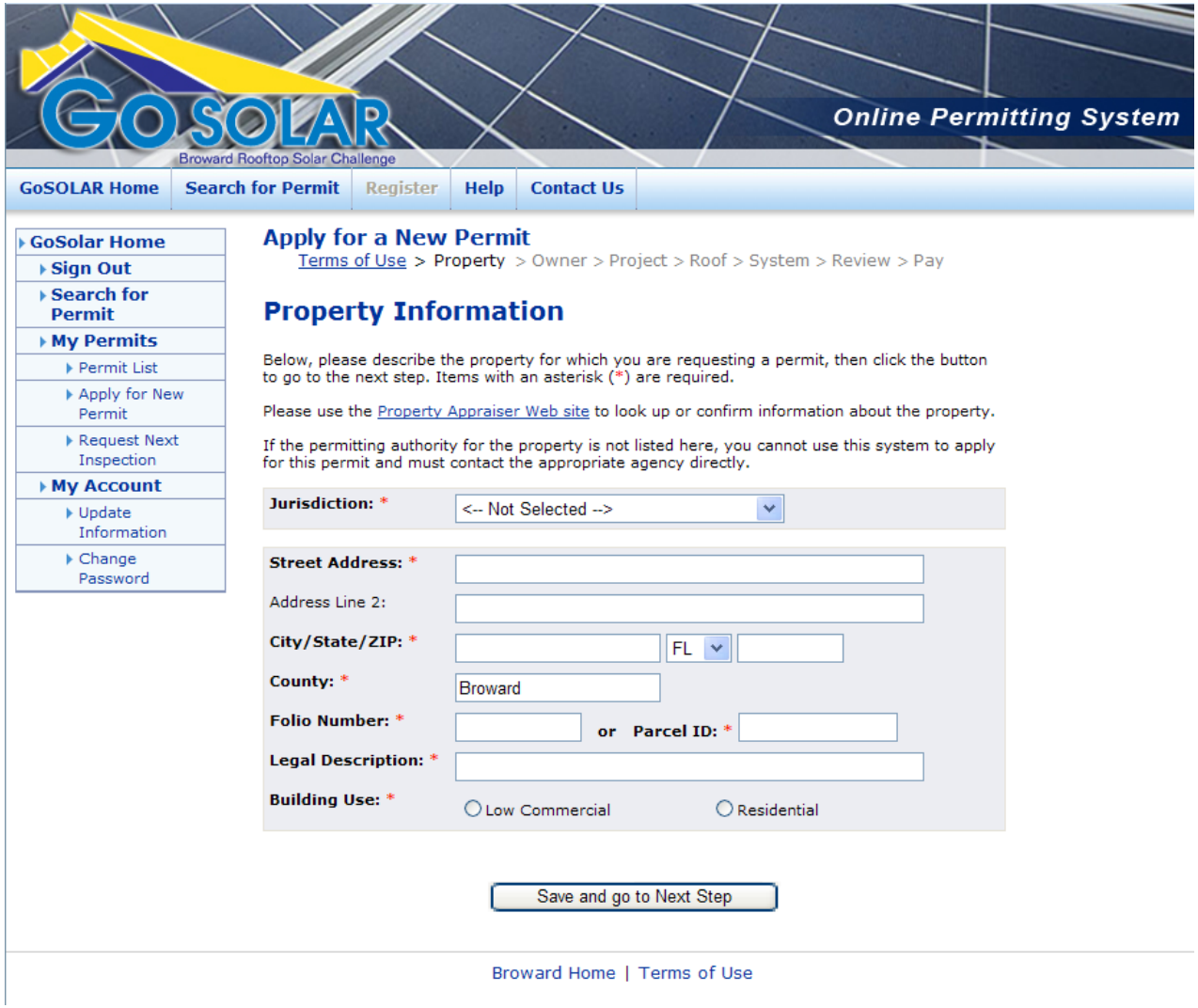
Go SOLAR Solution





Proposed Process
A Few Minutes

