



National Solar Jobs Census

Key Findings, Lessons Learned and Next Steps

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About The Solar Foundation

- National 501(c)(3) nonprofit that strives to increase the widespread adoption of solar energy
- Founded in 1977 and based in Washington, DC
- Charitable research arm of the Solar Energy Industries Association
- Our research & education efforts are focused on:
 - solar labor market/policy implications
 - solar access laws
 - helping local governments “go solar”
 - national educational initiatives

National Solar Jobs Census 2010

Partnered with Green LMI and Cornell University. Released October 2010.

Census was conducted because:

1. As solar deployment grows so does the number employed by solar
2. Local, state and federal laws are made with job creation in mind
3. No credible solar jobs numbers yet existed

Outcome of the Census:

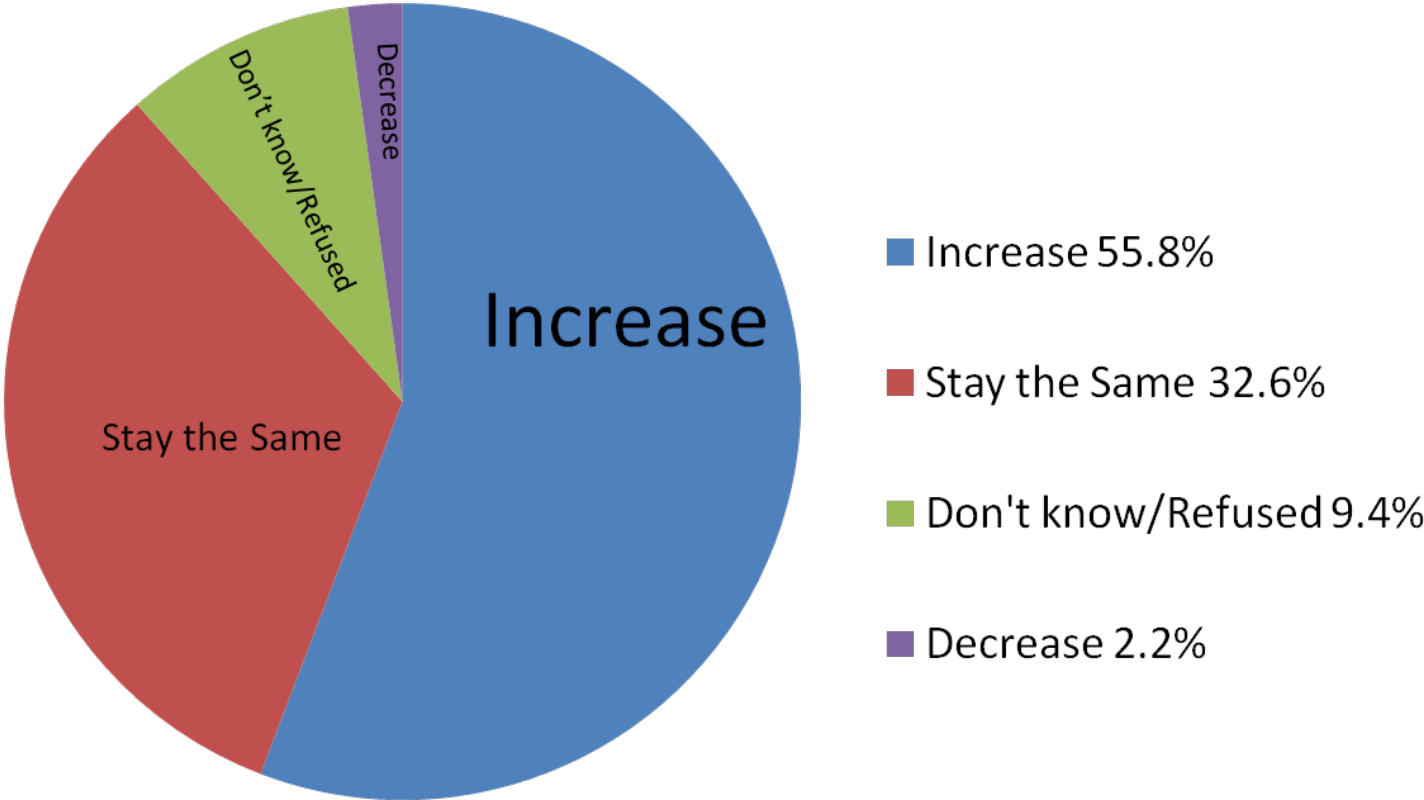
1. Media sensation
2. Establishes first credible solar jobs baseline
3. Provides lawmakers with tangible evidence of industry's value

