NEW YORK STATE OF OPPORTUNITY | NY-Sun

NY-Sun PV Trainers Network

In-Depth Policy Workshop Land Use Planning for Solar Energy

Presented by the

NY-Sun PV Trainers Network

MEISTER CONSULTANTS GROUP
Independent Contractor to NYSERDA

LAND USE LAW CENTER
PACE LAW SCHOOL

CUNY

NEW YORK STATE OF OPPORTUNITY | NYSERDA

About the PV Trainers Network

The NY-Sun PV Trainers Network aims to lower the installation cost and expand adoption of solar PV systems throughout the state.

training.ny-sun.ny.gov

NY-Sun Initiative

- Significantly expand installed solar capacity
- Attract private investment
- Enable sustainable development of a robust industry
- Create well-paying skilled jobs
- Improve the reliability of the electric grid
- Reduce air pollution
- Make solar available to all New Yorkers that want it

Statewide Goal of 3 GW

$961 Million Total Budget

↓ Stimulate the Market Place

↓ Reduce Soft Costs

About the PV Trainers Network

Lead Organizations

MEISTER CONSULTANTS GROUP

CUNY

ENTECH Engineering INCORPORATED

Supporting Organizations

LAND USE LAW CENTER PACE LAW SCHOOL

BRONX COMMUNITY COLLEGE

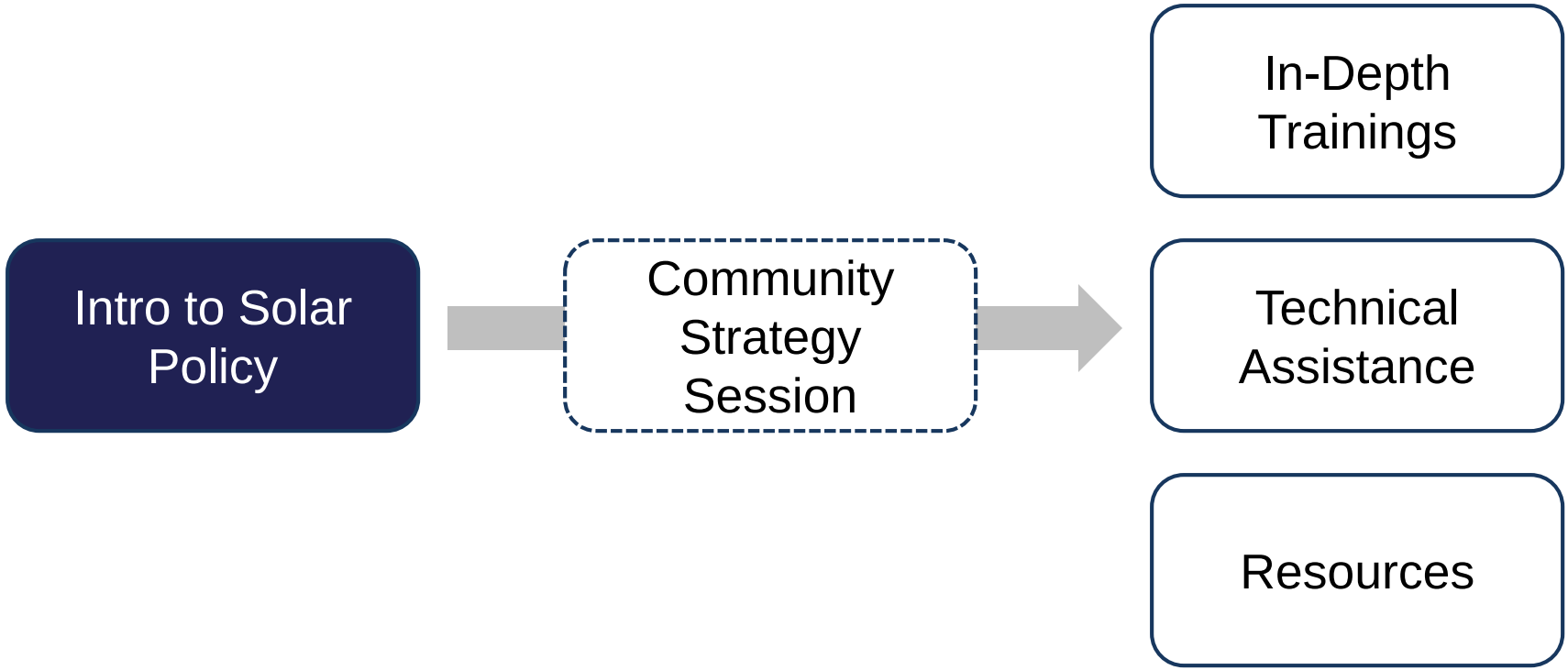
Delhi STATE UNIVERSITY of NEW YORK

SUNY CANTON

Shared Vision Shared Commitment Shared Success ULSTER BOCES Board of Cooperative Educational Services

SUNY ecc Workforce DEVELOPMENT

PVTN Services Offered



PVTN Services Offered

Facilitated dialogue to assist local **decision makers** in identifying market barriers, opportunities, solutions, and next steps to meeting goals

Intro to Solar Policy

Community Strategy Session

In-Depth Trainings

Technical Assistance

Resources

PVTN Services Offered

Intro to Solar Policy

Quickly get up to speed on key solar policy issues:

- Developing a Solar Strategy.
- Land Use Planning for Solar Energy.
- Zoning for Solar Energy.
- Streamlining Solar Permits.
- Growing your Solar Market.
- Expanding Solar with PACE.
- Solar Procurement for Local Governments.

In-Depth Trainings

Technical Assistance

Resources

PVTN Services Offered

Intro to Solar Policy

Targeted consulting to support implementation:

- Solar ordinance.
- Solar ready guidelines.
- Streamlined permitting.
- Smart permit fees.
- Engaging lenders.
- Solarize program.

In-Depth Trainings

Technical Assistance

Resources

PVTN Services Offered

Intro to Solar Policy

Community Strategy Session

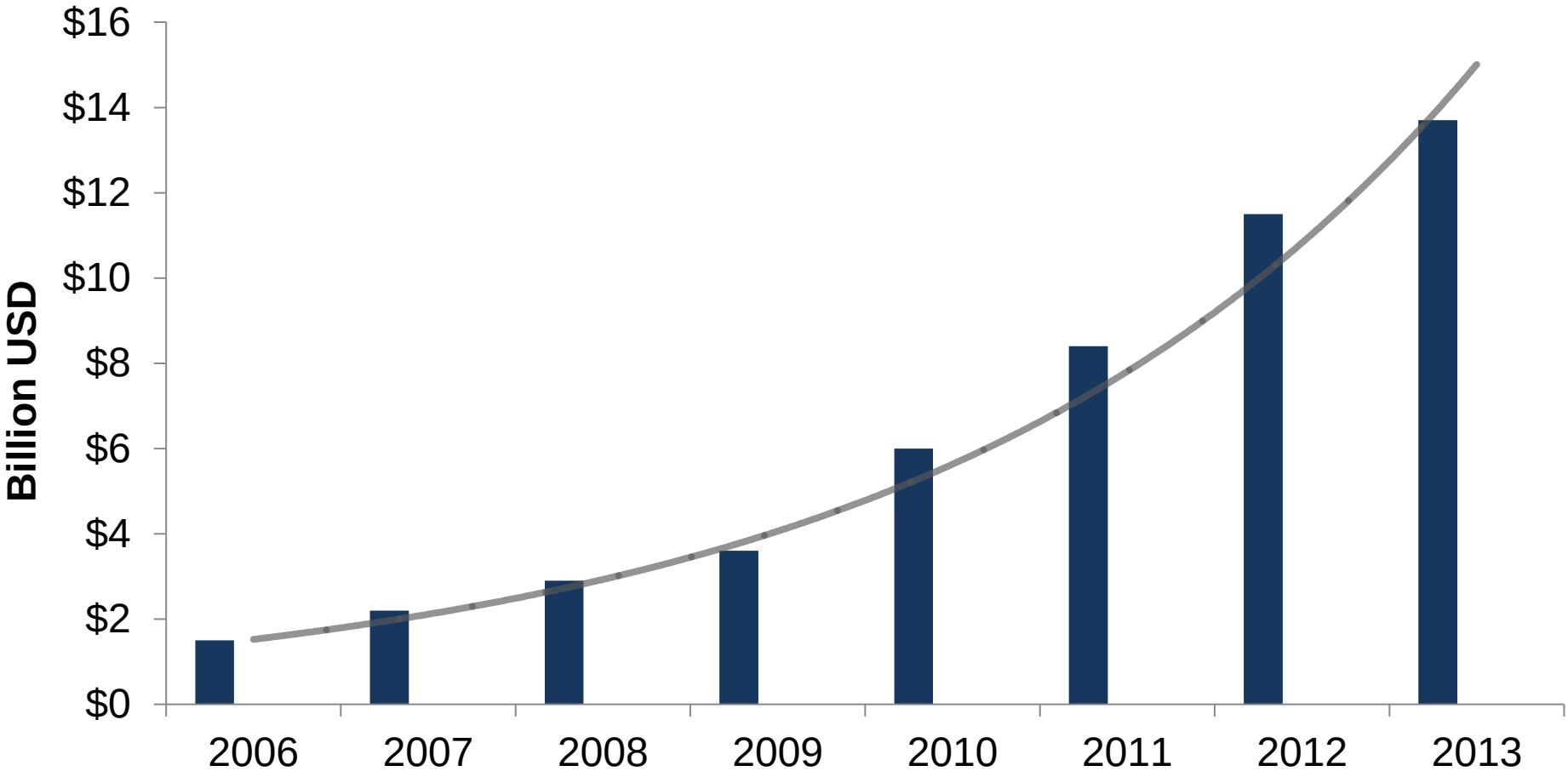
- Webinars.
- Podcasts.
- Toolkits.
- Model documents.
- Case studies.

