

American Solar Transformation Initiative Regional Kick-off Meeting

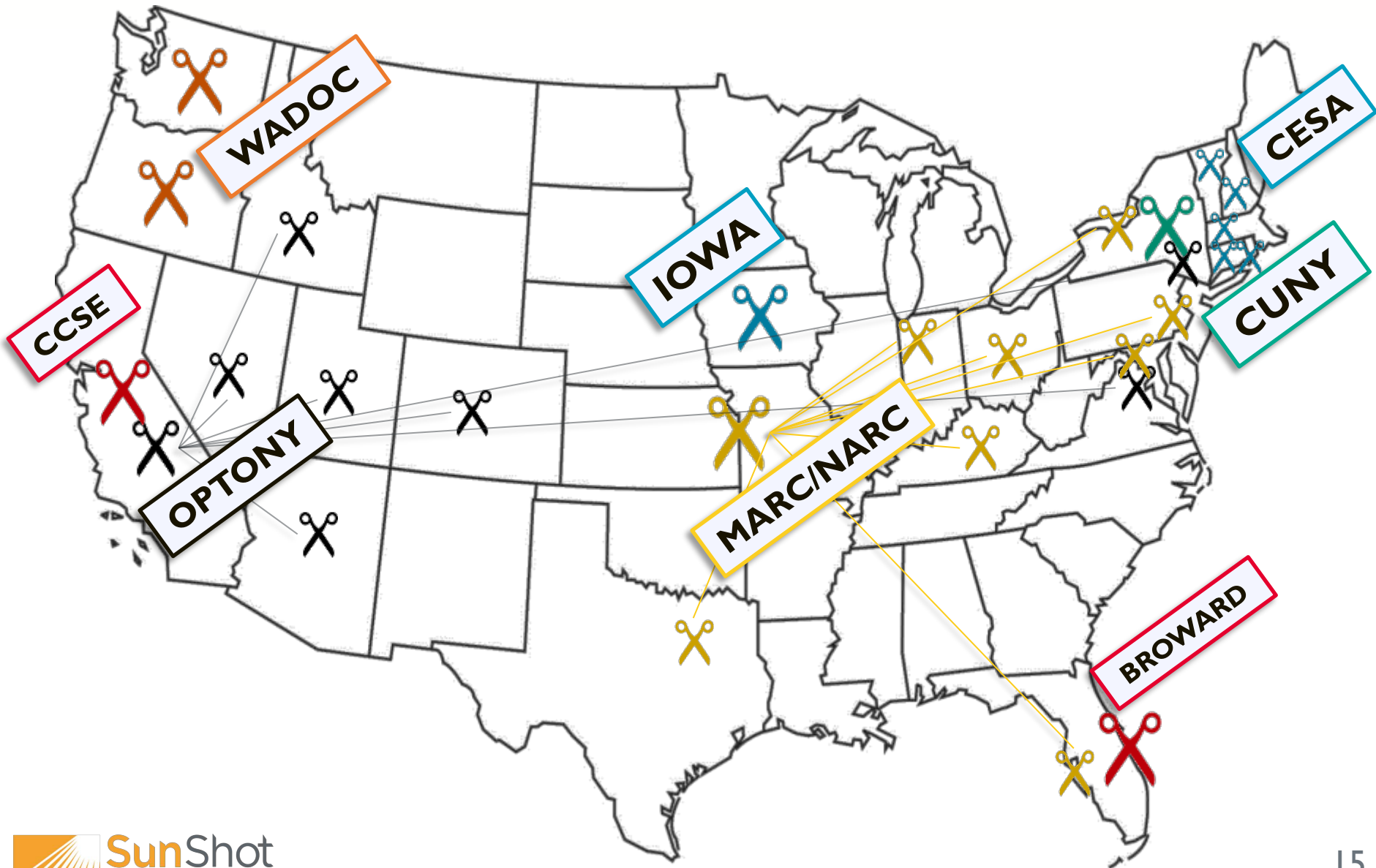


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Senior Project Managers, Optony Inc.
MWCOG BEEAC Meeting | January 16, 2014



