

Solar Ready II

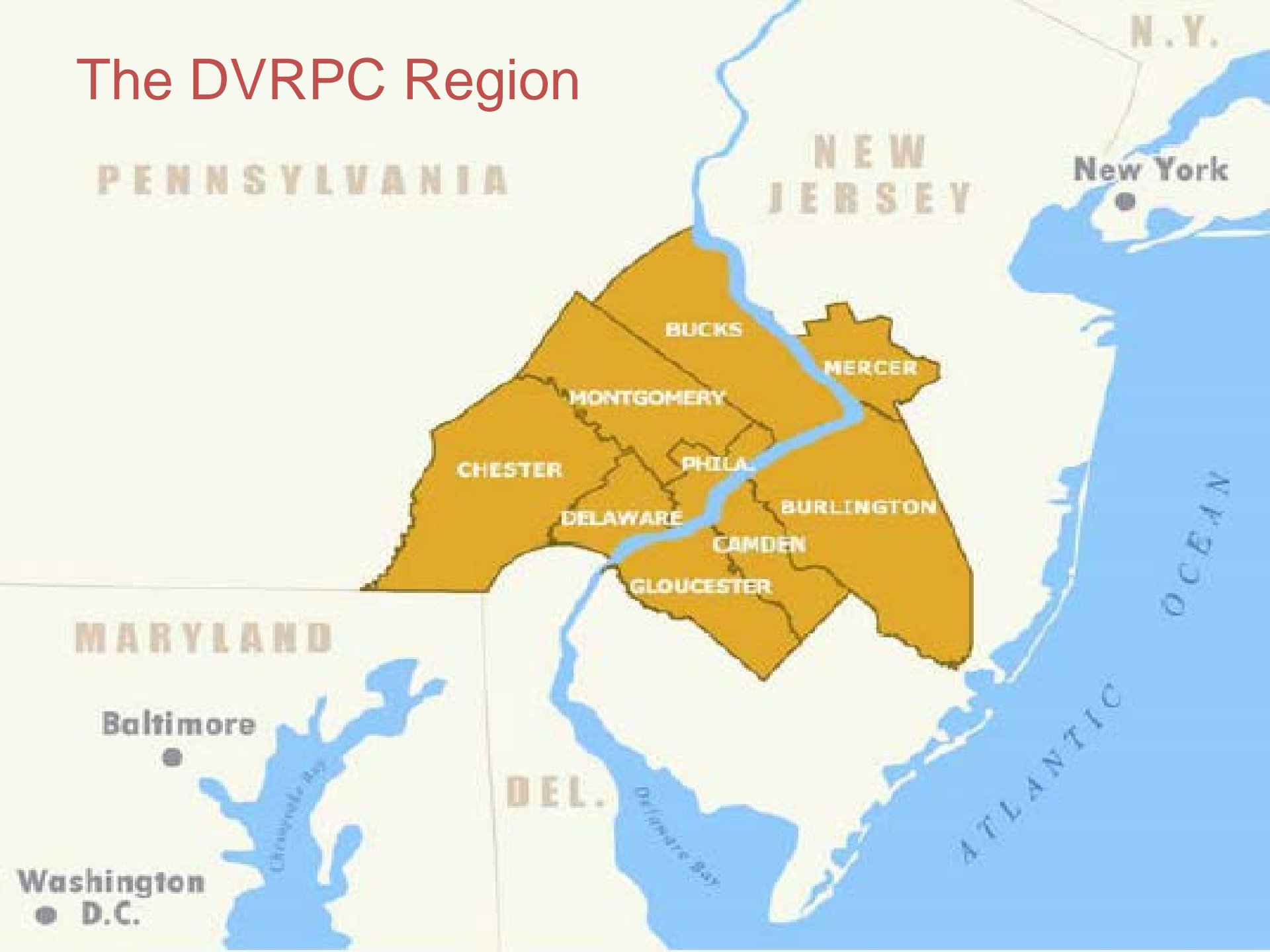
Introductory Stakeholder Meeting



Goals of Today's Meeting

1. Overview of Solar Ready II
2. Discuss existing solar PV **barriers** and **best management practices** for solar adoption our region;
3. Establish solar needs and goals of Greater Philadelphia – how can we encourage adoption;
4. Outline roles/responsibilities of stakeholder group;
5. Clearly lay out next steps.

The DVRPC Region



Delaware Valley Regional Planning Commission



- MPO for Greater Philadelphia Region
- Region is bi-state, nine counties surrounding and including Philadelphia
- Planning areas
 - Transportation Planning, Air Quality, Smart Growth Planning, Environmental Planning, Housing and Economic Development, Population and Employment forecasts, Long Range Planning
 - Office of Energy and Climate Change:
 - Regional greenhouse gas inventory
 - Climate Change Adaptation Planning
 - Preparing the region for alternative energy
 - Electric Vehicle Readiness Plan
 - Municipal energy management assistance
 - Pennsylvania Partnership to Promote Natural Gas Vehicles

Connections 2040



CONNECTIONS 2040

PLAN FOR GREATER PHILADELPHIA

fostering sustainability, equity and innovation

- **A long-range transportation plan that also considers land use, natural resources, and economic development**
- **Identifies strategies to achieve regional goals, including transportation investments**
- **Investments are fiscally-constrained**

Core Plan Principles



Manage Growth & Protect the Environment



Create Livable Communities



Build the Economy



Establish a Modern Multimodal Transportation System

Framework for a More Sustainable Future

Connections 2040: DVRPC's Long Range Plan

- Reduce emissions 50% by 2035
- Develop a more Energy-Efficient Economy

How?

1. Provide the same services with less energy
 - Energy efficiency and conservation
2. Purchase/produce energy with less CO₂
 - Renewable fuels for stationary and mobile
3. Reduce the demand for services energy provides
 - Key role for regional planning



CONNECTIONS 2040

PLAN FOR GREATER PHILADELPHIA

fostering sustainability, equity and innovation

Introductions/ Discussion:

**Why promote solar in your
community?**

Stakeholders



Elected
Officials/
Gov' Employees



Local
Constituents
/Advocacy



Business &
Industry



Regional
Utilities

U.S Department Of Energy SunShot Initiative Rooftop Solar Challenge



U.S Department of Energy SunShot Initiative

The U.S. Department of Energy SunShot Initiative is a collaborative national effort that aggressively drives innovation to make solar energy fully cost-competitive with traditional energy sources before the end of the decade. Through SunShot, DOE supports efforts by private companies, academia, and national laboratories to drive down the cost of solar electricity to \$0.06 per kilowatt-hour.

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

The U.S. Department of Energy SunShot Initiative Rooftop Solar Challenge incentivizes regional awardee teams to make it easier and more affordable for Americans to go solar. By streamlining permit processes, updating planning and zoning codes, improving standards for connecting solar power to the electric grid, and increasing access to financing, teams will clear a path for rapid expansion of solar energy and serve as models for other communities across the nation.

What is SunShot targeting?

Soft Costs



=

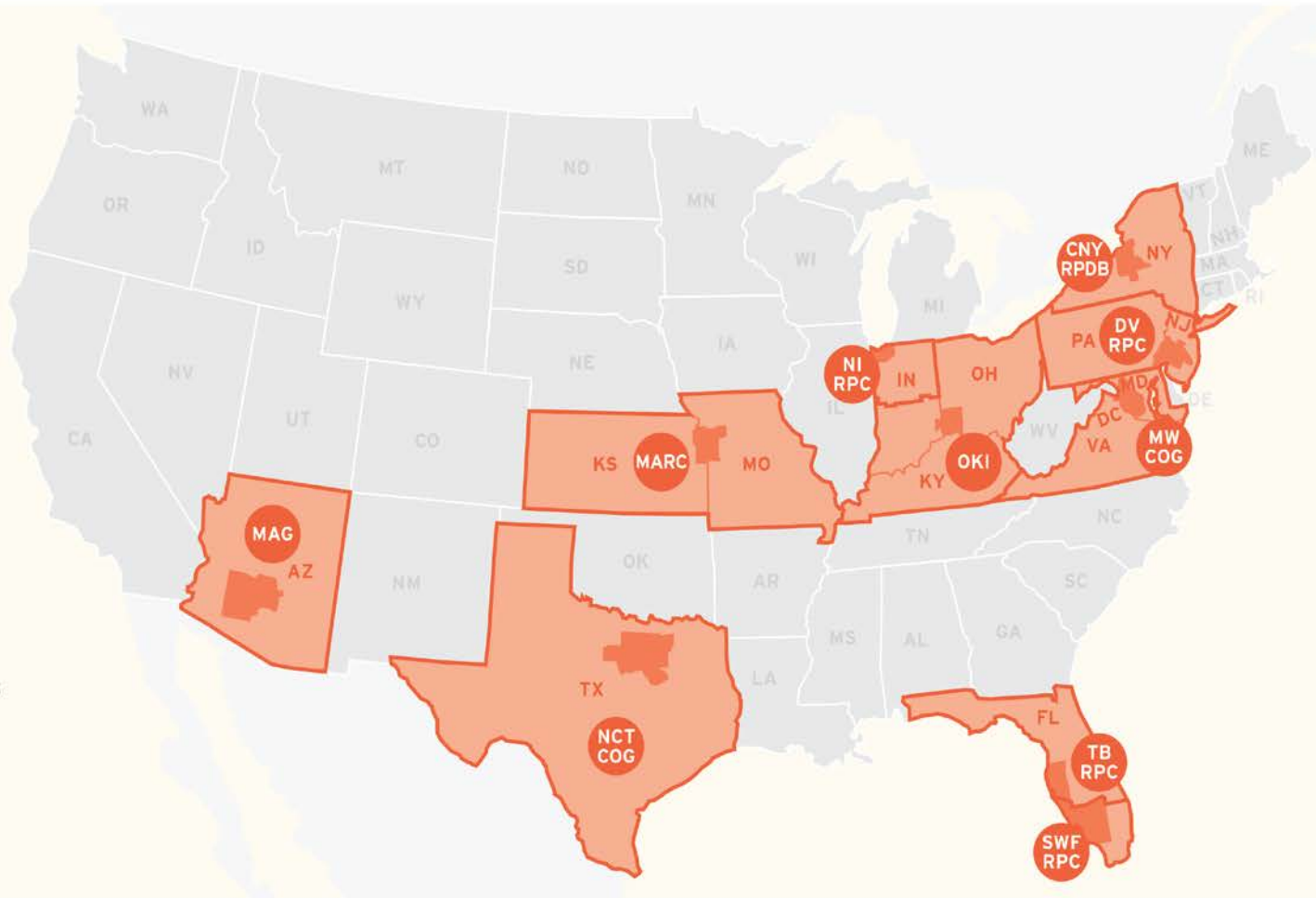
~~Up to 50%~~ **over 64%** of
the cost of a solar
installation