Technical Assistance

In-Depth Trainings

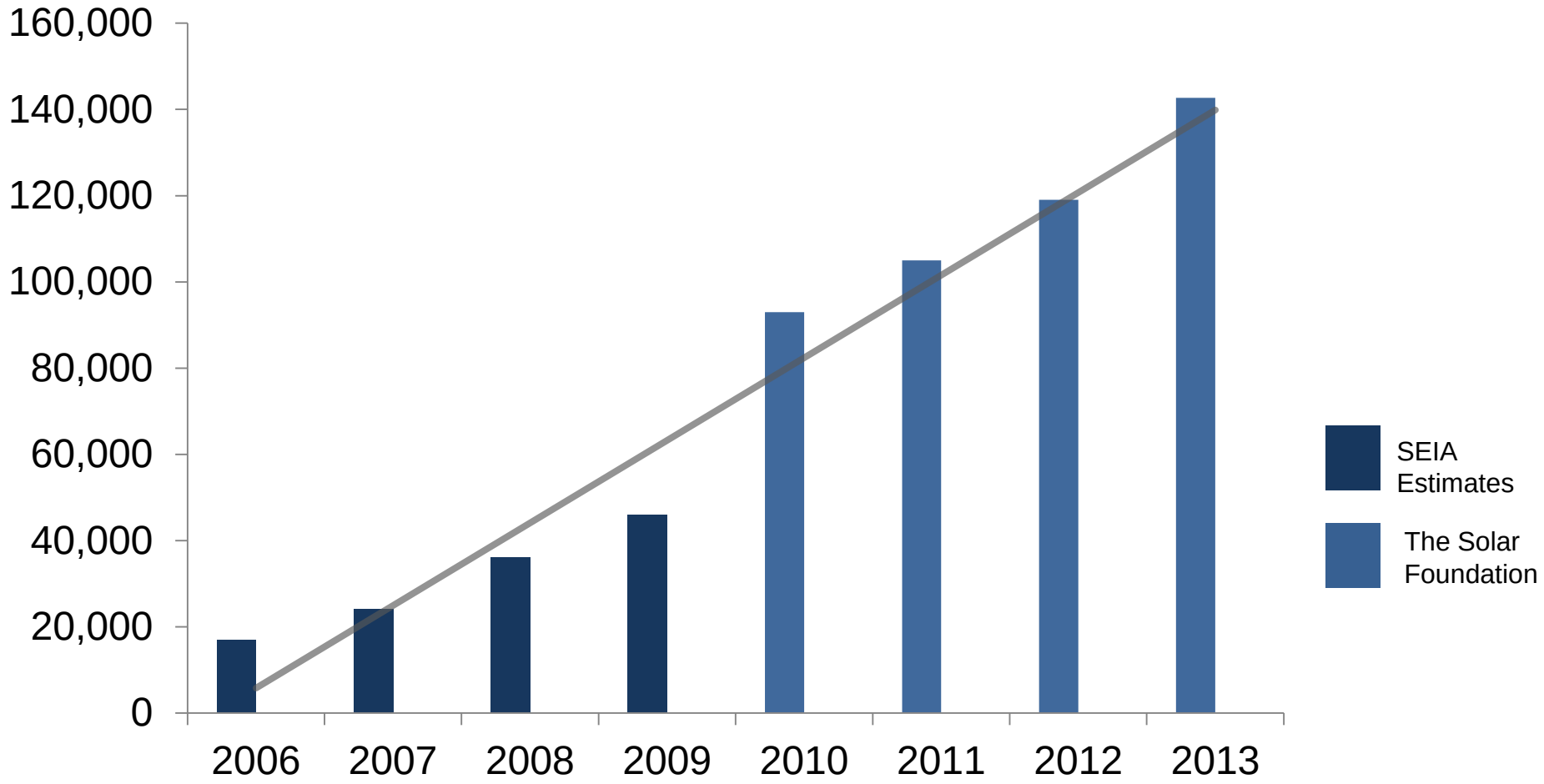
Resources

US Solar Market Value



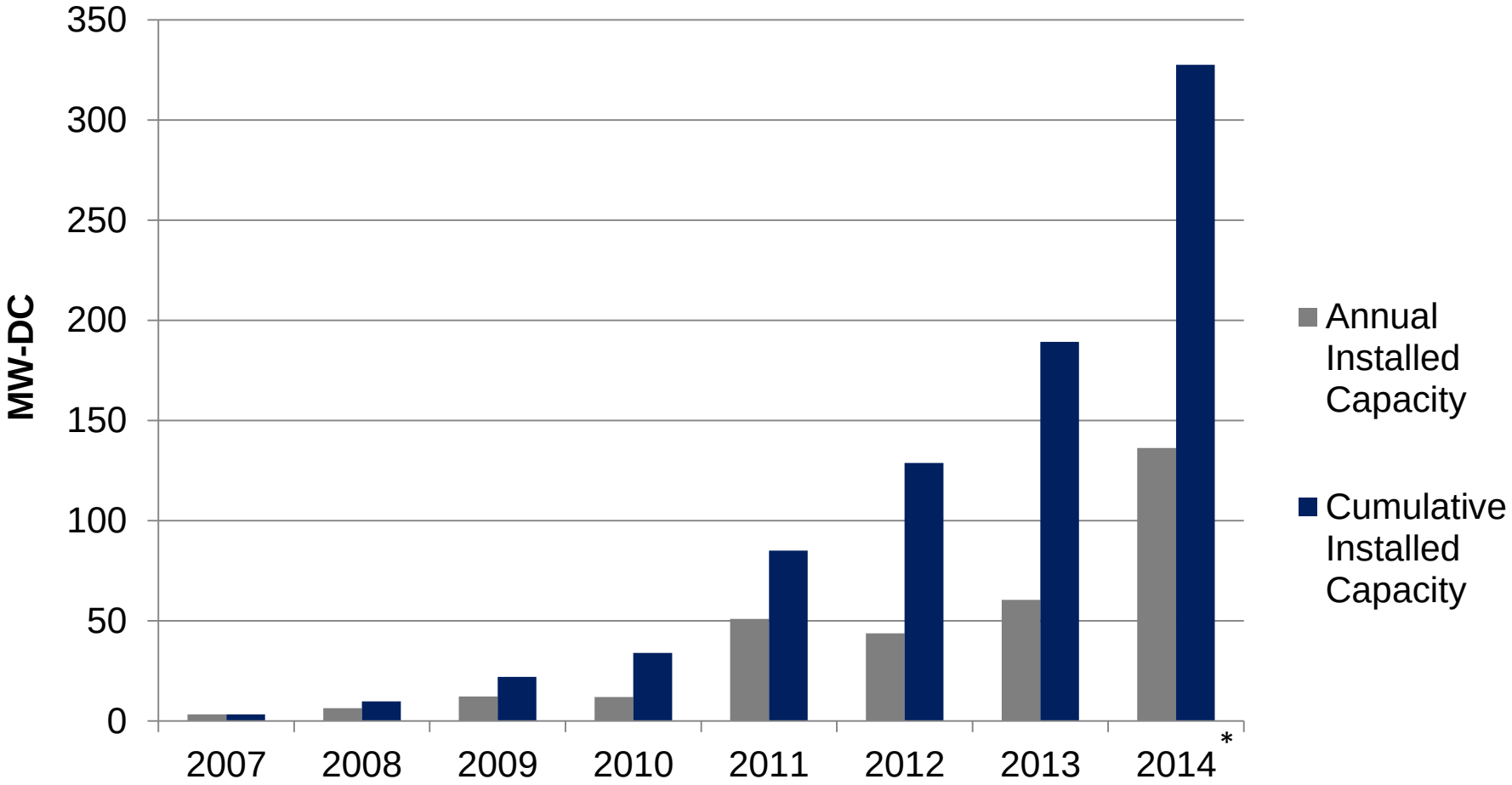
Source: SEIA/GTM Research – 2009/2010/2011/2012/2013 Year in Review Report

Solar Job Growth in the US



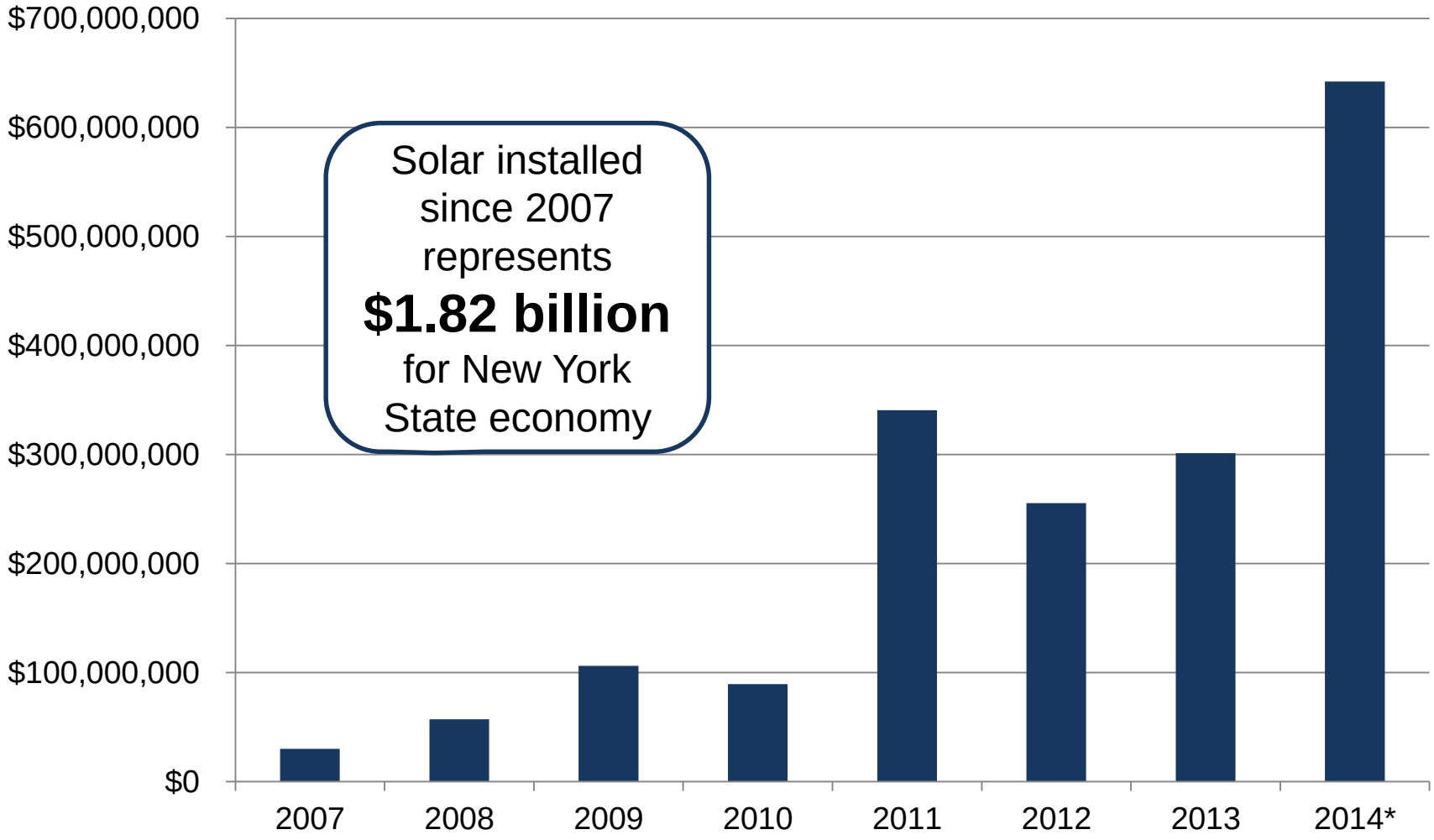
Source: SEIA Estimates (2006-2009),The Solar Foundation's National Solar Jobs Census 2010 (2010),The Solar Foundation's National Solar Jobs Census 2013 (2011-2013).