Go SOLAR Application



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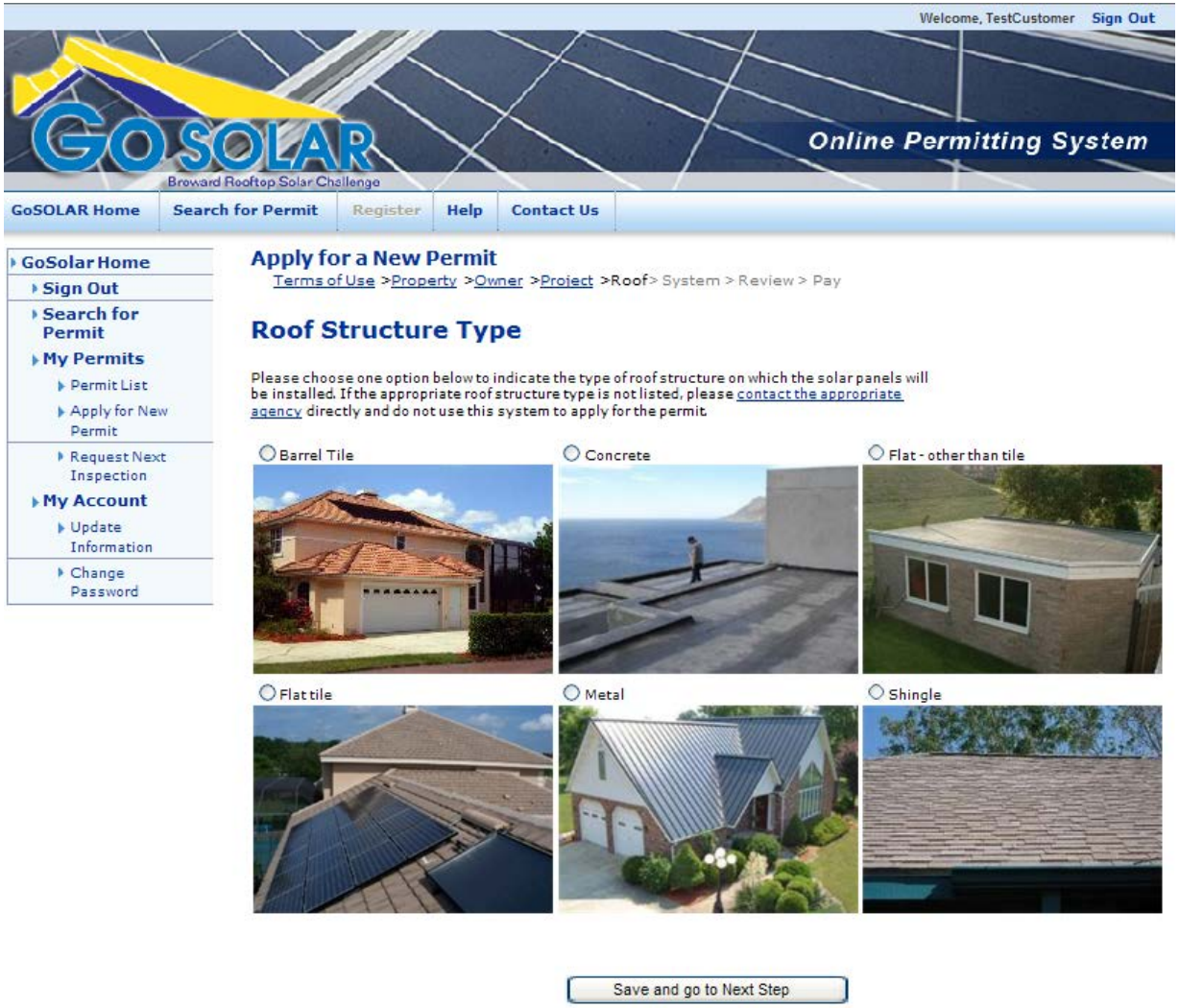