Solar Ready II

- Partnering with **Mid-America Regional Council (MARC)**, **National Association of Regional Councils (NARC)**, **Meister Consultants Group (MCG)**, and **Council of State Governments (CSG)**.
- Goals are to implement solar best management practices, training materials and methods, and other proven implementation strategies previously established by MARC's 2012 Solar Ready KC Initiative.
- Ultimately will result in more streamlined and standardized solar practices, and will achieve measurable improvements in solar market conditions and access for ten million people across the US.

SOLAR READY II REGIONAL PARTNERS

- CNY RPDB** Central New York Regional Planning and Development Board
- DV RPC** Delaware Valley Regional Planning Commission
- MAG** Maricopa Association of Governments
- MW COG** Metropolitan Washington Council of Governments
- MARC** Mid-America Regional Council
- NCT COG** North Central Texas Council of Governments
- NI RPC** Northwestern Indiana Regional Planning Commission
- OKI** Ohio-Kentucky-Indiana Regional Council of Governments
- SWF RPC** Southwest Florida Regional Planning Council
- TB RPC** Tampa Bay Regional Planning Council



SRII Grant Details – DVRPC/DCPD

Major Goals

Identify existing conditions and barriers in PA and NJ

Develop/Implement Plan Reduce Soft Costs to Solar PV Adoption

- Light technical assistance to 10-30 municipalities
- Training on BMPS

Funding Amount

\$90,000 (\$75,000 plus \$15,000 if goals are met)

Timeframe

18 to 30 months (depending on accomplishments met)

Major Deliverables and Milestones

Subtask	Target Date
Engage stakeholders	Dec. 2013 and ongoing
Evaluate existing processes/policies and update with Best Management Practices (BMPs)	February 2014 and ongoing
Jurisdiction Questionnaires and Data Gathering	March 2014 and ongoing
Engage 10-30 local governments as committed participants	March 2014 and ongoing
Conduct trainings on determined best practices	May 2014 and ongoing

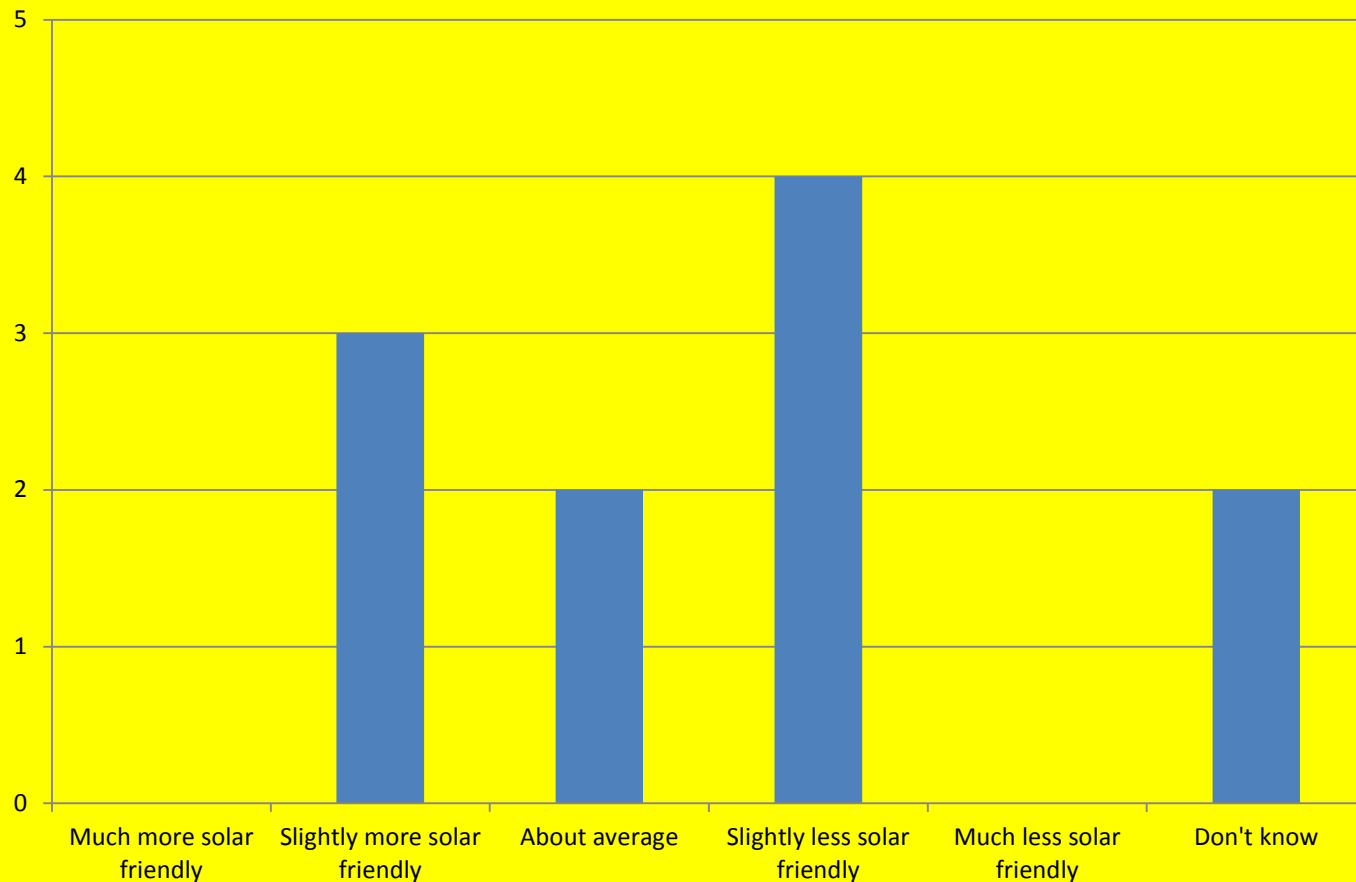
Solar Activity in the Region

- DVRPC's Alternative Energy Ordinance Working Group
- County-level planning activities and municipal assistance
- Sustainable Jersey "Solar Friendly" actions
- PennFuture SunshineTEAM
- Conservationtools.org

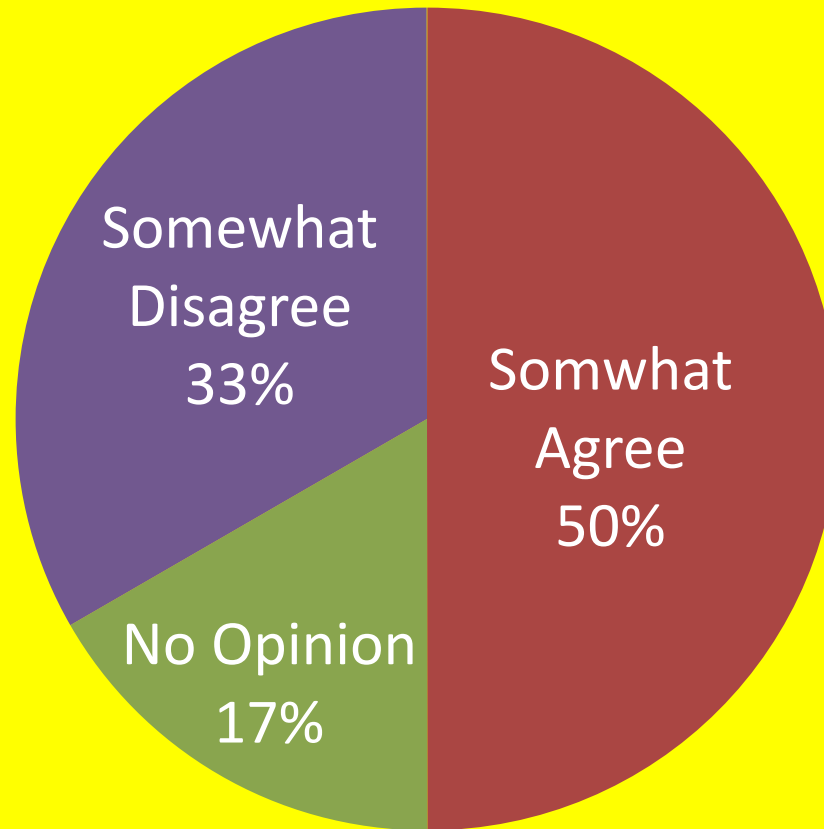
Discussion:

**What are the Real and
Perceived Barriers to
Solar?**

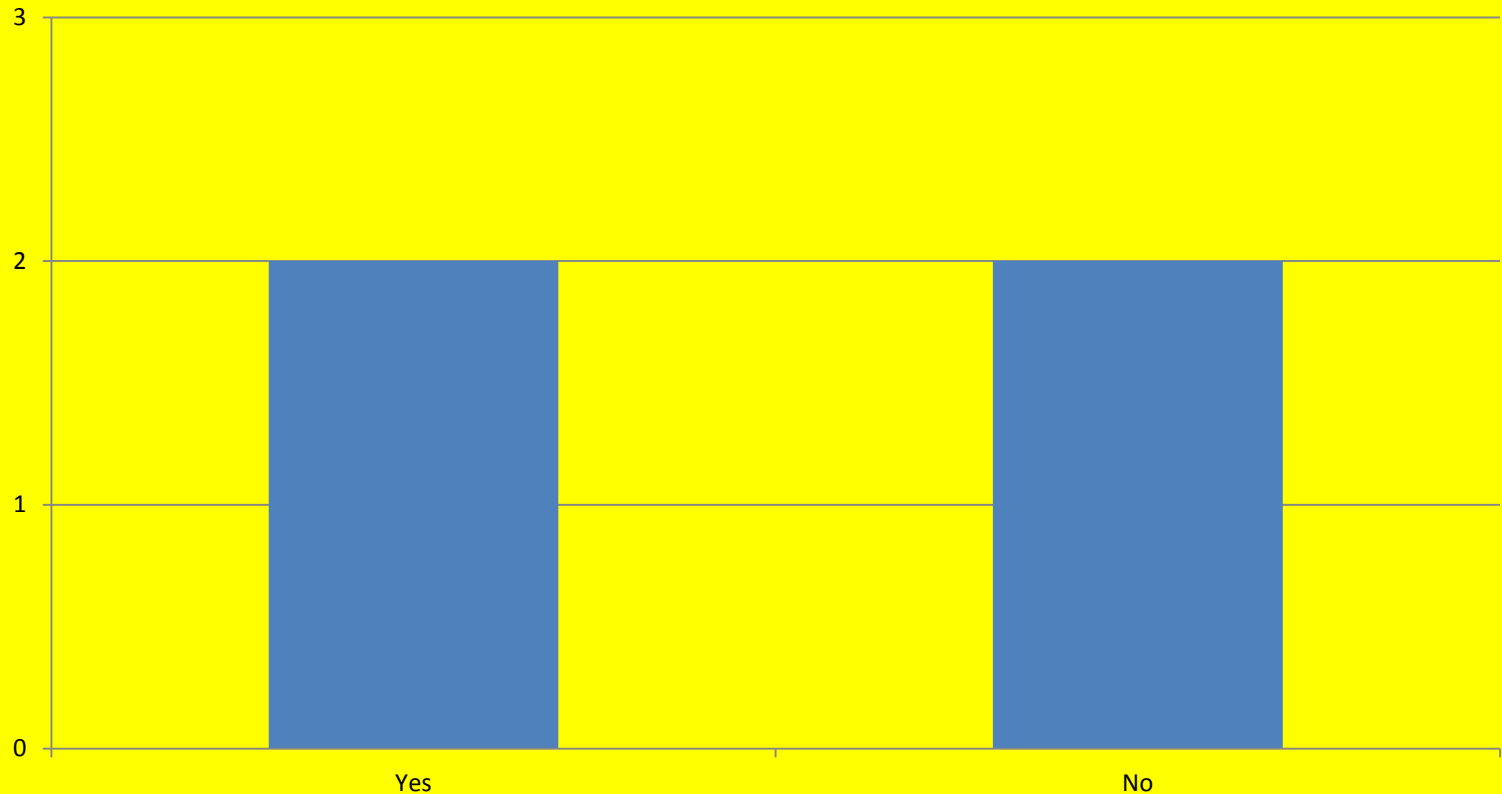
Thinking about the solar market across the country,
how do you think the Greater Philadelphia region
compares in terms of regulations that impact solar
implementation?



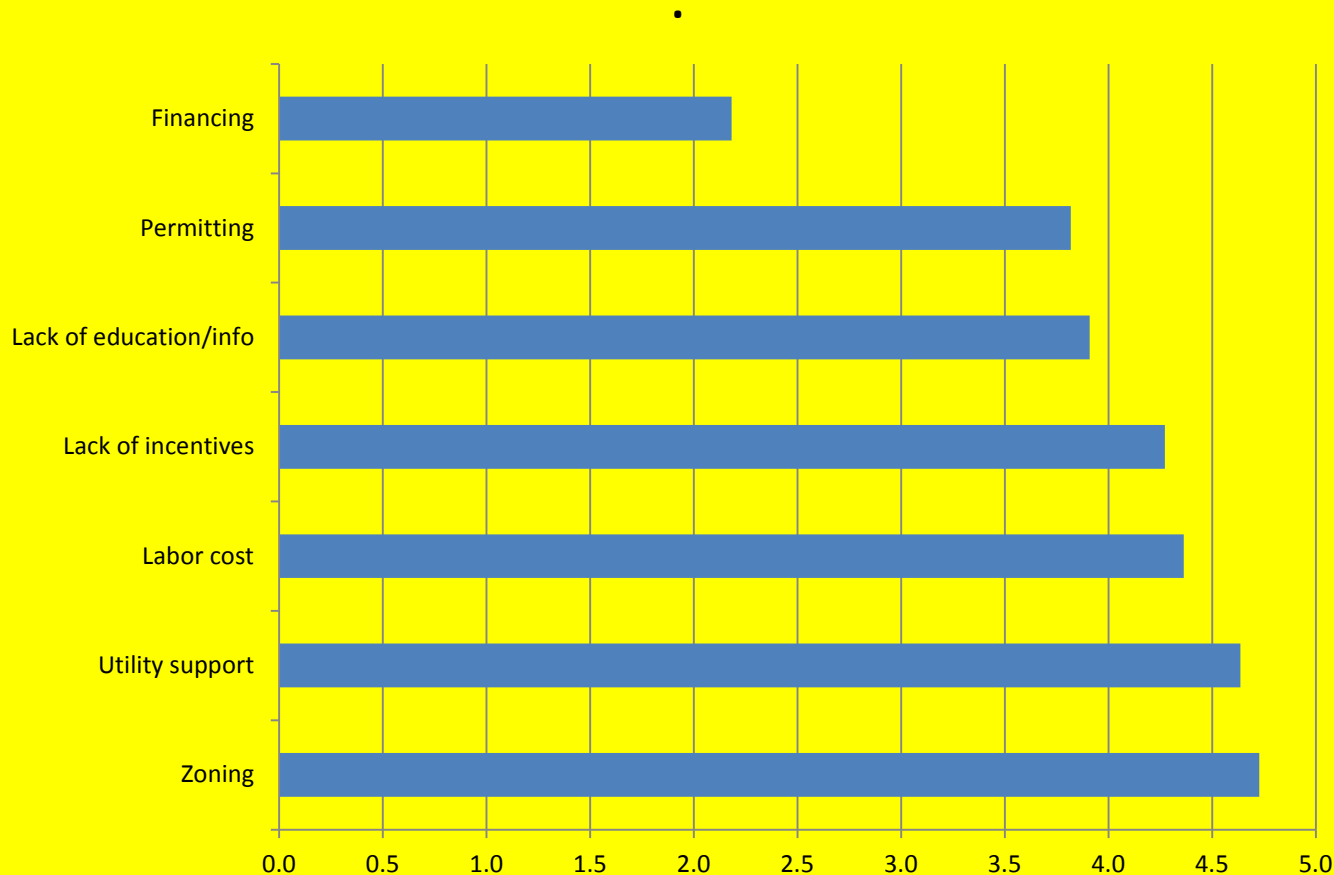
Agree or disagree? The permit process is too complicated and drives people away.
(of eleven responses)



If you represent a local government, does your entity currently have a solar permitting process in place?

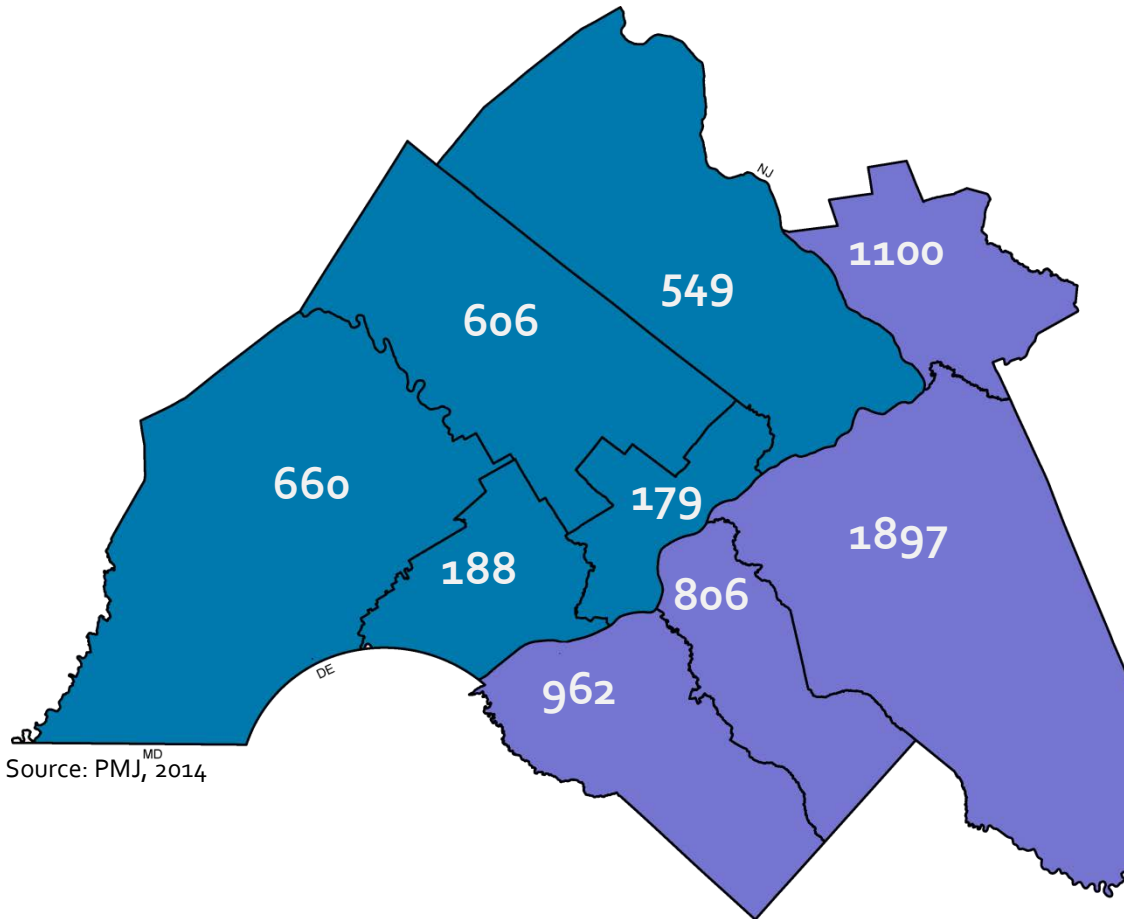


Rank the following “soft cost” areas in order of those that create the most difficult barriers to least difficult barriers