Methodology

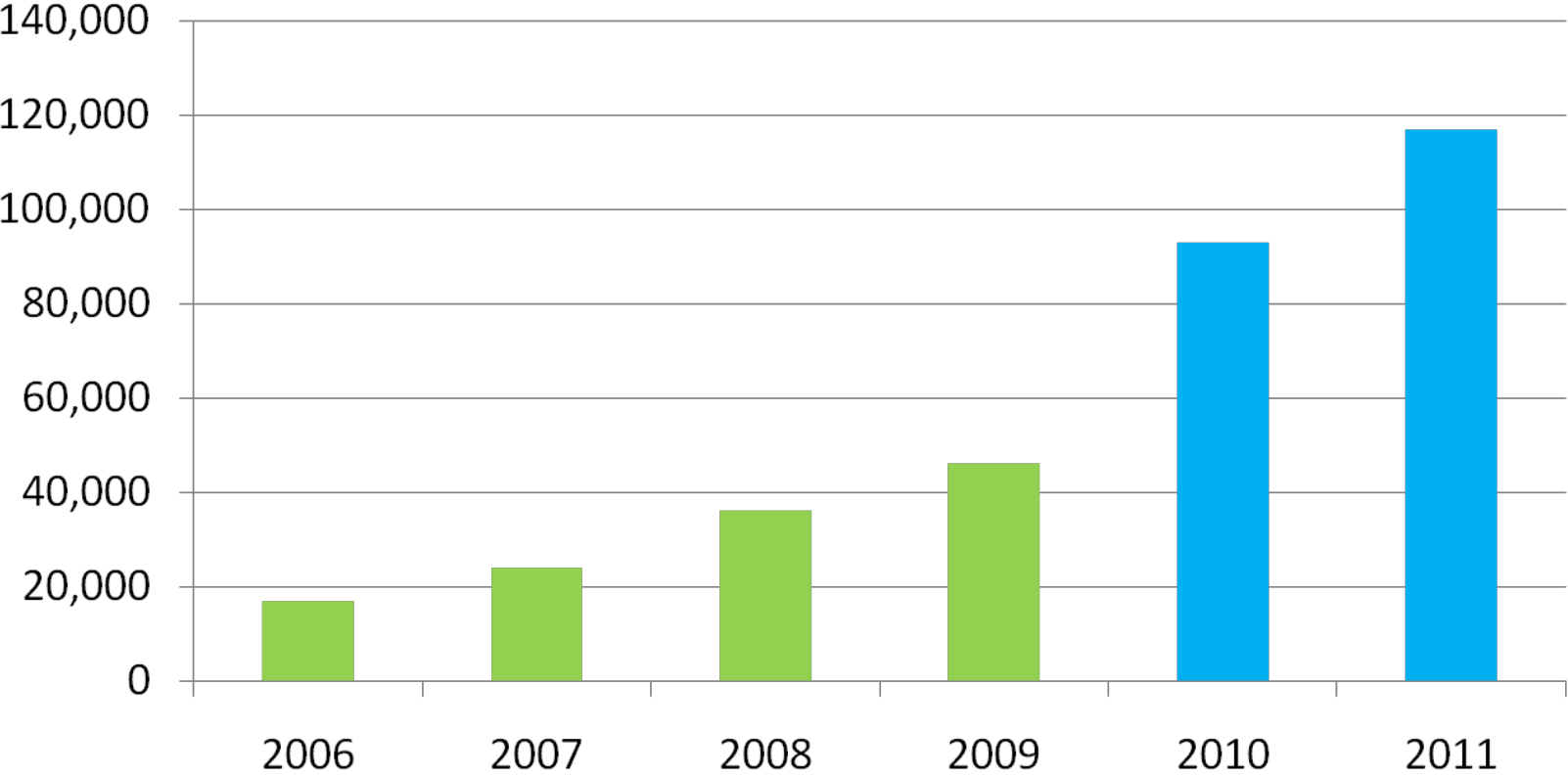
- Census does not rely on economic impact models
- Targeted self-identified solar employers (and employers with NAICS classifications that typically work with solar) via email and phone
- 2,400 confidential employer responses were drawn from all 50 states across installation, wholesale trade, manufacturing, utilities, and “other” subsectors
- Analyzed 31 occupations across PV, SWH (+ pools), space heating and cooling
- Average response rate was 29%, with all duplicates eliminated
 - States with small sample size or non-distributional sampling were not included
- Results were:
 - compared against secondary industry and state data sources
 - tested by labor statisticians at Cornell University
 - statistically significant and conservative