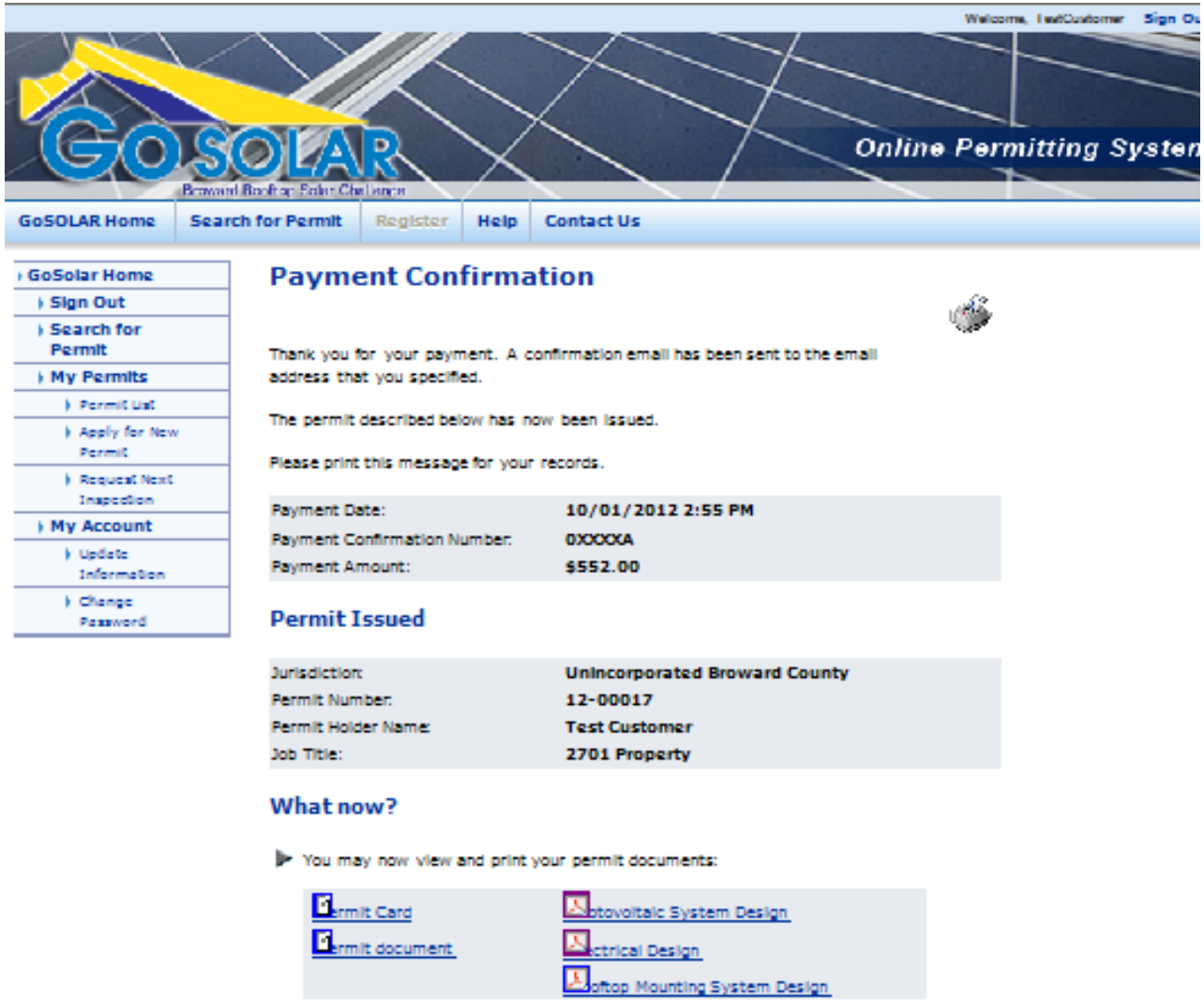
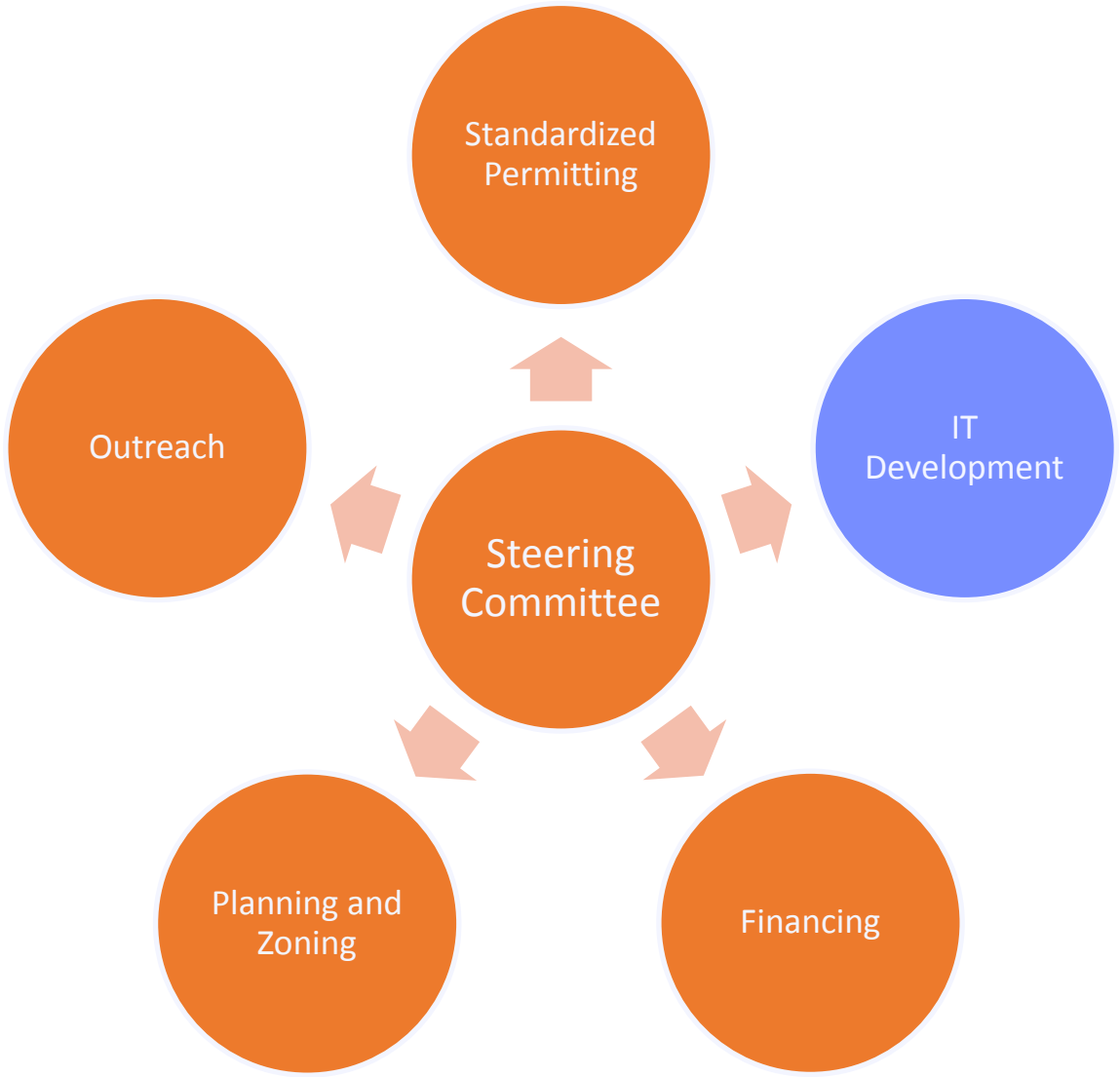
Go SOLAR Application