PV Installations in DVRPC Region

Count of solar PV systems installed by county



	PA	NJ
National Rank	10 th	2 nd
Av. System Size	2.8 kW	5.4 kW
SREC Price	\$40.00	\$160
\$/W installed (residential)	\$3.84	\$2.68
\$/W installed (commercial)	\$4.61	\$3.96

Source: NREL, 2014; PMJ, 2014; srectrade.com

Solar installations spiked in 2010, but demand still present

Installed Capacity

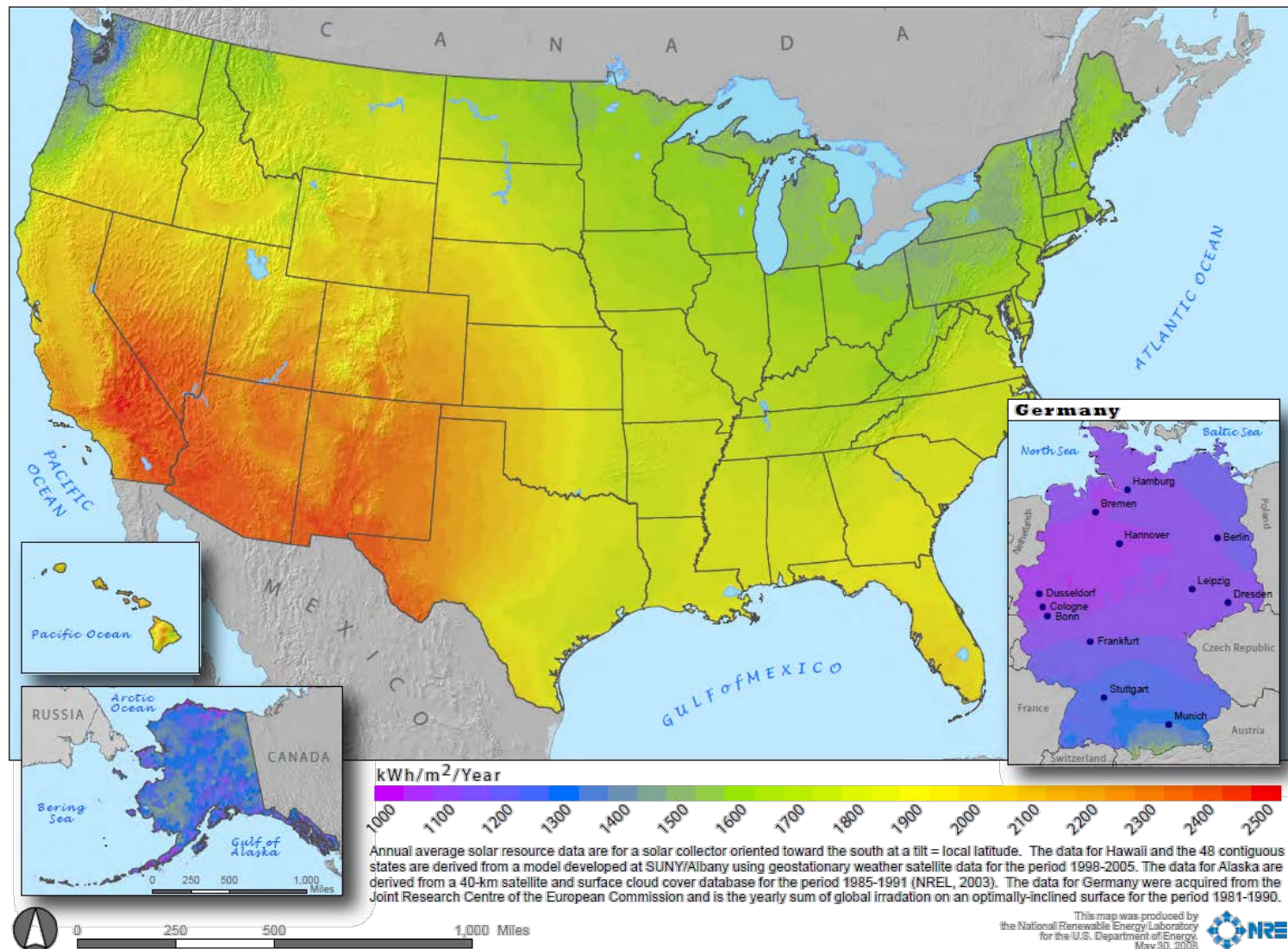
Total installed solar
capacity in the US

7.7 GW

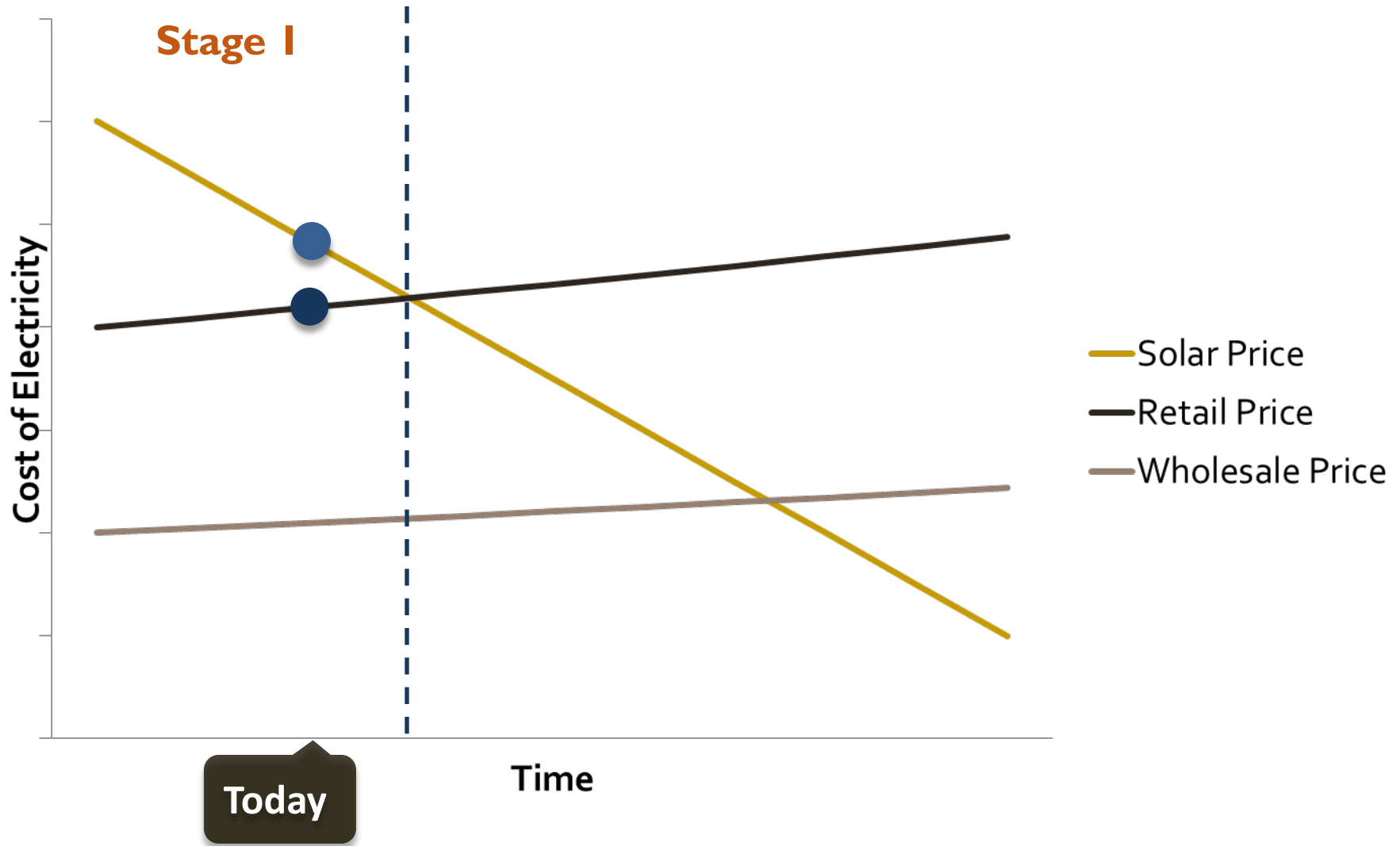
Capacity installed in
Germany in 2012
alone