NY State Solar Market



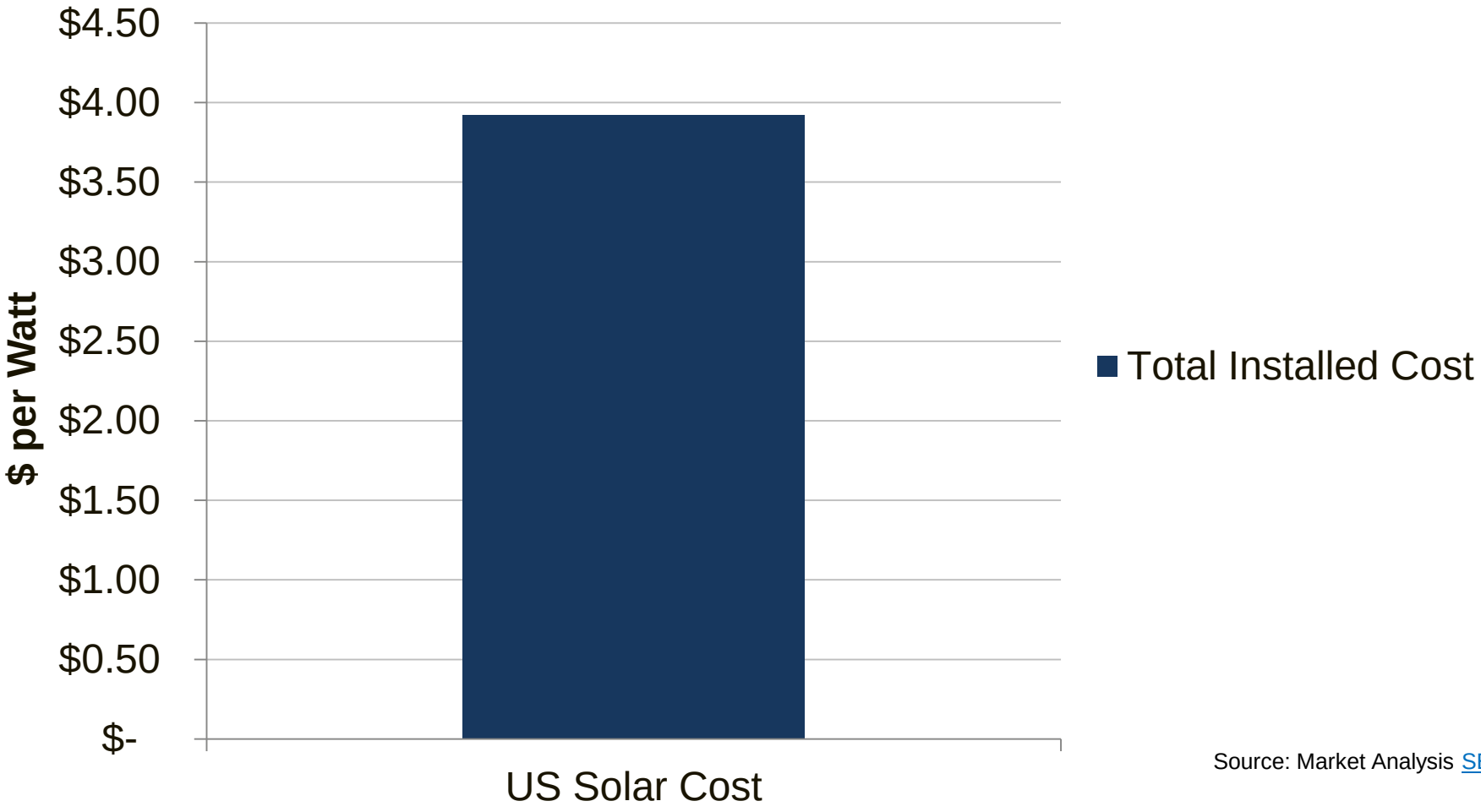
* 2014 figures through 9/1/2014 based on CUNY Pyramid, NYSERDA and LIPA data

Value of Installed Solar in NY by Year



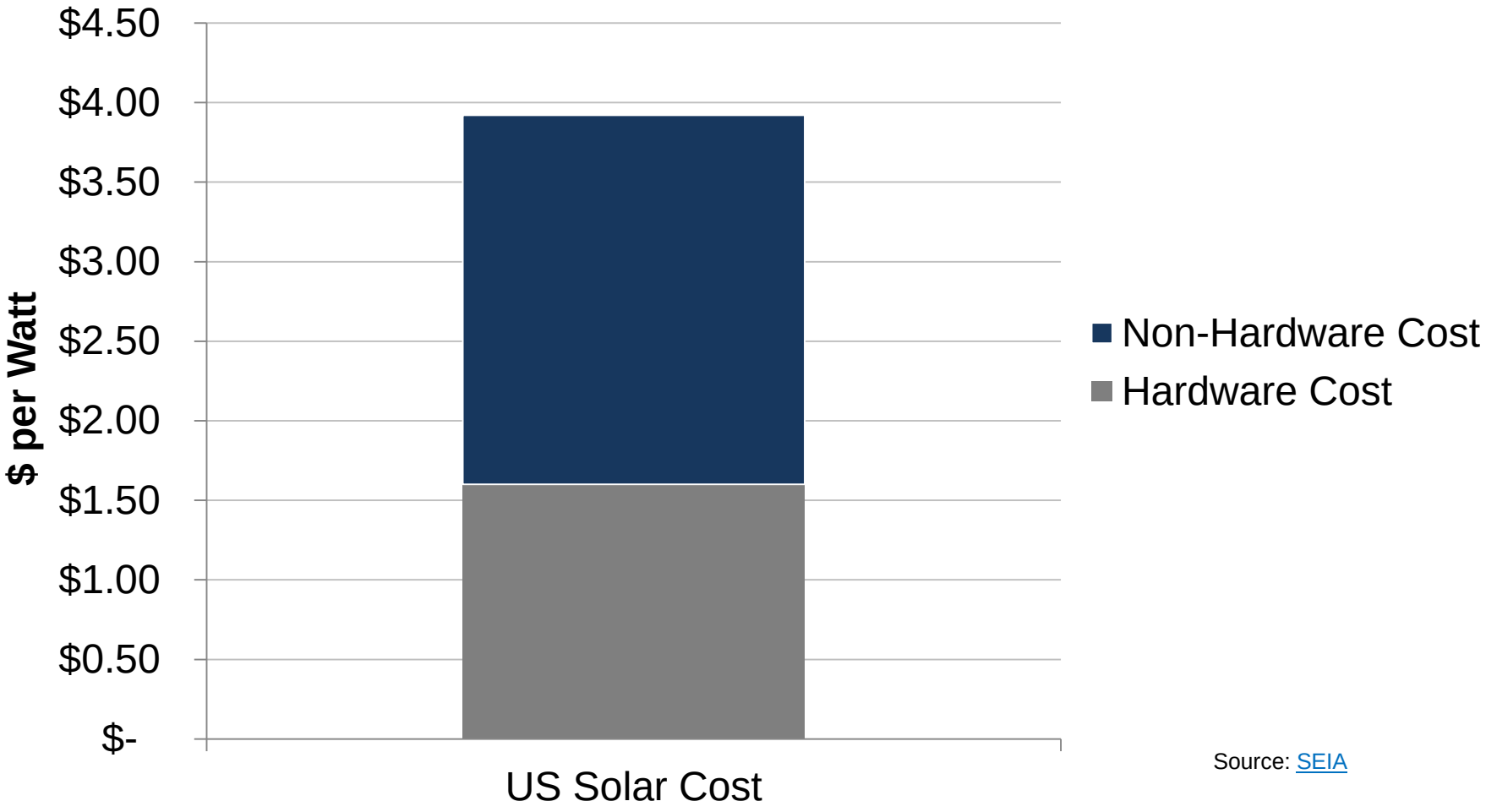
* 2014 figures through 9/1/2014 based on CUNY Pyramid, NYSERDA and LIPA data