National Impact

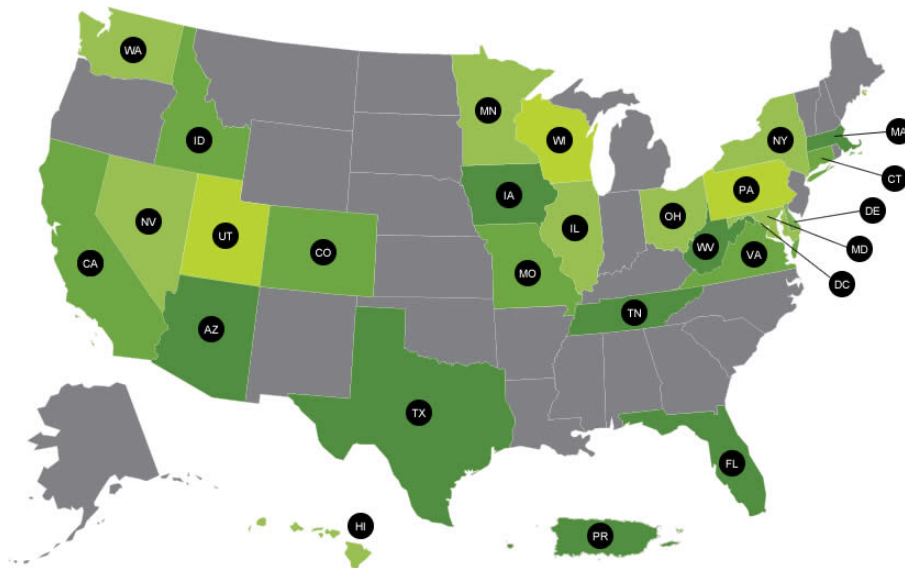
- 147 million people
- 47% of the U.S. population
- 26 States + D.C.



American Solar Transformation Initiative (ASTI)



DOE-supported initiative to **reduce the total installed costs** of solar PV systems and **increase deployment** of solar across the US by lowering barriers to adoption in targeted focus areas



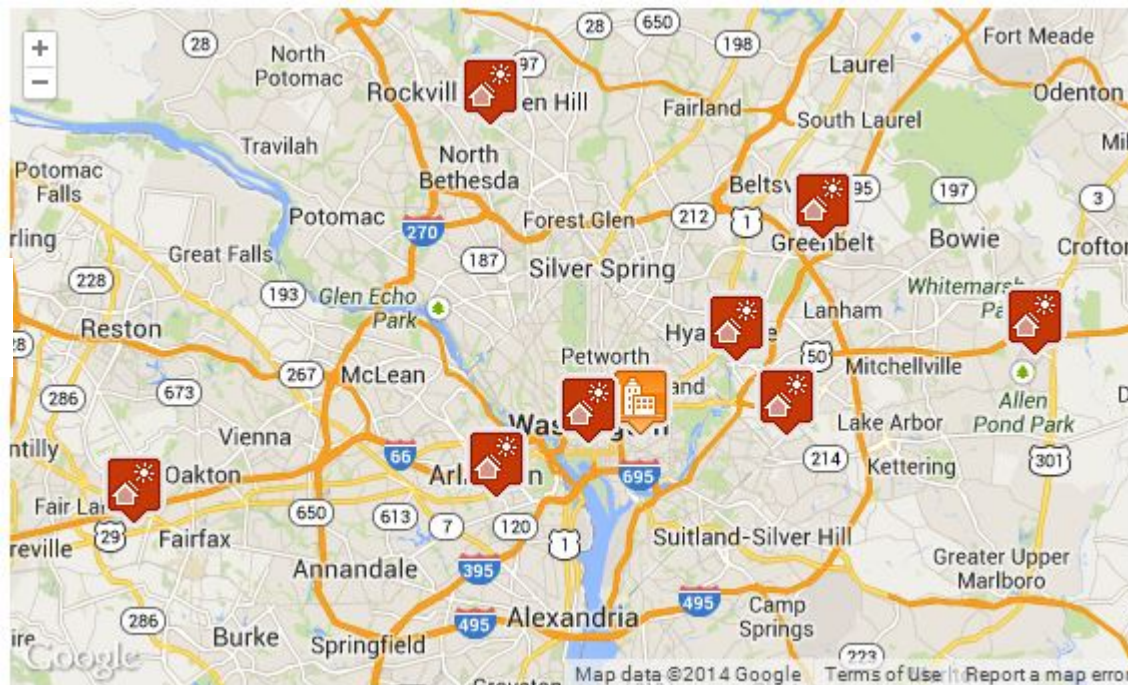
FOCUS AREAS

- Local Permitting Process
- Planning & Zoning Regulations
- Financing Tools and Resources
- Innovative Deployment Programs
- Education and Outreach
- Utility Interconnection



ASTI Participant Update

(8) Communities in the Greater Washington D.C region



- Washington, D.C.
- Fairfax County
- Arlington County
- Prince George's County
- Bladensburg
- Greenbelt
- Bowie
- Montgomery County

+ (88) Communities and (19) Utilities from (21) States nationwide



PROGRESS UPDATE



Solar Survey Results

Early Achievements

District of Columbia

- Streamlining permitting process
- Community Shared Solar
- Commercial PACE
- Residential Aggregation
- Municipal Aggregation