7.6 GW

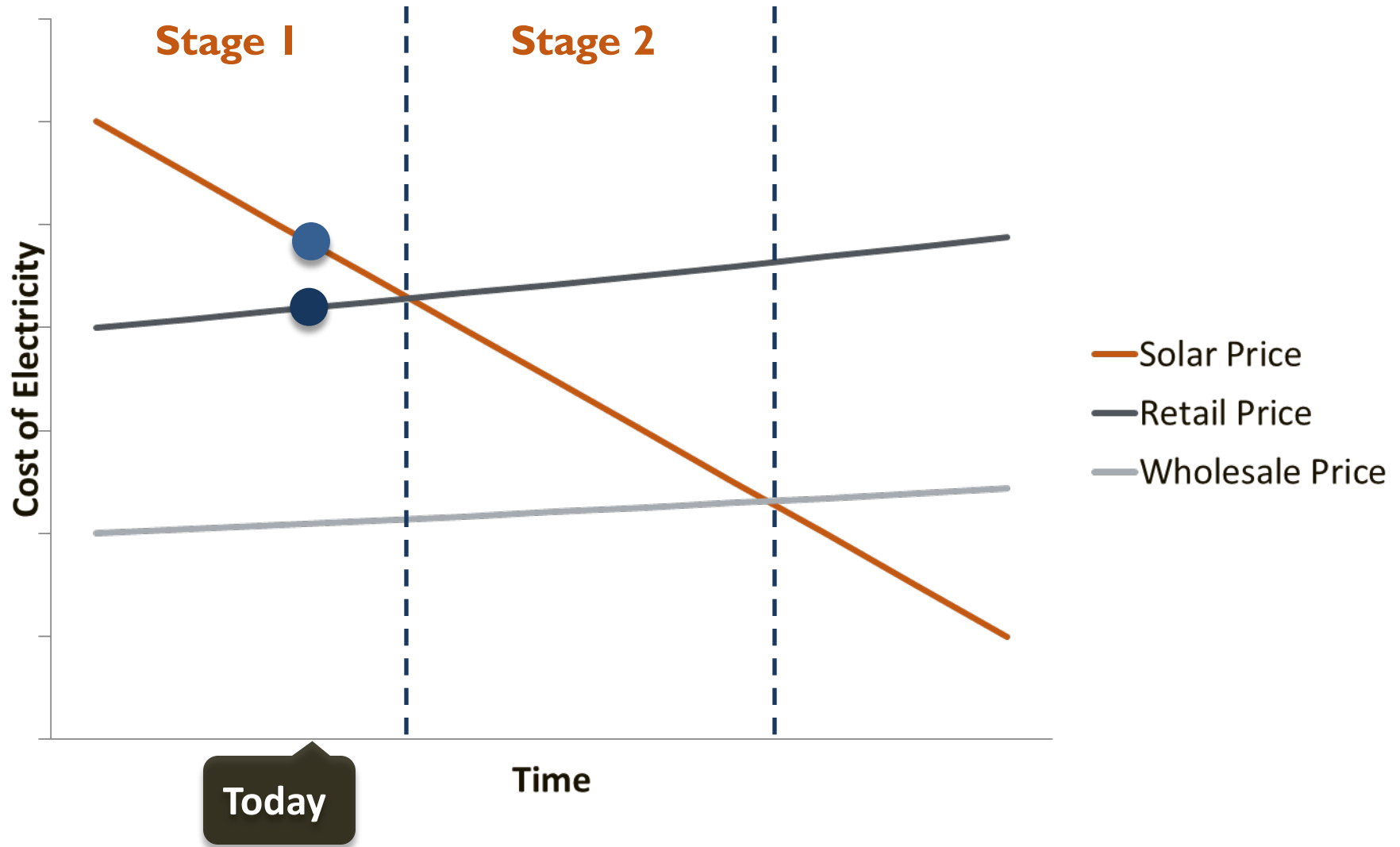
Myth: It's not sunny enough where I live