US Solar Costs



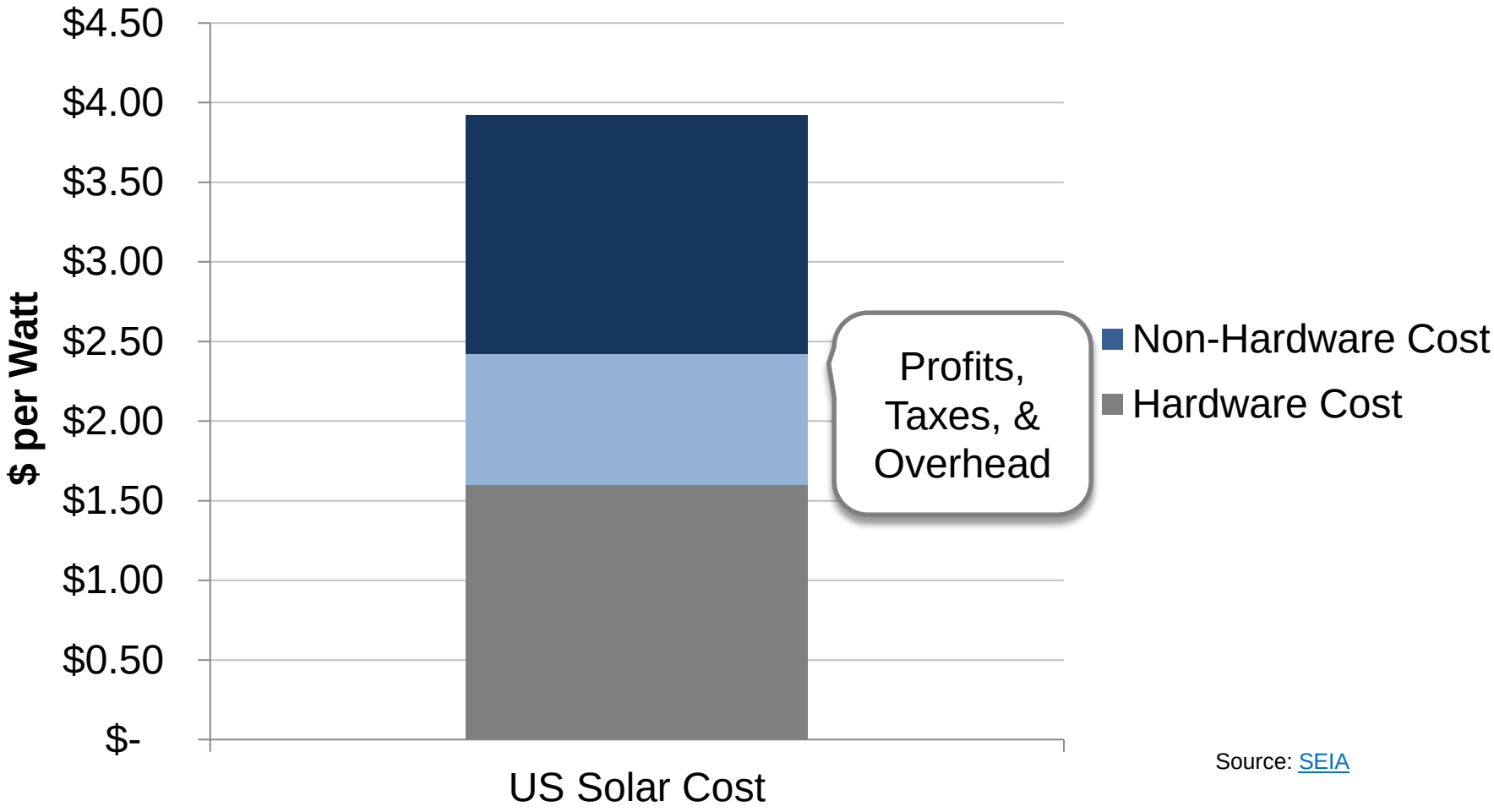
Source: Market Analysis SEIA

US Solar Costs



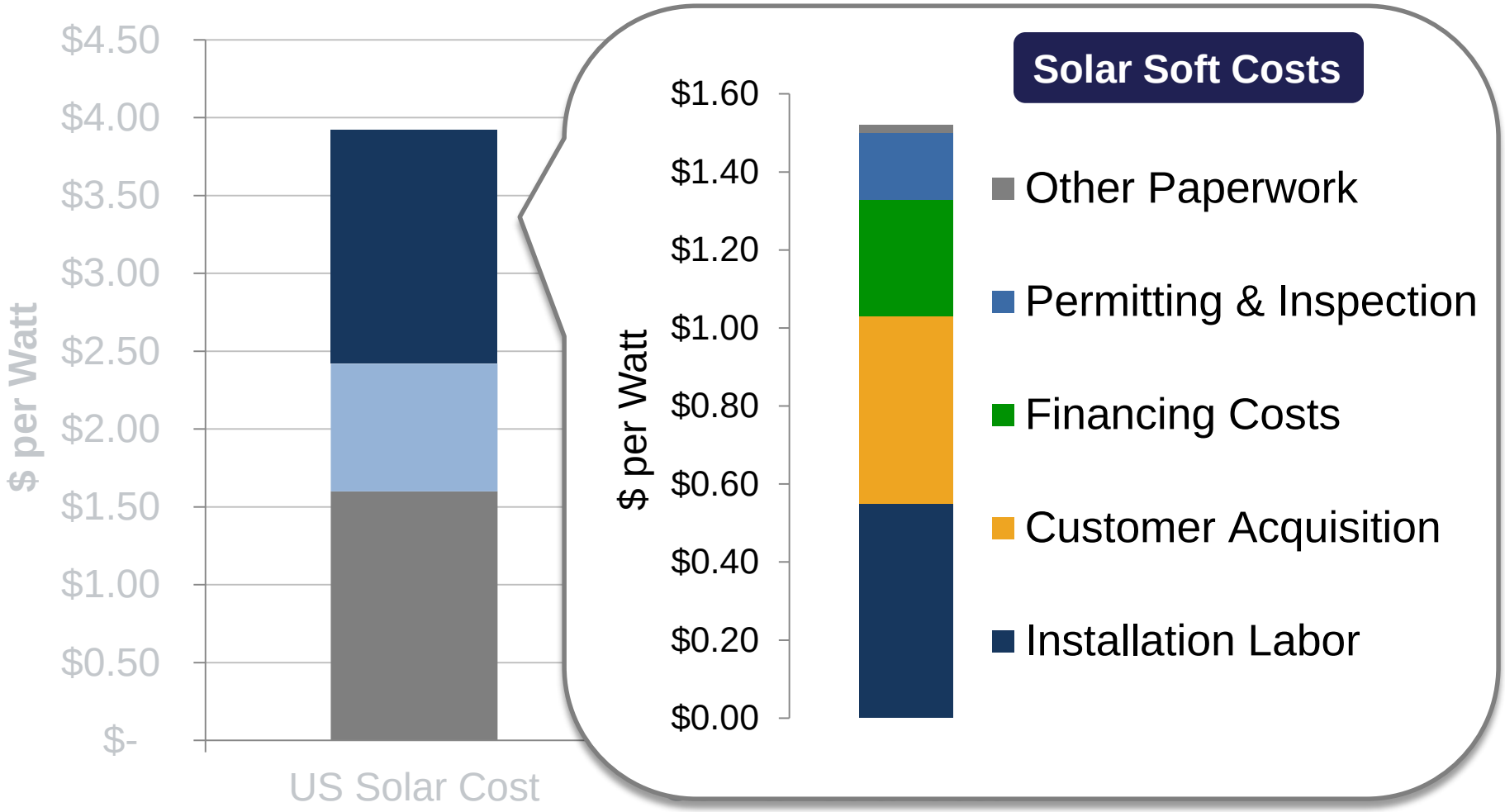
Source: SEIA

US Solar Costs



Source: SEIA

US Solar Costs



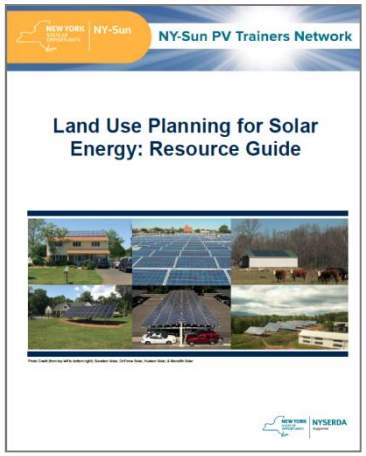
Why We Are Here

Workshop Goal:

To enable policymakers to replicate successful solar practices that reduce soft costs and expand local adoption of solar energy.

Resources: NY-Sun PV Trainers Network

Land Use Planning for Solar Energy



https://training.ny-sun.ny.gov/images/PDFs/Land_Use_Planning_for_Solar_Energy.pdf

Solar Technologies

Solar Photovoltaic (PV)

Solar Hot Water

Concentrated Solar Power

Solar Technologies

Solar Photovoltaic (PV)

Solar Hot Water

Concentrated Solar Power

Scale

Residence
5 kW

Factory
1 MW+

Office
50 – 500 kW

Utility
2 MW+

Agenda

Overview of NY Sun PV Trainers Network &

Introductions

Role of Local Government & Planning

Policy Development

Community Engagement

Plan Making

Question & Answer/Next Steps

Your Trainers Today

Jessica Bacher

Land Use Law Center

Pace Law School

jbacher@law.pace.edu

(914)422-4262

Who’s in the room?