Hiring Expectations – All Firms

Between August 2010 – August 2011



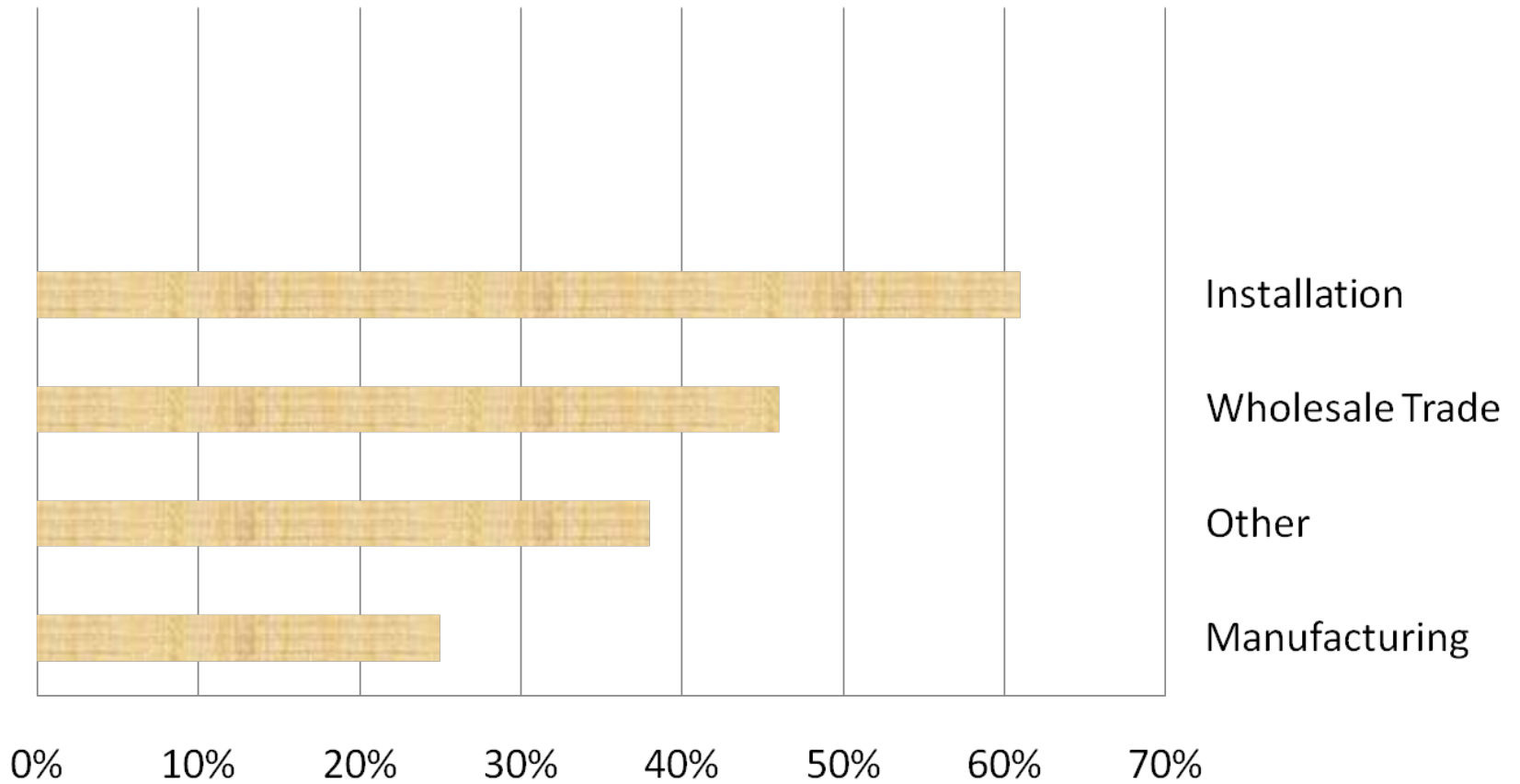
Estimated U.S. Solar Industry Employment