The Cost of Solar in the US

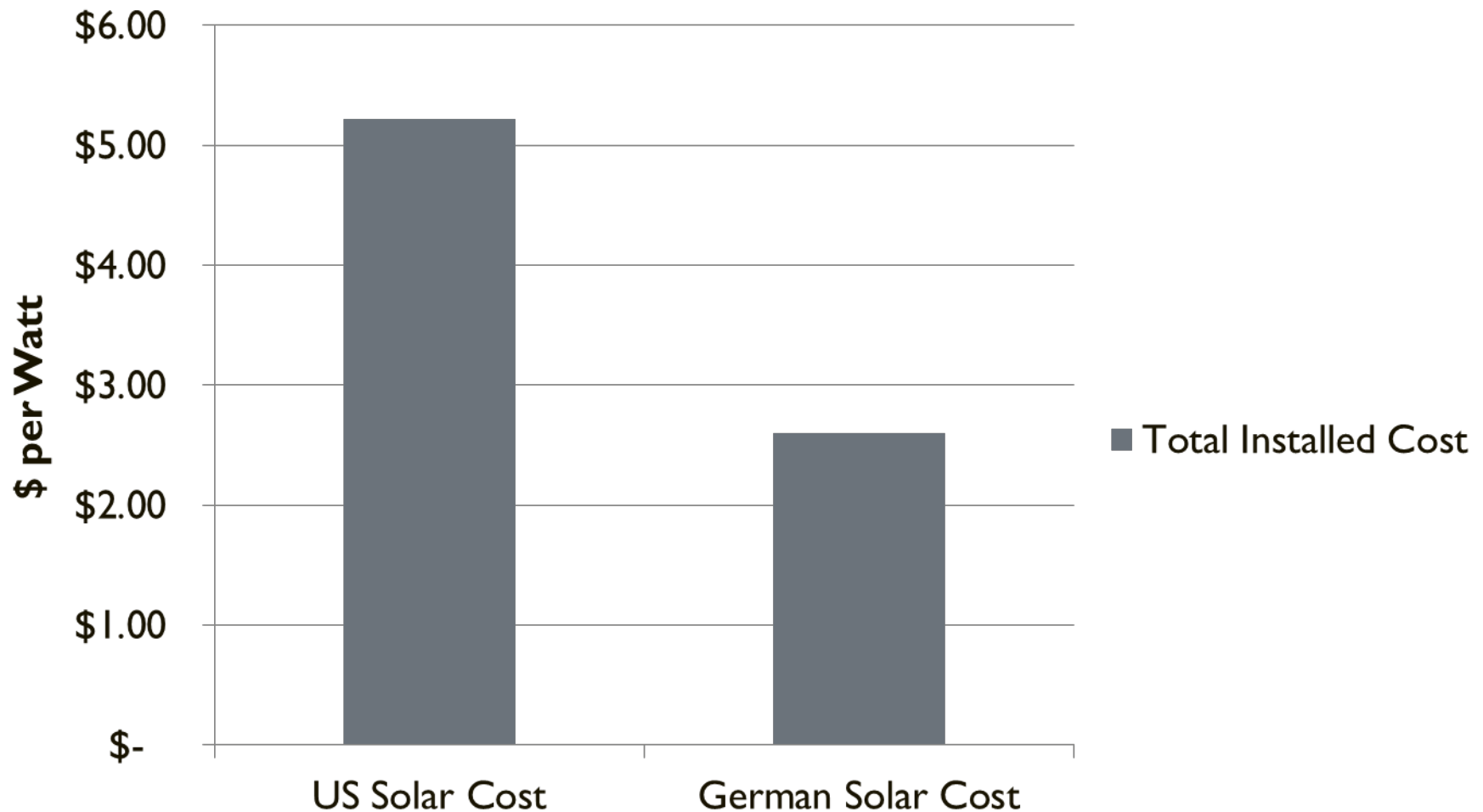


The Cost of Solar in the US



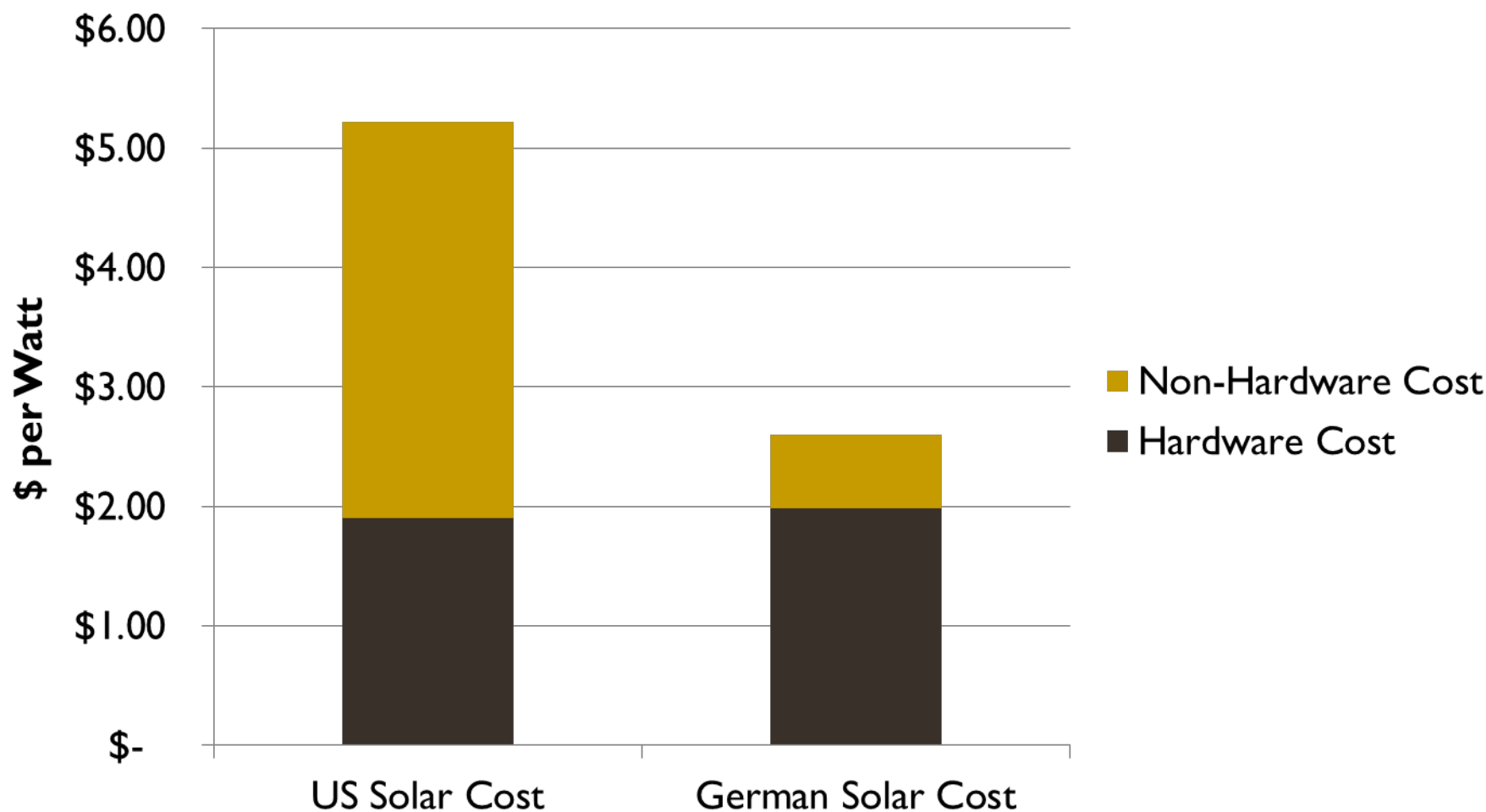
The Cost of Solar in the US

Comparison of US and German Solar Costs



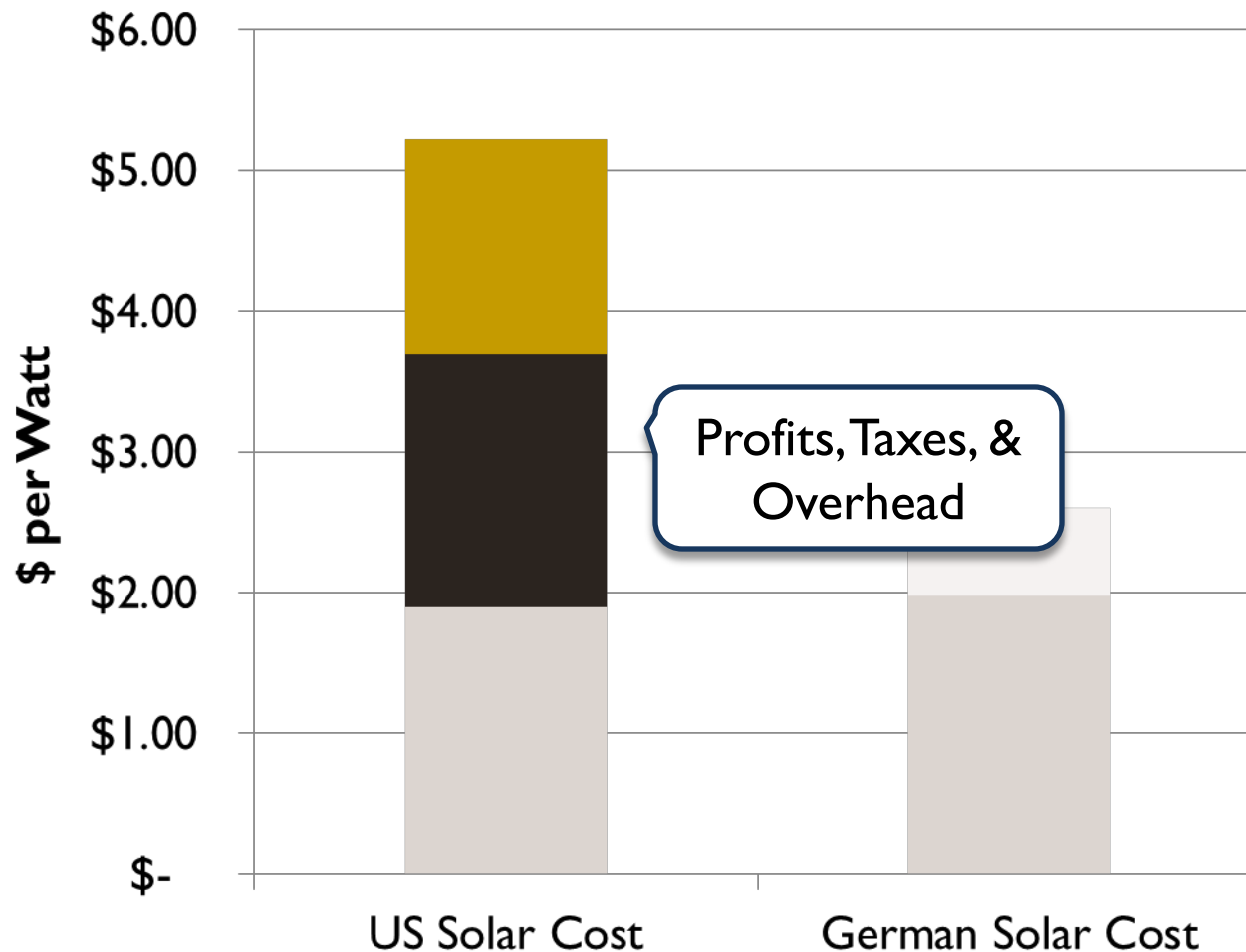
The Cost of Solar in the US

Comparison of US and German Solar Costs



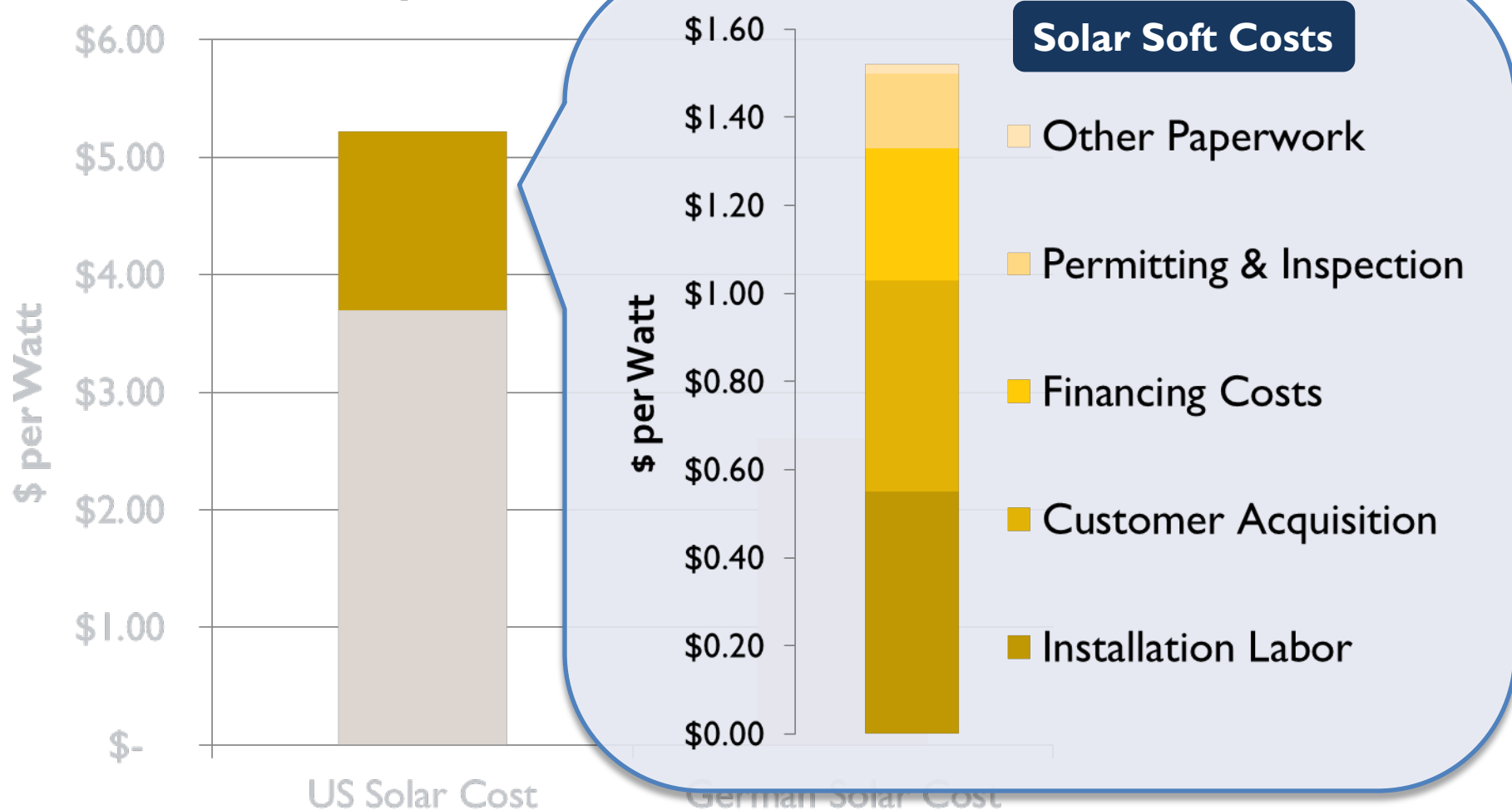
The Cost of Solar in the US