A. Land Use Board member
B. Municipal Planning/Building Department staff
C. Elected officials
D. County government
E. State Agency
F. Solar industry
G. Developer
H. Planners, Attorneys or other professional
I. Community member
J. Other

Agenda

Overview of NY Sun PV Trainers Network &

Introductions

Role of Local Government & Planning

Policy Development

Community Engagement

Plan Making

Question & Answer/Next Steps

Role of Local Gov't & Planning

1,550+ local jurisdictions in NY

With land use authority

Source: NREL

Delegation of Authority

Legislature

- Adopt Land Use Laws and Plans
- Site Plan Approval
- Subdivision Approvals
- Special Permits

Building Inspector/Zoning Enforcement Office

- Building permits
- Zoning Determination

Zoning Board of Appeals

- Variances
- Interpretation
- Special Permits

Planning Board

- Advises on Zoning Adoption
- Site Plan Approval
- Subdivision Approvals
- Special Permits

Comprehensive Plan and Zoning

- New York law states that zoning, and all land use regulations, must be in conformance with the comprehensive plan.

Today's first part

- Focus on **policy and planning** and the **importance of having a plan** of some type that commits the community to facilitating solar energy and stating the policy reasons for that commitment.

Zoning Provisions that Further Solar

- Definitions of each type of solar facility
- Provisions that allow each type to be built
  - Accessory Uses, Special Permits, Secondary Uses, Principal Uses
  - Waivers or adjustments of height restrictions, maximum lot coverage requirements, and set back restrictions

These will be discussed in second part.

Delegation of Authority

Legislature

- Adopt Land Use Laws and Plans
- Site Plan Approval
- Subdivision Approvals
- Special Permits

Building Inspector/Zoning Enforcement Office

- Building permits
- Zoning Determination

Zoning Board of Appeals

- Variances
- Interpretation
- Special Permits

Planning Board

- Advises on Zoning Adoption
- Site Plan Approval
- Subdivision Approvals
- Special Permits

Agenda

Overview of NY Sun PV Trainers Network &

Introductions

Role of Local Government & Planning

Policy Development

Community Engagement

Plan Making

Question & Answer/Next Steps

Policy Development Framework

Adopt a Resolution or Mayoral Proclamation that:

- Lists solar benefits and findings
- States intention to plan and regulate for solar
- Adopts a task force
- Authorizes research and studies
- Establishes a training program
- Authorizes an inter-municipal partnership
- Seeks state and federal funding and assistance
- Develop a community engagement process

Policy Development

Adopt a Resolution or Mayoral Proclamation

RESOLUTION SUPPORTING IMPLEMENTATION OF
A SOLAR ENERGY PROGRAM

[City/Town/Village] of _____

Date Adopted:_____

WHEREAS, solar energy is an abundant, renewable, and non-polluting energy resource;

WHEREAS, it is the intention of the [City/Town/Village] to adopt a strategy for municipal-wide solar development for the purpose of accomplishing the multiple economic, health, environmental, and educational benefits of solar energy, while maintaining the community character, design standards, and livability of the [City/Town/Village];

WHEREAS, there are a number of solar energy facilities and technologies that can be deployed in the [City/Town/Village] and several strategies that the [City/Town/Village] can implement to ensure the maximum use of solar energy in the community;

WHEREAS, the deployment of many of these solar energy facilities and the pursuit of these strategies can greatly reduce the cost and consumption of energy, while lowering carbon emissions and reducing fossil fuels in the [City/Town/Village];

WHEREAS, it is the intent of the [City/Town/Village] to examine its current policies, plans, programs, strategies, and regulations to determine whether they facilitate and further the deployment of appropriate solar energy facilities in the [City/Town/Village];

WHEREAS, there are various policies, plans, and programs that the [City/Town/Village] can consider implementing to encourage the deployment of solar energy facilities, including:

- Appointing a task force responsible for solar programs by charging an existing sustainability task force or conservation advisory council or creating a Solar/Renewable Energy Task Force
- Evaluating opportunities, conducting studies, and performing

SANTA FE COUNTY

RESOLUTION NO. 2013-49

Introduced by Commissioner Daniel Mayfield and Commissioner Robert Anaya

A RESOLUTION SUPPORTING CLEAN AND RENEWABLE ENERGY PROJECTS TO DEPLOY AND INSTALL ENERGY EFFICIENT AND RENEWABLE ENERGY TECHNOLOGY SYSTEMS ON SANTA FE COUNTY OWNED FACILITIES, WHICH WILL RESULT IN DECREASED UTILITY COSTS FOR TAXPAYERS, REDUCE NEGATIVE ENVIRONMENTAL IMPACTS FROM FOSSIL FUEL USE AND CONTRIBUTE TO CLEANER AIR QUALITY AND HEALTHIER COMMUNITIES

WHEREAS, the Board of Santa Fe County Commissioners ("the Board") approved and adopted its Resolution No. 2013-7 on January 29, 2013, a resolution that requires that County government "lead by example" and implement sustainable resource management principles and cost-effective waste reduction, recycling and clean energy strategies in County operations;

WHEREAS, the Board adopted the Sustainable Growth Management Plan in 2010, which established, by policy, clean energy directives generally that includes the use of solar renewable energy in new development;

WHEREAS, consistent with these policy directives, Santa Fe County has already constructed various buildings that incorporated energy efficient and renewable energy including United States Green Building Council Leadership in Energy and Environmental Design Standards ("LEED");

WHEREAS, the Board recognizes that buildings consume a large proportion of energy used in the United States and that it is in the best public interest and the best interest of Santa Fe County to address the County's existing facilities to achieve the goal of conserving natural resources as well as to reduce the operational and maintenance costs at each County facility;

WHEREAS, Santa Fe County has the ability to lead by example and make Santa Fe County a clean energy leader by taking further affirmative public policy action on environmental stewardship and climate change and supporting and implementing clean and renewable energy projects to deploy and install energy efficient and renewable energy technology systems on County-owned facilities;

WHEREAS, Santa Fe County holds tremendous solar power potential that could reduce negative local impacts from fossil fuel use, create new jobs, and bring brighter possibilities for health, prosperity and sustainability to county communities;

What Are the Benefits of Solar?

A. Econ. Development & job creation
B. Environ. & public health benefits
C. Reduced & stabilized energy costs
D. Energy independence & resilience
E. Value to utility
F. Community pride
G. Other

Appoint a Task Force

- Charge an existing sustainability task force or conservation advisory council
- Create a Solar/Renewable Energy Task Force

Who sits on the Task Force?

- Municipal Officials
- Solar industry
- Chamber of Commerce
- HOAs
- Environmental/Non-profit Community
- Historic Preservation Representative
- Developers
- Landowners & Farmers
- Planning Board Member (required for Comp. Plan)

Best Practice

AUSTIN LOCAL SOLAR ADVISORY COMMITTEE

The Austin Local Solar Advisory Committee was established to develop a strategic plan with specific recommendations to ensure the optimum utilization of Austin's local solar energy resource base.

For further information see Resolution 20120426-081.

- Solar industry
- Chamber of Commerce
- Environmental Community
- Consumer Advocate
- Electric Utility Commission
- Resource Management Commission

What is the Task Force's Role?

- Conducting studies & performing research
- Establishing a training program
- Partnering with adjacent communities
- Leveraging state and federal technical assistance grants
- Developing a community engagement process
- Amending the comprehensive plan
- Considering regulatory changes

Best Practices

KENT COUNTY, MARYLAND

RENEWABLE ENERGY TASK FORCE

Established 9 March 2010

THE VILLAGE OF

Dobbs Ferry

New York

Sustainable Dobbs

The Town of Cortlandt

WELCOME TO THE

Town of DeWitt

Onondaga County, NY Est. 1835

A Climate-Smart Community

Task Force

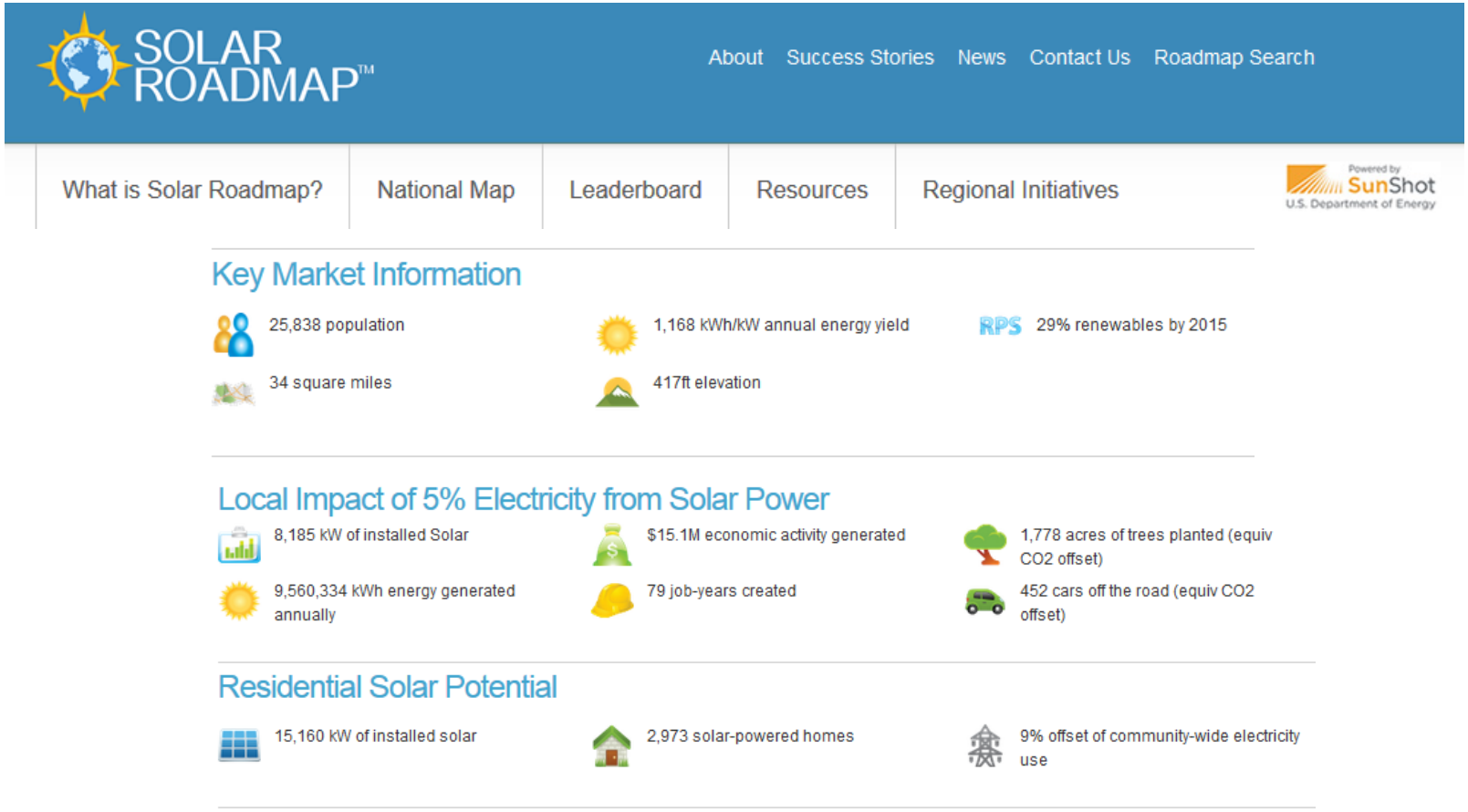
- Who has a Task Force?
- Who sits on your Task Force?
- What is the role of your Task Force?