Maryland

- Permitting & inspection information online
- Residential Aggregation
- Municipal Aggregation

Virginia

- Permitting & inspection information online
- Low permitting fees
- Short permit processing and inspection turnaround time



Residential Solar Potential Analysis

	Solar Viable Residences	Residential Potential (MW)	Community Elec. Offset Potential (%)		Solar Viable Residences	Residential Potential (MW)	Community Elec. Offset Potential (%)
Washington D.C.	42,213	215	2.4%	Prince George's County	85,390	435	6.0%
Montgomery County	97,450	497	5.5%	Bowie	7,068	36	7.7%
Arlington County	14,537	74	3.4%	Greenbelt	1,552	7.9	4.0%
Fairfax County	111,554	569	4.9%	Bladensburg	306	1.5	2.0%

- These numbers represent systems hosted on single-unit residential structures.
- Additional (and much greater) opportunities exist in the municipal, commercial, and industrial sectors, as well as residential systems hosted remotely!



Community Page

Market Information & General Resources

Community Roadmap

Interactive Goals & Tailored Resources

Washington, D.C.

This webpage provides the latest resources and information available to help residents, businesses, installers and local governments expand the local solar market. The District is well positioned for explosive solar market growth due to a suite of aggressive renewable energy goals and supportive policies.

Transitioning to solar power not only provides environmental benefits like enhanced air quality, but it also delivers a host of economic benefits from green job creation and market development. Below, there is a direct link to the City's interactive policy roadmap designed to increase local solar installations by making it easier and more cost-effective to "go solar".



Key Market Information

- 632,323 population
- 1,292 kWh/kW annual energy yield
- RFS 20% renewables by 2020
- 68 square miles
- 15ft elevation

Shown below is an estimation of the significant economic and environmental impact from providing just 5% of community-wide electricity use from solar energy. The residential section provides a quantification of the massive and still untapped opportunity for existing residential rooftops to contribute to a greener and more prosperous community. These numbers are generated using the latest available data and market-leading estimation tools. [Learn more here.](#)

Local Impact of 5% Electricity from Solar Power

- 457,821 kW of installed solar
- \$847.0M economic activity generated
- 209,466 acres of trees planted (equiv CO2 offset)
- 591,504,905 kWh energy generated annually
- 4,395 job-years created
- 53,239 cars off the road (equiv CO2 offset)

Resources



Clean Energy Planning

- [Washington, D.C. Solar Map](#) - The interactive online rooftop solar mapping tool allows users to estimate rooftop solar electric potential
- [Energy Smart DC Draft Plan](#) - This Comprehensive Energy Plan presents the District's energy vision for the future
- [Sustainable DC Plan](#) - A 20-year plan to make the District the healthiest, greenest, most livable city in the nation

Local Financing Programs & Incentives

- [District of Columbia's Database of State Incentives For Renewables and Efficiency \(DSIRE\)](#) - Residential, Commercial and Local Governments
- [Renewable Energy Incentive Program \(REIP\) for Businesses](#) - Commercial
- [District of Columbia Solar Renewable Energy Certificate \(SREC\) Market](#) - Residential, Commercial and Local Governments
- [Third-party financing](#) - Residential, Commercial and Local Governments

Solar Energy Policy

- [Summary of the District of Columbia's solar energy policies \(DSIRE\)](#)

Regional Partners



Additional Information

- Residents & Businesses
- Government
- Industry
- Project Finance

Washington, D.C. Solar Roadmap

Roadmap Goals and Progress

The Solar Roadmap team has worked in close coordination with the District to develop a customized, interactive solar roadmap containing guidance on how to transform the local solar market. Each recommendation in the roadmap is supported with relevant reports, case studies, examples, and



Show Active Objectives Only

- Permitting Process** Current Progress: 29% (4 of 14 goals achieved)
- Planning & Zoning** Current Progress: 14% (1 of 7 goals achieved)
- Financing Options** Current Progress: 60% (3 of 5 goals achieved)
- Solar Market Development** Current Progress: 67% (4 of 6 goals achieved)

Expand each focus area below to show its related goals, and click the "Take Action" button to view resources designed to help you achieve these goals.