Comparison of US and German Solar Costs



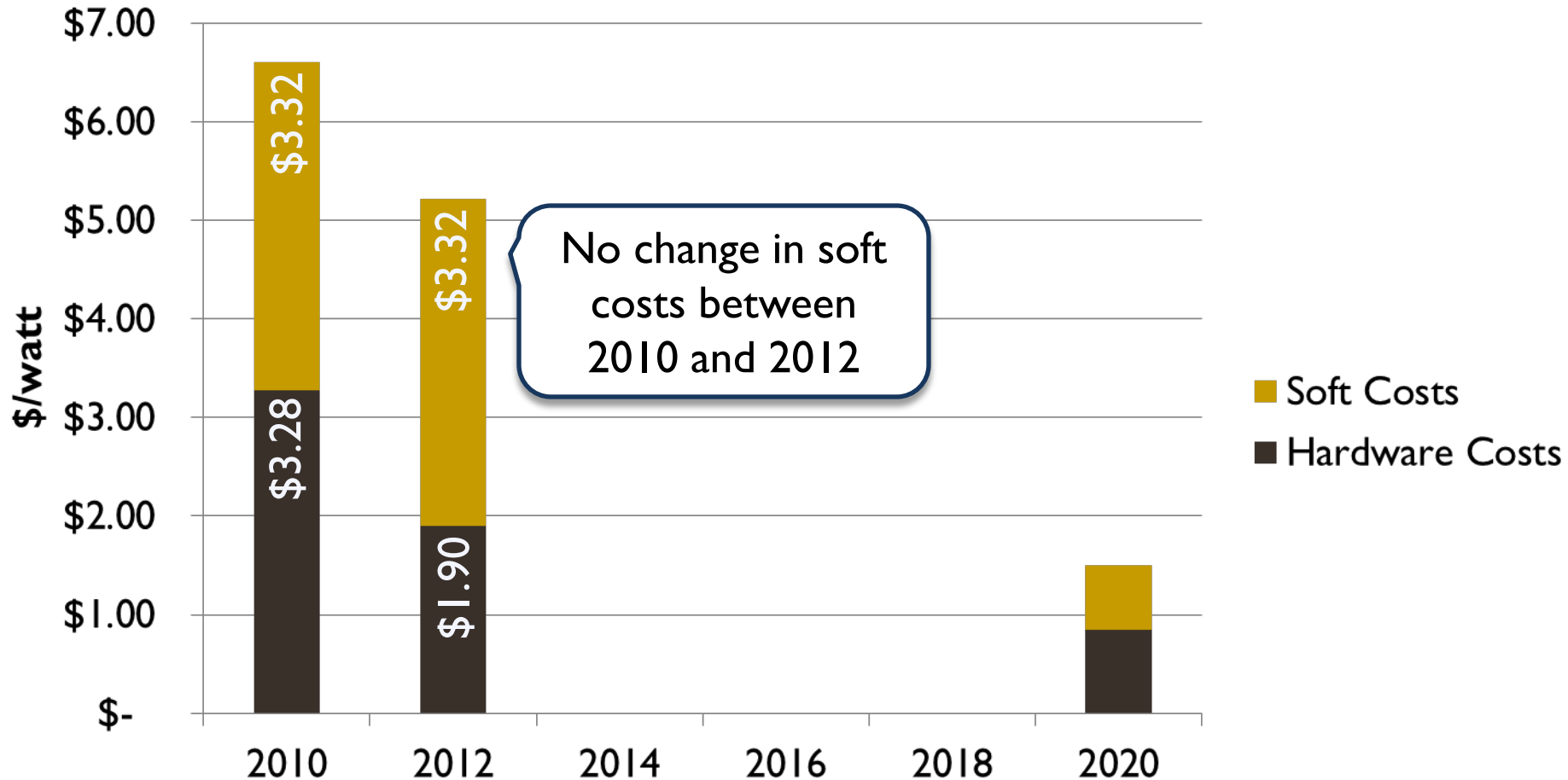
The Cost of Solar in the US

Comparison of US and German Solar Costs



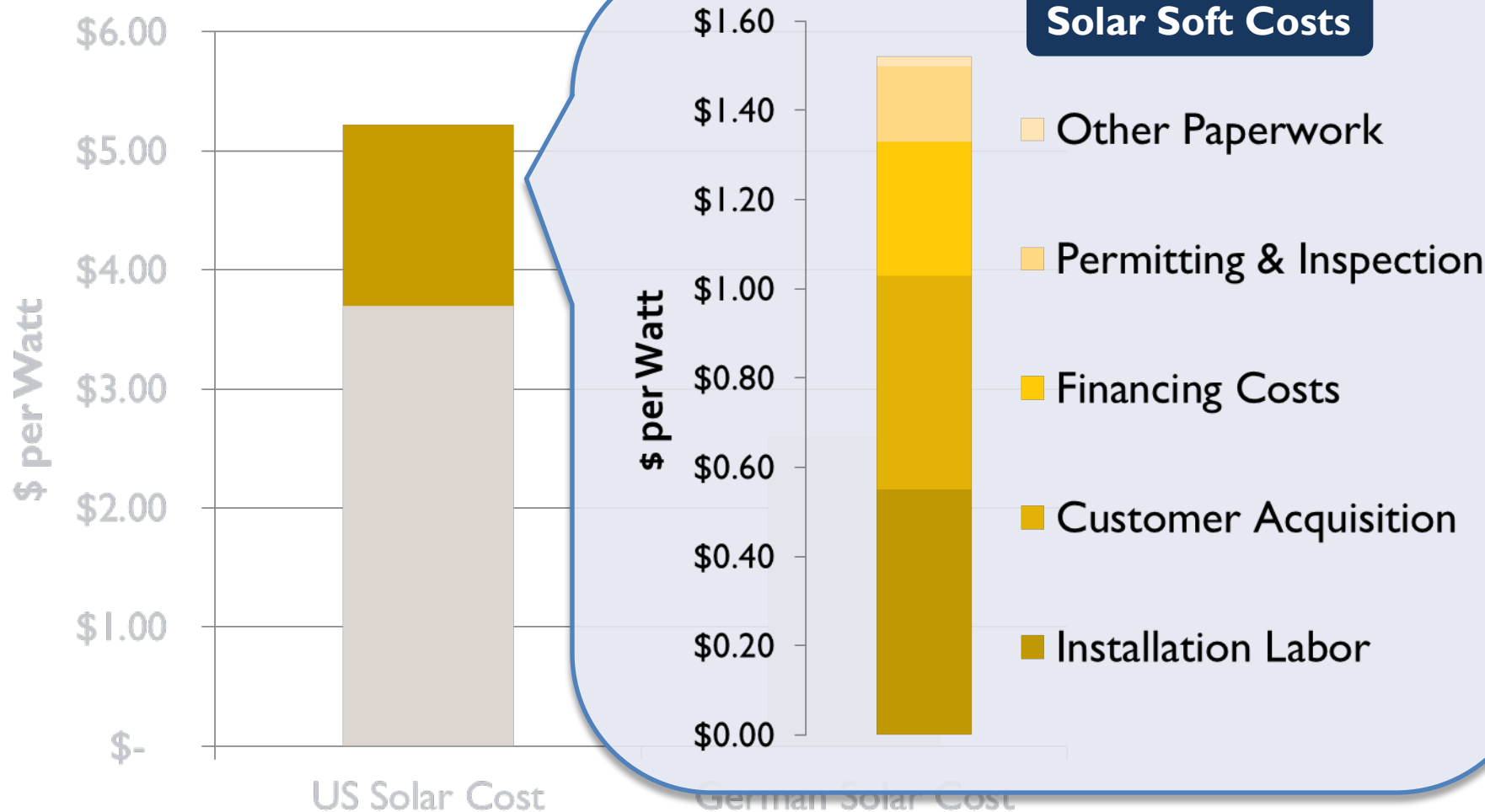
The Cost of Solar in the US

Change in Soft Costs and Hardware Costs Over Time



The Cost of Solar in the US

Comparison of US and German Solar Costs



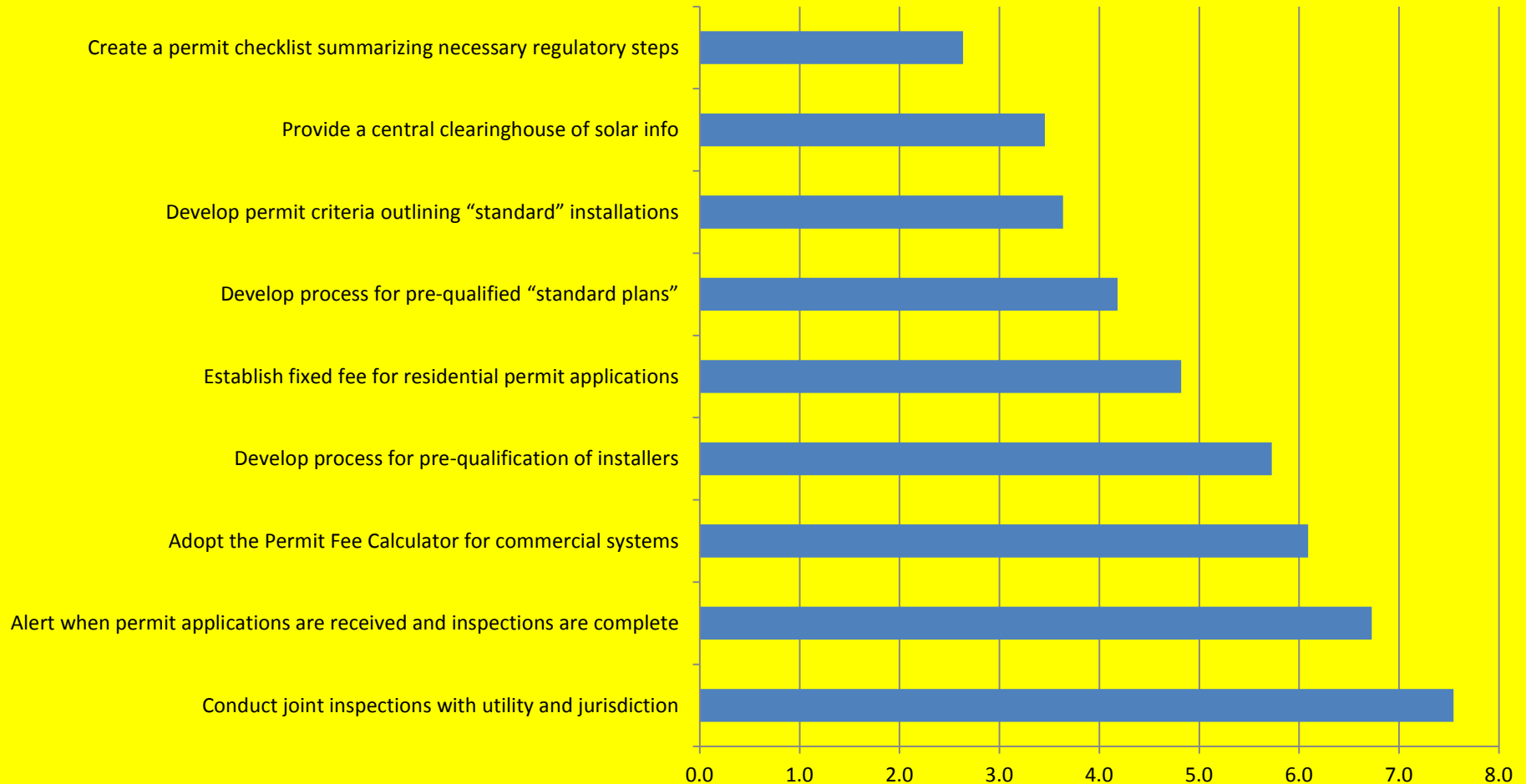
What we've heard...