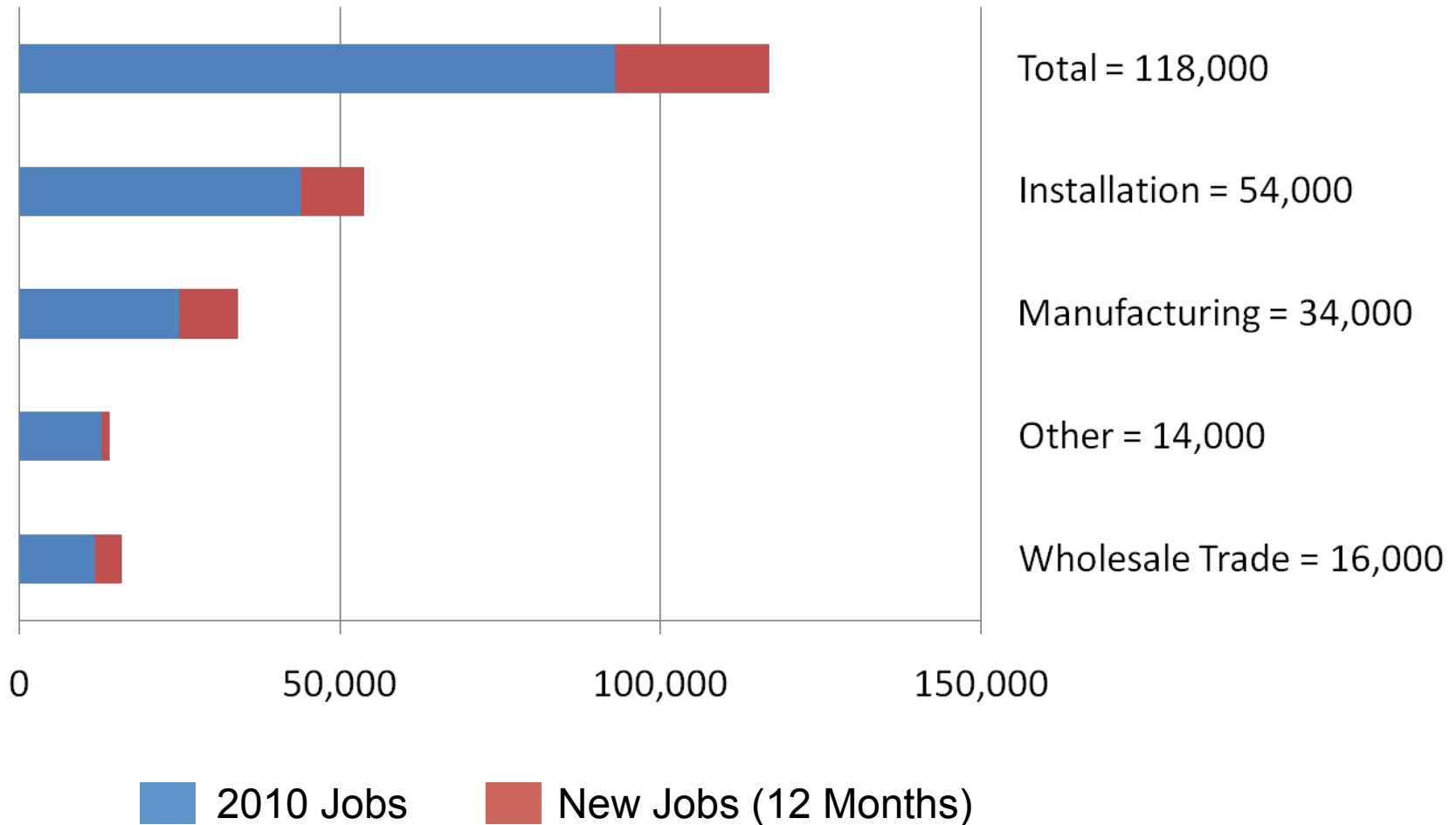
SEIA Estimate

The Solar Foundation Census

Percentage of Firms, By Subsector



Subsector Job Numbers & Growth Expectations