What is the Task Force's Role?

- **Conducting studies & performing research**
- Establishing a training program
- Partnering with adjacent communities
- Leveraging state and federal technical assistance grants
- Developing a community engagement process
- Amending the comprehensive plan
- Considering regulatory changes

Authorize Studies

Resource: Solar Roadmap



Activity: Solar in Your Community

Part 1: Please look at the questions in the *Developing Effective Solar Policies in Your Community* handout.

What is the Task Force's Role?

- Conducting studies & performing research
- **Establishing a training program**
- Partnering with adjacent communities
- Leveraging state and federal technical assistance grants
- Developing a community engagement process
- Amending the comprehensive plan
- Considering regulatory changes

Establish a Training Program

Resource: NY-Sun PV Trainers Network

New York State | State Agencies | Search all of NY.gov

HOME | COURSES/WORKSHOPS | COURSE CALENDAR | RESOURCES | NY-SUN INITIATIVE

About the Program

The PV Trainers Network is part of NY-Sun, Governor Cuomo's initiative to greatly increase the amount of installed solar capacity throughout New York State. Through education, training, and technical assistance, the Network helps local governments and stakeholders identify opportunities, mitigate barriers, and create programs that drive the development of solar electric (photovoltaic or PV) markets in communities across the state. With funding from the New York State Energy Research and Development Authority (NYSERDA), Meister Consultants Group has partnered with Entech Engineering, the City University of New York (CUNY), and a network of academic institutions to implement the Network.

What is the Task Force's Role?

- Conducting studies & performing research
- Establishing a training program
- **Partnering with adjacent communities**
- Leveraging state and federal technical assistance grants
- Developing a community engagement process
- Amending the comprehensive plan
- Considering regulatory changes

Partner with Adjacent Communities

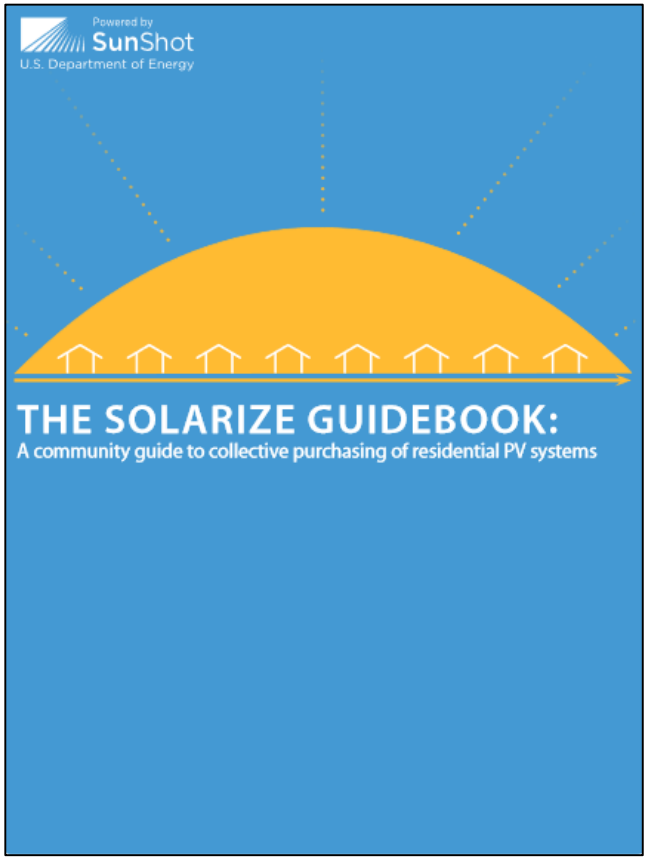
Best Practice: Sustainable Westchester

About Sustainable Westchester

Sustainable Westchester is a consortium of Westchester County local governments that facilitates effective sustainability initiatives, engages community stakeholders, and shares tools, resources, and incentives to create more healthy, vibrant and attractive communities, now and in the future.

Partner with Adjacent Communities

Resources: Regional Solarize Campaigns



SOLARIZE SYRACUSE

What is the Task Force's Role?

- Conducting studies & performing research
- Establishing a training program
- Partnering with adjacent communities
- **Leveraging state and federal technical assistance grants**
- Developing a community engagement process
- Amending the comprehensive plan
- Considering regulatory changes

Leverage State & Federal Assistance

Resources: NYSERDA & DOE

The NY-Sun Initiative
Solar Powering New York

Solar PV Programs & Incentives

nyserda
Energy. Innovation. Solutions.

Energy Efficiency & Renewable Energy Program

ENERGY.GOV
Office of Energy Efficiency & Renewable Energy

SERVICES | EFFICIENCY | RENEWABLES | TRANSPORTATION | ABOUT US | OFFICES

Agenda

Overview of NY Sun PV Trainers Network &

Introductions

Role of Local Government & Planning

Policy Development

Community Engagement

Plan Making

Question & Answer/Next Steps

What is the Task Force's Role?

- Conducting studies & performing research
- Establishing a training program
- Partnering with adjacent communities
- Leveraging state and federal technical assistance grants
- **Developing a community engagement process**
- Amending the comprehensive plan
- Considering regulatory changes

Community Engagement

Designing the Process

Advantages of Community Engagement

- ✓ Saves time
- ✓ Better ideas and shared problem solving
- ✓ Builds relationships
- ✓ Satisfactory result
- ✓ Creates buy-in
- ✓ Considers a range of interests
- ✓ Encourages future involvement
- ✓ Boosts confidence in government
- ✓ Increases compliance

Community Engagement

Principles

- Engage Early
- Listen & Learn First
- Build on Interests, Not Positions
- Design an Effective Process
- Be Inclusive & Involve Many
- Be Transparent & Responsive
- Use a Skilled Facilitator

POSITIONS vs. INTERESTS

What are POSITIONS?

Parties' assertions, wants, demands, offers, and solutions

What are INTERESTS?

A person's needs and concerns

Community Engagement

Potential Competing Interests & Priorities

Techniques for Public Engagement

Incentives for Participation

- To improve services / their community
- Opportunity to be a part of change
- To have a voice
- Build self-confidence
- Meet other people
- Refreshments (this is always a good idea when hosting an event)
- Coming to an event and the engagement being secondary (eg: a community event)
- Freebies / a goodie bag
- Cash
- Vouchers
- Entry into a prize drawing

Techniques for Public Engagement

Methods

- Community Meetings
- Interviews, Polls & Surveys & Hotlines
- Websites, Email, Social Media & Texting
- Focus & Advisory Groups
- Neighborhood Walks

Techniques for Public Engagement

Choose creative locations that will attract diverse stakeholders and get mobile

- Trains
- Parks
- Bars/Restaurants
- Schools
- Shopping Centers
- Homeowner Association Meetings
- Senior and Recreational Centers
- Business locations/restaurants

Designing a Community Meeting

Step 1: Define the Purpose of the Meeting

Step 2: Identify Who Should Participate

Step 3: Logistics

Step 4: Create a Positive Environment

Step 5: Maintain and Continue Open Lines of Communication

Step 1: Define Purpose of Meeting

Host a general community meeting to define and clarify the issue:

- What are the benefits to solar?
- What are your concerns with solar?
- What are some strategies to overcome your concerns?

Step 2: Identify Participants

- Land use board members
- Municipal staff and officials
- Historical Preservation members
- Local developers
- Local environmental activists and citizen groups
- Architects and engineers
- Large landowners and farmers
- Fire and Rescue personnel
- Homeowner Association members
- Utility representatives
- Schools

Step 3: Logistics

- Hold Multiple Meetings
- Schedule Meetings to meet the needs of various stakeholders
  - Select convenient and accessible venues
  - Select varying dates and times
  - Publicize meetings

Step 4: Create a Positive Environment

- Distribute Detailed Agendas
- Establish Ground Rules
- Offer Refreshments
- Distribute Meeting Summary
- Discuss interests instead of positions

Step 5: Maintain Communication

- Post meeting notes and technical information
- Find ways to continue to receive input/feedback
- Continue to ask, “who else should we inform & update?”
- Schedule future meetings
- Give feedback

Community Engagement

	Required	Supplemental
Goal	Technical viable plan that conforms to all laws, rules and regulations	Technical viable plan that integrates stakeholder interests
Primary Audience for Plan	Decision-makers	Decision-makers and stakeholders
Purpose of Information	Ensure the plan conforms to professional practice and passes technical review	Ensure the plan is feasible and addresses stakeholders' issues and concerns
Skills	Technical (engineering, design, fiscal, legal)	Technical, legal, and facilitation/community engagement
Role of Public	Input and Advice at Public Hearing	Engage in discussion, join problem-solving

Agenda

Overview of NY Sun PV Trainers Network &

Introductions

Role of Local Government & Planning

Policy Development

Community Engagement

Plan Making

Question & Answer/Next Steps

What is the Task Force's Role?