- Permitting Process** Current Progress: 29%
- Planning & Zoning** Current Progress: 14%
 - [Z4] Solar Planning Guidelines
 - Initial Status: Solar is not addressed in standards for new construction
 - Guidance: Consider adoption of solar specific language in general construction and solar access.
 - [Z5] Solar Related Zoning and Regulations
 - Initial Status: Solar is not addressed in zoning ordinances
 - Action Taken: City is considering the addition of solar standards
 - Guidance: Consider adoption of zoning codes that have solar specific language
 - [Z6] Minimize Restrictive Ordinances for Solar
 - Initial Status: No ordinances creating a barrier to solar
 - Action Taken: The City does not have ordinances which create a barrier to solar
 - Guidance: City currently at market best practice.
 - Goal Achieved!
- Financing Options** Current Progress: 60%

Essential Resources

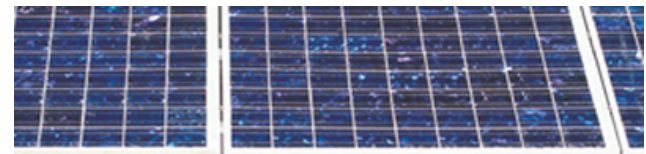
- Solar Access Benefits for Cities and Counties**
Author: US Department of Energy
- Model County Zoning Ordinance**
Author: Maricopa County
- Model Municipal Planning and Zoning Code**
Author: City of Madison
- Model Solar Standards for Lots and Setbacks**
Author: City of Eugene
- Sample Solar Definitions for Planning and Zoning Codes**
Author: Garfield County
- Sample Solar Zoning Ordinance and Design Standards**
Author: City of Aurora, CO
- National Guidelines for Installing Solar Panels in Historic Districts**
Author: National Alliance of Preservation Commissions
- Case Study, Building a Solar-Powered Home in a Historic Neighborhood**
Author: Build San Antonio Green

NEXT STEPS



Next Steps

- Select roadmap goals to pursue (JAN)
 - Determine those goals which are interesting, relevant, viable
- Follow-up call with ASTI team (FEB)
 - Discuss findings, make a game plan
- Implement goals (MAR-DEC 2014)
 - Support provided by ASTI team throughout year as needed



Regional Opportunities

- Standardized Permitting Forms (and process)
- Awareness Campaign
- Bulk Purchase Programs
- Publicize Innovative Market Development Platforms



THANK YOU!

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About Optony

Optony develops and deploys solar best practices across the entire solar project lifecycle for government agencies, schools and commercial organizations.

Working with clients across all phases of solar projects creates deep insight into true performance drivers which is used to reduce costs and improve performance at any stage in the process.

www.optony.com

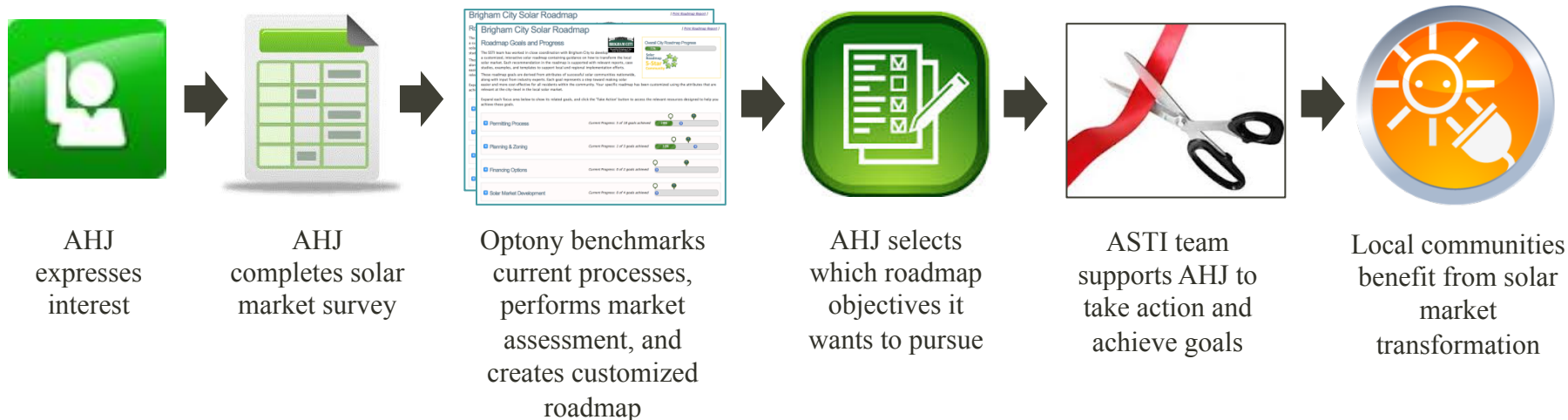


“Optony’s consulting service is a must-have for any organization considering an investment in solar. Based on Optony’s comprehensive analysis and recommendations, we now have a low-risk, high-return solar strategy.”



Onboarding Process

GET ON THE SOLAR ROADMAP



EXPECTATIONS

- Collaborate with city staff to complete solar market survey (data from current processes related to permitting, planning/zoning, and financing)
- Commit to setting goals and taking action in any of the focus areas with support from ASTI team, peers, and partners