“Solar Worker” spends $\geq 50\%$ of time on solar activities

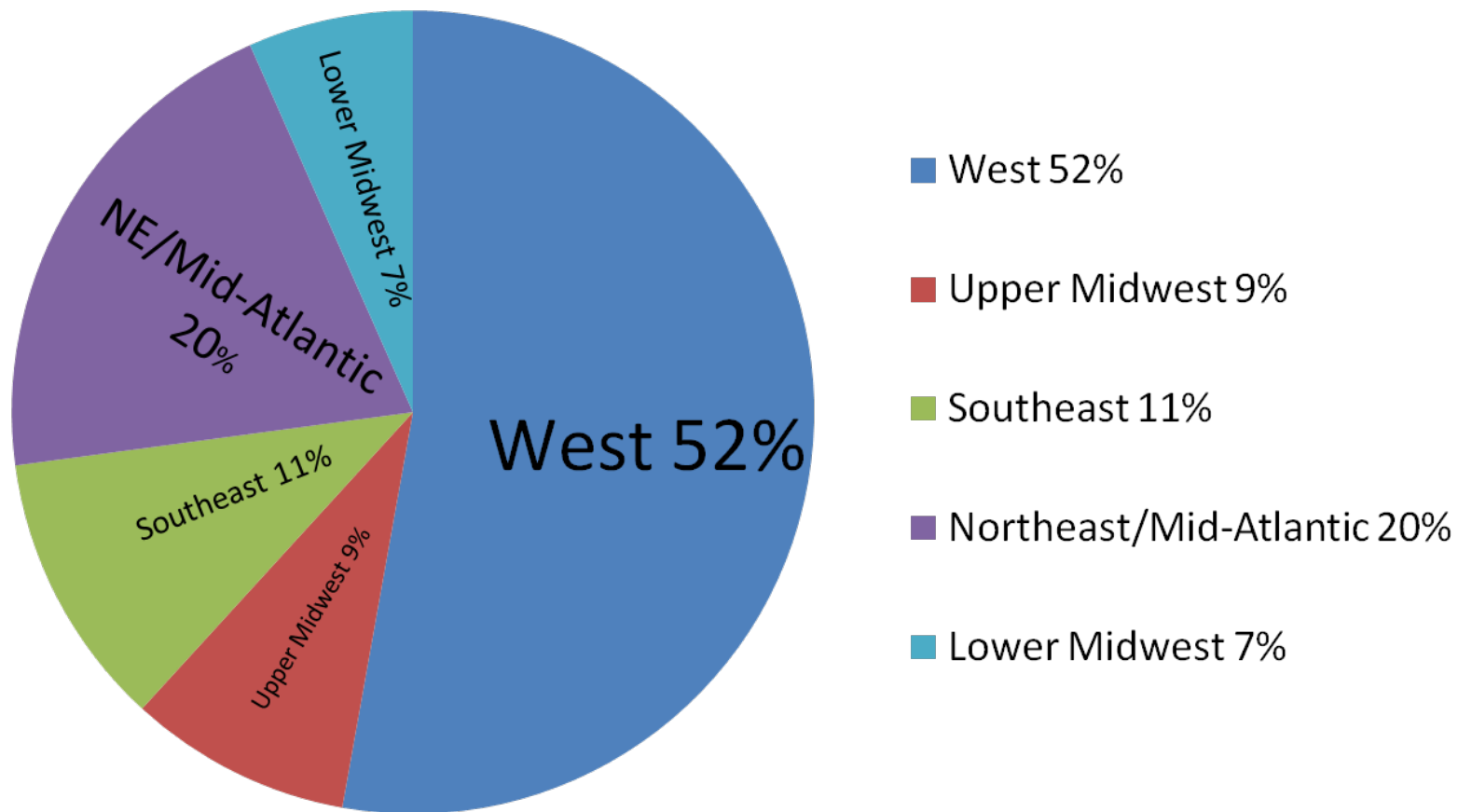
Average number of solar workers:

- Installation firm = 8
- Manufacturing firm = 24
- Utility = 4
- Wholesale trade company = 4

Of the 31 occupations identified, the five fastest growing are:

1. PV Installers (51 – 66% growth)
2. Electricians with specific experience in solar installations (42-55% growth)
3. Sales occupations at wholesale trade firms (40 -49% growth)
4. Sales representatives or estimators at installation firms (39-47% growth)
5. Roofers with specific experience in solar installations (36-49% growth)

Breakdown of Solar Employers by Region



Top 10 States for Solar Jobs

Rank	State	Est. Solar Firms 2010	Solar Jobs 2010	Est. Solar Jobs 2011
1	California	1,072	17,352	36,000
2	Pennsylvania	282	3,193	6,700
3	Texas	170	3,068	6,400
4	Michigan	76	3,023	6,300
5	Wisconsin	89	2,885	6,000
6	Colorado	254	2,528	5,300
7	Georgia	62	2,157	4,500
8	Arizona	230	1,815	3,800
9	New York	225	1,654	3,500
10	Indiana	25	1,628	3,400

Key Takeaways/Lessons Learned

- Solar jobs are real and on the rise
 - Solar is having a positive impact on the overall economy and in all 50 states
 - Growth across the entire value chain – even manufacturing
- Employers are reporting difficulty finding qualified workers
- Smart policies accelerate job creation
 - High solar jobs numbers do not signify that new solar legislation is not needed
- Employment data and economic impact studies will continue to be important in winning political support for solar
- More credible and independently verified studies are needed
 - Information must be timely – best if we have the data before legislation is voted on
 - Need to dig deeper into state level data and recognize policy implications
 - Need greater participation from employers
 - Need to survey project managers and not human resource representatives

Next Steps

- Currently:
 - Working w/ partners to resolve perceived and actual hiring difficulties
 - Working with BLS to get solar on their radar
- Plans to:
 - Publish subsequent studies with refined jobs numbers
 - Actively seeking partnerships and financiers
 - Examine workforce implications if certain polices are passed
 - Examine other economic development impacts
 - Direct value/multiplier effect, business attraction, exports, etc.
 - Our economic context demands it



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Andrea Luecke Bio

Andrea Luecke is the acting executive director of The Solar Foundation, where she is responsible for developing and implementing educational initiatives and research that promote the widespread adoption of solar energy.

In addition to the release of the *National Solar Jobs Census*, The Solar Foundation is a partner on the DOE's *Solar America Communities Outreach* grant to provide local governments with technical expertise in creating solar programs and policies.

Prior to joining the Foundation, Andrea led the City of Milwaukee's *Solar America Cities* initiative where she designed its PACE program, administered installer workshops, launched a marketing campaign, and created the *Milwaukee Metro Solar Hot Water Business Council* – an effort to help local manufacturers enter the solar hot water supply chain.

Andrea is a life-long environmentalist, has a master's degree in nonprofit management, a background in international and economic development, and is based in Washington DC.