- Conducting studies & performing research
- Establishing a training program
- Partnering with adjacent communities
- Leveraging state and federal technical assistance grants
- Developing a community engagement process
- **Amending the comprehensive plan**
- Considering regulatory changes

Plan Making

Communitywide Comprehensive Plan

Neighborhood Plans

Corridor Plans

Special District Plans

Green Infrastructure Plans

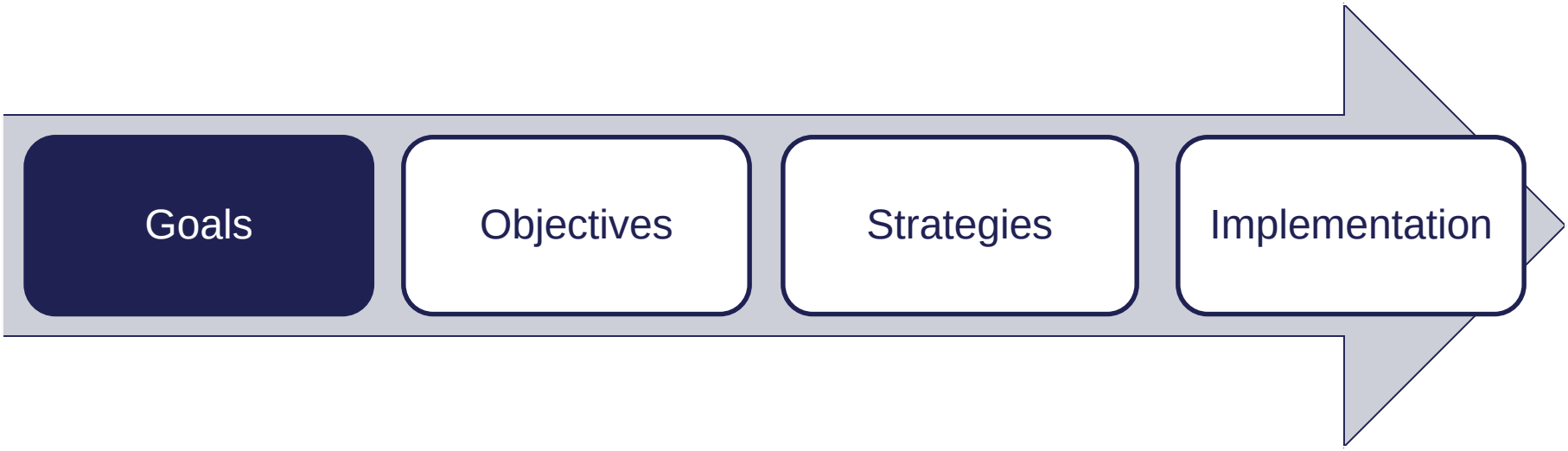
Energy Plan

Climate Action Plan

Comprehensive Plan

1 Establish Goals

Plan Making



What are the benefits solar can bring to your community?

Set Solar-Specific Goals

- How closely does solar help meet existing community goals?
- What scales and contexts are appropriate?
- How much development is possible within the appropriate scales and contexts?

1 Establish Goals

Is solar on residential rooftops appropriate in your community?

1 Establish Goals

Is pole-mounted solar appropriate in residential areas in your community?

1 Establish Goals

Is solar on commercial rooftops appropriate for your community?

1 Establish Goals

Is solar on commercial rooftops appropriate for your community?

1 Establish Goals

Is solar on historic structures appropriate for your community?

1 Establish Goals

Is solar on brownfields appropriate for your community?

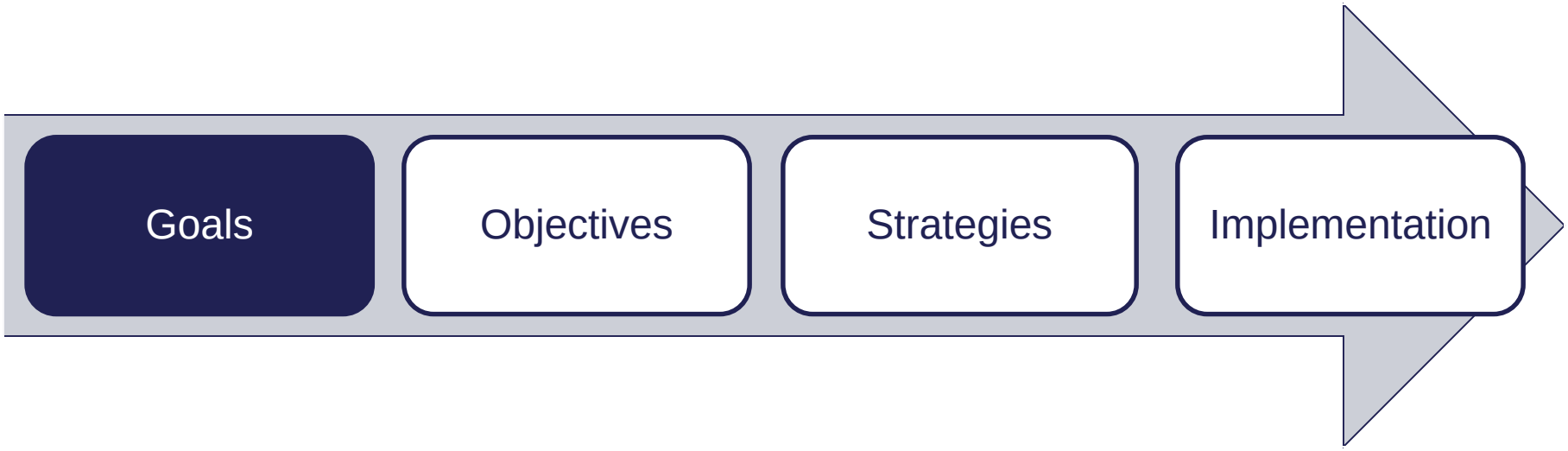
1 Establish Goals

Is solar on greenfields appropriate for your community?

Is building-integrated solar appropriate for your community?

1 Establish Goals

Plan Making



- Example Goal:

- *Support, plan for, and encourage solar energy use*

Plan Making

Statements of measurable midterm outcomes in furtherance of a certain goal

2 Establish Objectives

Plan Making

Example Objectives:

- Remove barriers from zoning to safeguard solar energy access
- Ensure new lots offer proper solar orientation

Plan Making

Actions to accomplish each objective.

Example Strategies:

- Bedford, NY
  - waive height limits for solar
- West Bloomfield, NY
  - waive setbacks for solar
- Austin, TX, & Howard Co, MD
  - allow solar in historic districts
- Iola, KS & Ashland, OR
  - solar access protections

4 Implementation

Plan Making

An implementation plan:

- Designates the board or officials responsible for each strategy,
- Identifies necessary resources, and
- Establishes time periods for completing each action

Example: Plan Making

Comprehensive Plan Best Practice

The Green Buildings and Environmental Sustainability Element of the Master Plan

Lawrence Township, Mercer County, New Jersey

Example: Plan Making

Comprehensive Plan Best Practice

City of Shakopee 2030 Comprehensive Plan *Solar Access Protection*

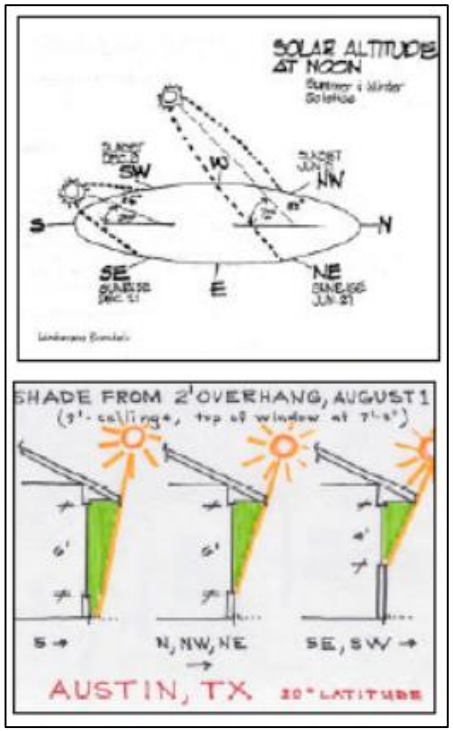
Minnesota's Energy Situation:

Minnesota is almost totally dependent on outside sources for its energy supplies, producing only 0.2% fuel used in the state. Minnesota pays more for fuels than some other states and is more vulnerable to possible supply disruptions. The former Minnesota Energy Agency had developed forecasts of the supply/demand relationship in the year 1995. Its baseline forecast assumed that energy users would respond to higher energy prices by 1) reducing their consumption or switching to lower priced fuels, b) that there would be some energy conservation, and c) that economic growth would continue.