- Permitting and inspection process
- Utility interconnection
- Financing
- First Responder Safety
- Customer Acquisition

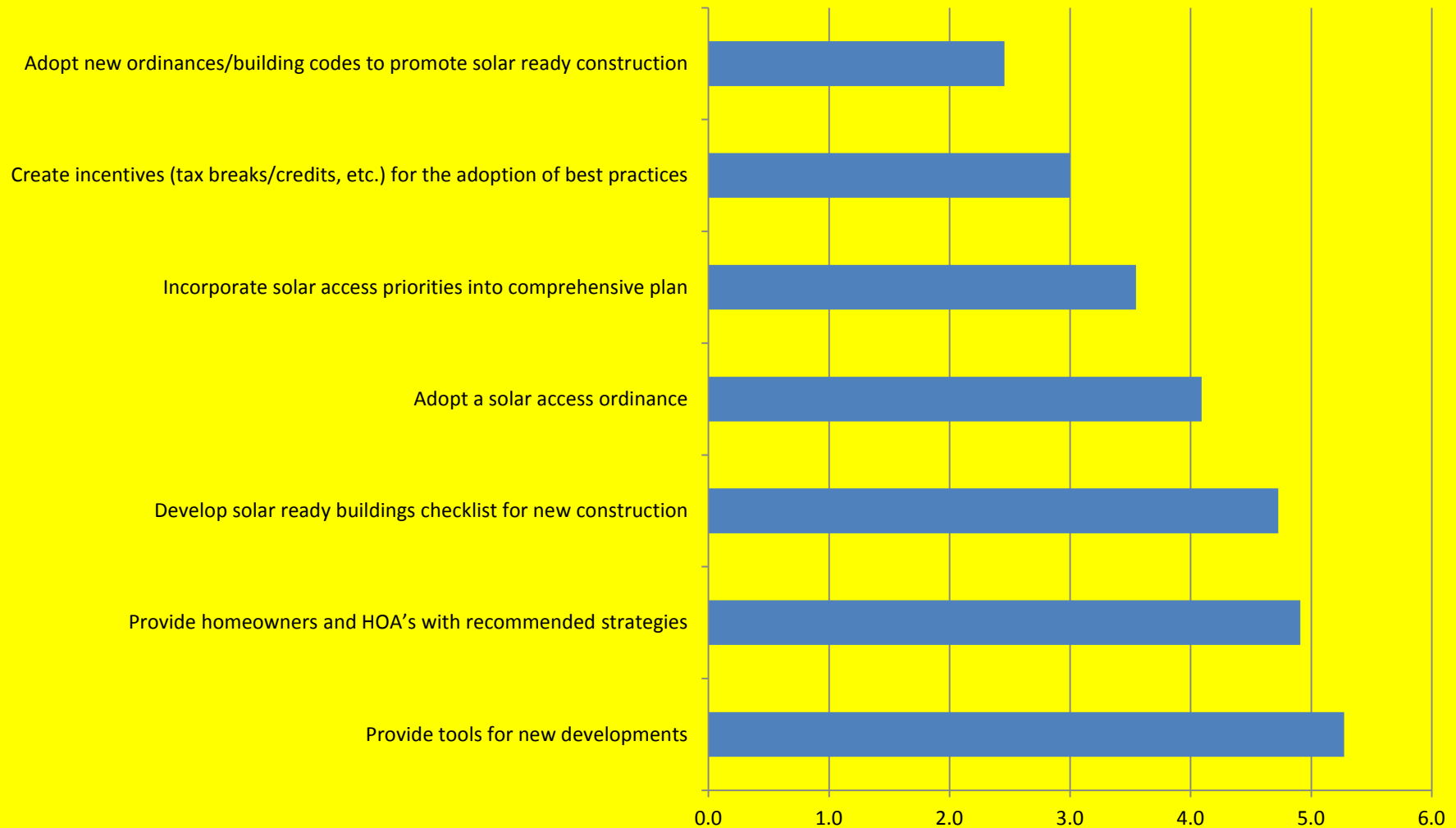
Discussion:

**What can we do to
improve the situation?**

Process Improvements: Rank what you believe should be the 5 most important to pursue locally, number 1 being the most important.



Planning Improvements: Rank what you believe should be the 5 most important to pursue locally, number 1 being the most important.



Best Management Practices

Process

Improve
Permitting
Process

Prequalify
Installers

Utility
Coordination

Planning

Zoning Code
Improvements

Improve Solar
Access

Educate
Developers +
Homeowners

Financing &
Adoption

Distribute
Cost Survey
to Installers

Enact Solarize
Program

Engage Local
Lenders

Process Improvements

Streamline Permits

1. Provide a central clearinghouse of solar info
2. Create a permit checklist summarizing necessary regulatory steps
3. Develop permit criteria outlining “standard” installations

Standardize Permit Fees

4. Establish fixed fee for residential permit applications
5. Adopt the Permit Fee Calculator for commercial systems

Notify Utility

6. Alert when permit applications are received and inspections are complete
7. Conduct joint inspections with utility and jurisdiction

Pre-Qualify Plans and Installers

8. Develop process for pre-qualified “standard plans”
9. Develop process for pre-qualification of installers

Planning Improvements

Improve Solar Access

- 10. Incorporate solar access priorities into comprehensive plan
- 11. Adopt a solar access ordinance

Educate Developers

- 12. Provide tools for new developments

Educate Homeowners

- 13. Provide homeowners and HOA's with recommended strategies

Improve Solar Readiness

- 14. Develop solar ready buildings checklist for new construction
- 15. Adopt new ordinances/building codes to promote solar ready construction

Engage Homeowners Associations

- 16. Create incentives (tax breaks/credits, etc.) for the adoption of best practices

Financing & Adoption

Engage Local Lenders

Enact a Solarize Program

Property Assessed Clean Energy (PACE)

- Authorized in NJ not in PA
- Commercial and industrial properties only

Needs and Goals of Greater Philadelphia

Discussion:

1. Which BMPs are currently being practiced in our region?
2. Which are most practical/relevant for improving the solar market in the Greater Philadelphia region?
3. Do we want a standardized “regional” process/suite of BMP’s, or should we create a collecting BMP documents to be picked/chosen?
4. In your opinion, does the cost and/or dynamic specifications of solar equipment cause home owners or others to refrain from installation?

Discussion:

What's expected of the stakeholder group?

Finalize Stakeholder Group

Requests & Responsibilities

1. Identifying barriers and BMPs
2. Identify participant municipalities
3. Training resources:
 1. Topics, locations, speakers, outreach
4. Assist DVRPC with data gathering and statistics
5. Attend meetings on a regular basis for the life of the project:
 - a) Discuss accomplishments/hurdles;
 - b) Review draft BMP documents; and
 - c) Discuss ongoing programs

Discussion:

Who else should be included in the stakeholder group?

Discussion:
What's next?

Next Steps

Jurisdiction Questionnaire

- Used to create a baseline
- 6 pages total
- 10-30 responses needed
- Best method for dissemination – assistance needed?

Solar Ready II Implementation

- Identify BMP that are most applicable to the region
- Create an implementation strategy

Identifying municipalities and providing tech assistance

- How do we get them to sign on?

Solar Ready II Trainings

- Look for existing trainings to help promote
- Introduce the program to local governments from across the region and seek engagement
- Presentations on current Best Management Practices from peer jurisdictions

Stakeholder Meetings

- Discuss hurdles and accomplishments
- Evaluate progress
- Review/refine documents
- Meet bimonthly?

Thank you for
Attending!

Goals of Today's Meeting

1. Overview of Solar Ready II
2. Discuss exiting solar PV **barriers** and **best management practices** for solar adoption our region;
3. Establish solar needs and goals of Greater Philadelphia – how can we encourage adoption;
4. Outline roles/responsibilities of stakeholder group;
5. Clearly lay out next steps.

For More Information

Liz Compitello

Research Analyst

Energy and Climate Change Initiatives

**Delaware Valley Regional Planning
Commission**

ecompitello@dvrpc.org

215.238.2897

Justin Dula

Manager

County & Regional Planning

Delaware County Planning

Department

dulaj@co.delaware.pa.us

610-891-5219

www.dvrpc.org/EnergyClimate/aeowg.htm

www.narc.org/solarready



Mia Colson
National Contact
National Association of Regional Councils

Mia@narc.org
(202) 986-1032, x218
www.narc.org/solarready

<http://www.eere.energy.gov/solarchallenge/index.html>

Acknowledgment: This material is based upon work supported by the U.S. Department of Energy under Award Number DE-EE0006310

Disclaimer: This presentation was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.