Go SOLAR Application



How We Did It


Standardized Permitting
IT Development
Financing
Planning and Zoning
Outreach
Steering Committee

How We Did It

www.broward.org/gogreen/gosolar

Permitting Improvements

	Pre-Go SOLAR	Go SOLAR
Cost for Developing Plans	$2,000	$0
Average Permitting Fee	$630	$552
Prepare and Route Permit	$200	$0
	$2,830	$552
	80% Reduction	
Time to Issue Permit	5.7 – 1.5 Days	1 hour
	92% Reduction	

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Rooftop Solar Challenge II Goals

- To build strong regional solar markets by rapidly deploying innovative, transformative, locally-generated solutions on a broad scale;
- To enable solar companies to more efficiently manage their labor, material and cash flows, and customer interactions by introducing process predictability and standardization at the local government level; and
- To increase affordability of residential and small-scale solar PV.

Rooftop Solar Challenge II Goals

- Additional Potential Partners
  - Alachua County
  - Orange County
  - Miami-Dade
  - Sarasota County
  - Monroe County
  - St. Lucie County

Lessons Learned

- Communication
  - Collaboration vs. time
  - Keeping partners engaged
- Time
- Going Rogue
- New technology time sinks
- Variety vs. Efficiency
- Free is good
- Training
- Value of a good idea
- Show me the money

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6/26/13

QUESTIONS