Example: Plan Making

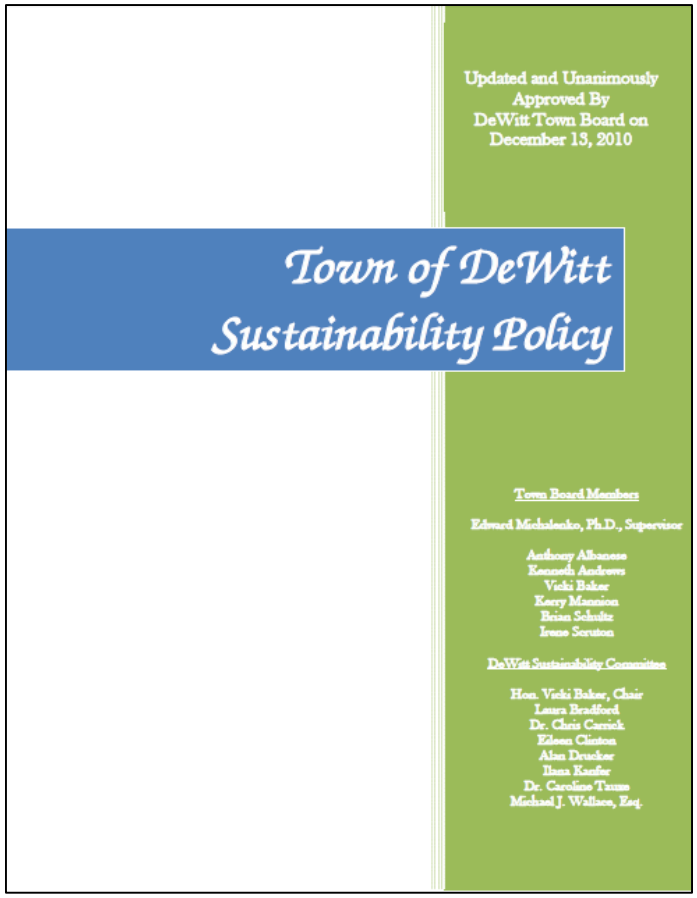
Subarea Plan Best Practice

Brentwood/Highland
Neighborhood Plan



Example: Plan Making

Functional Plan Best Practice



Updated and Unanimously Approved By DeWitt Town Board on December 13, 2010

Town of DeWitt Sustainability Policy

Town Board Members

Edward Michalenko, Ph.D., Supervisor

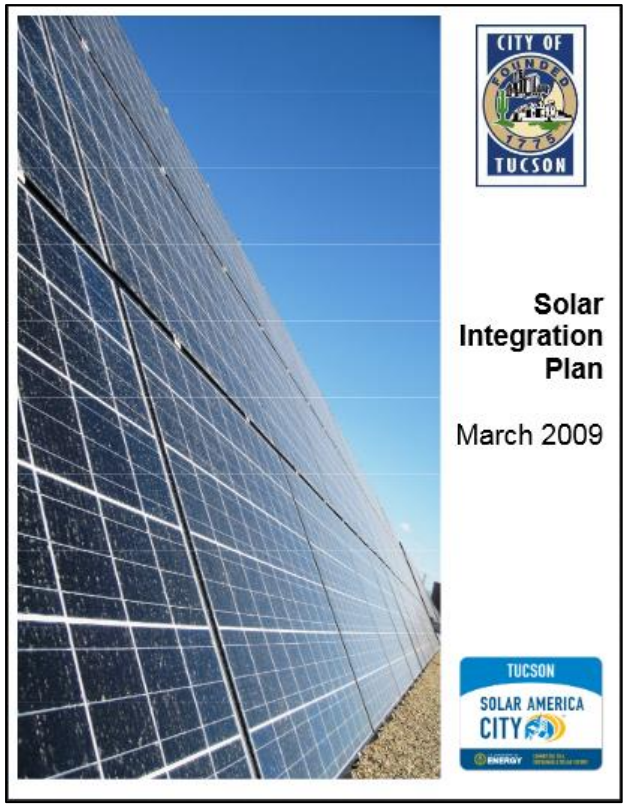
Anthony Albanese
Kenneth Andrews
Vicki Baker
Kerry Mannion
Brian Schultz
Irene Scruton

DeWitt Sustainability Committee

Hon. Vicki Baker, Chair
Laura Bradford
Dr. Chris Carrick
Eileen Clinton
Alan Drucker
Ilana Kaufer
Dr. Caroline Tauss
Michael J. Wallace, Esq.

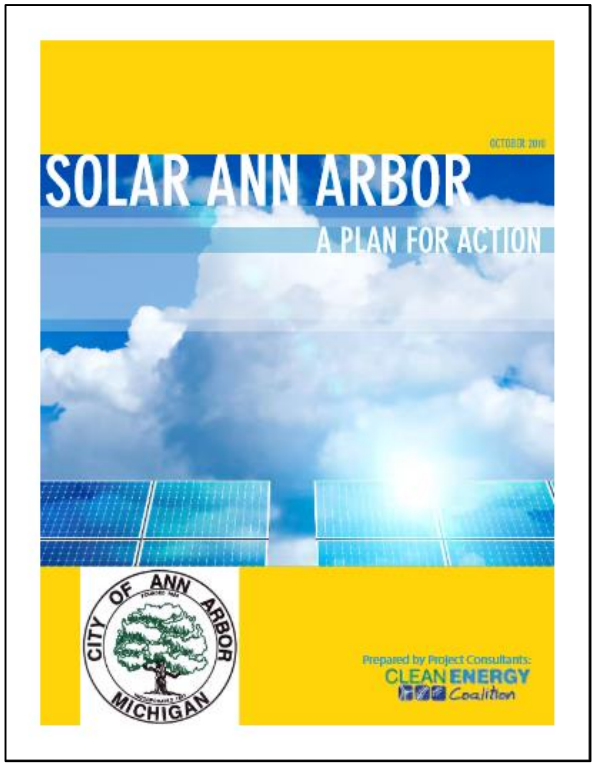
Example: Plan Making

Functional Plan Best Practice

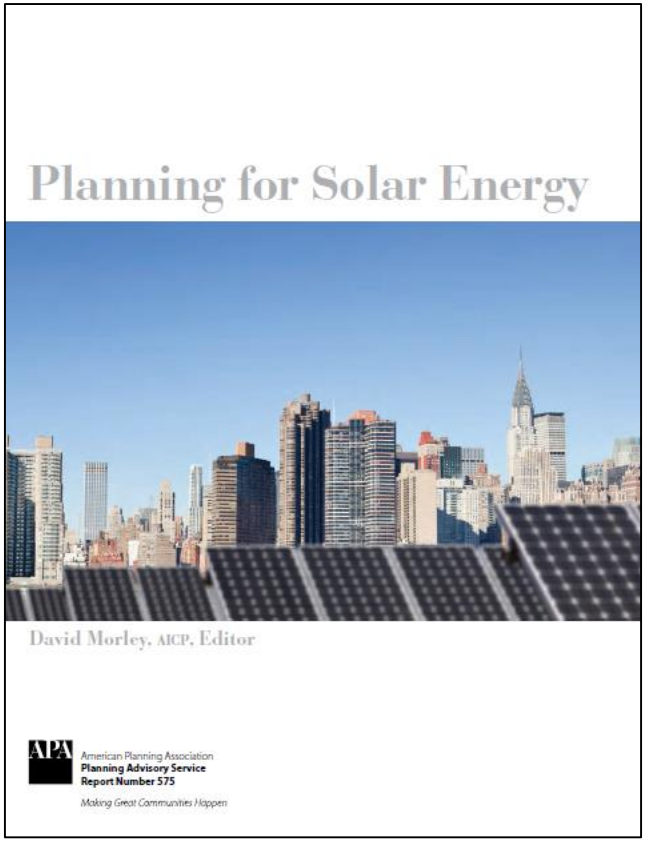


Example: Plan Making

Functional Plan Best Practice

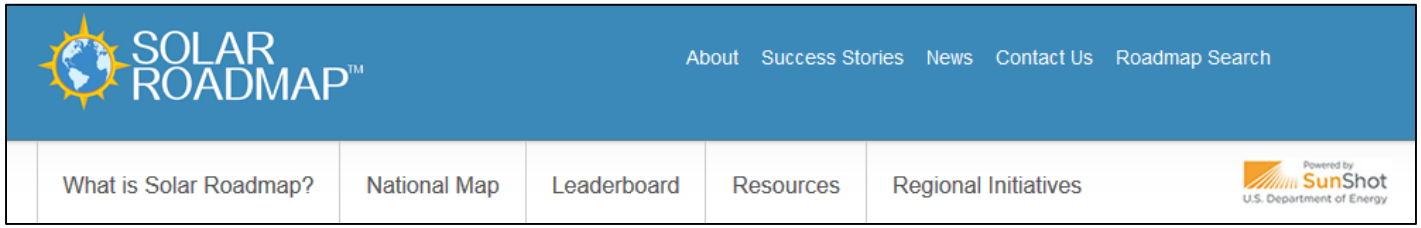


Resource: Planning for Solar Energy



Resource: Solar Road Map

Link: Solarroadmap.com



The Solar Roadmap helps local governments, electric utilities and service providers implement global best practices at the local level to make solar energy easier, faster and more cost effective

Example: Solar Road Map

Resource: Solar Roadmap

Town of DeWitt, NY Solar Roadmap

Town of DeWitt

Roadmap Goals and Progress

Permitting Process	*Current Progress:* *6 of 13 goals achieved*	46%
Planning & Zoning	*Current Progress:* *1 of 6 goals achieved*	17%
Financing Options	*Current Progress:* *2 of 3 goals achieved*	67%
Solar Market Development	*Current Progress:* *2 of 4 goals achieved*	50%

Resource: Planning for Solar Energy

U.S. Department of Energy SunShot Initiative Rooftop Solar Challenge II

Planning & Zoning Working Group Members

- **CUNY LEAD**
- Pace- Land Use Law Center
- City of Albany
- City of Ithaca
- City of Poughkeepsie
- City of Rochester
- City of Schenectady
- City of Syracuse
- City of White Plains
- Town of Clifton Park
- Town of Hempstead
- Town of South Hampton
- Village of Warwick

Working Group DOE Deliverables

✓ Model NYS Solar Zoning Ordinance
- Promotes Solar Zoning Best Practices
- Supports solar friendly language
- Increases transparency
- Increases project conformity to local zoning ordinances

✓ NYS Solar Ombudsman Support Adoption

NYSOLAR SMART

Agenda

Overview of NY Sun PV Trainers Network &

Introductions

Role of Local Government & Planning

Policy Development

Community Engagement

Break

Plan Making

Question & Answer/Next Steps

What is your Next Step?

- Adopt model resolution
- Appoint Task Force
- Conducting studies & performing research
- Establishing a training program
- Partnering with adjacent communities
- Leveraging state and federal technical assistance grants
- Developing a community engagement process
- Amending the comprehensive plan
- Considering regulatory changes