Record-Breaking Growth

2015 marked the third consecutive year in which solar employment growth was at 20 percent.

The U.S. solar industry currently provides opportunities for nearly 209,000 solar workers in all 50 states and is creating jobs at a rate 12 times higher than employment growth in the overall economy. Since 2010, TSF’s Census series has found that solar employment has grown by 123%, representing an increase of 115,000 well-paying solar jobs.

This growth in solar jobs continues to be driven by demand for solar energy systems over the last decade. In 2010, the year the Census series began, the U.S. solar industry installed 929 megawatts (MW) of solar capacity. In 2015, over 7,430 MW were installed, eight times that of 2010. The strong relationship between capacity increases and job growth becomes evident when one considers that collectively, demand-side industry sectors (installation, sales and distribution, and project development) make up nearly 80% of all solar industry employment.

Greater Certainty for Solar Employers

Over the next 12 months, solar companies expect to add a total of 30,000 new solar workers, representing 14.7% employment growth over 2015. This increase is 13 times the projected 1.1% increase in employment in the overall U.S. economy over the same period.

Census data collection concluded prior to Congressional action, which extended the 30% federal investment tax credit (ITC). It is very likely that the national solar workforce will continue growing at a rapid pace now that solar businesses, investors, and the entirety of the solar economic supply chain are assured the benefits of the ITC will continue through 2021.

The installation sector, the largest employer of solar workers, now employs 119,931 workers, having grown 24% or 22,900 jobs in the previous year and 173% since 2010. In 2016, the installation sector anticipates adding 20,000 solar workers, a 16.6% increase.

Data for Census 2015 is derived from a statistically valid sampling and survey that went to nearly 400,000 establishments throughout the nation, resulting in data from 19,000 firms and a total of 2,350 full completions from U.S. solar establishments.
Continued Growth in 2016 Across All Sectors

*Census 2015* shows that solar companies in most sectors added workers. The project development sector, which includes utility-scale solar, experienced the fastest rate of growth at 48.6% (or more than 7,300) jobs since 2014. With 22,452 people working in this sector, project development now represents 10.8% of the solar workforce. Solar companies expect this sector to experience 16.6% growth in 2016. Installation firms continue to account for over half the jobs in the solar industry, currently employing 119,931 solar workers. Since November 2014, one out of every 83 new jobs created in the U.S. was created by the solar industry.

<table>
<thead>
<tr>
<th>Sector</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016 (Projected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation</td>
<td>43,934</td>
<td>52,503</td>
<td>57,177</td>
<td>69,658</td>
<td>97,031</td>
<td>119,931</td>
<td>139,813</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>24,916</td>
<td>24,064</td>
<td>29,742</td>
<td>29,851</td>
<td>32,490</td>
<td>30,282</td>
<td>34,123</td>
</tr>
<tr>
<td>Sales &amp; Distribution</td>
<td>11,744</td>
<td>17,722</td>
<td>16,005</td>
<td>19,771</td>
<td>20,185</td>
<td>24,377</td>
<td>27,352</td>
</tr>
<tr>
<td>Project Development</td>
<td>n/a</td>
<td>n/a</td>
<td>7,988</td>
<td>12,169</td>
<td>15,112</td>
<td>22,452</td>
<td>26,074</td>
</tr>
<tr>
<td>All Others</td>
<td>12,908</td>
<td>5,948</td>
<td>8,105</td>
<td>11,248</td>
<td>8,989</td>
<td>11,816</td>
<td>12,263</td>
</tr>
<tr>
<td>Total</td>
<td>93,502</td>
<td>100,237</td>
<td>119,017</td>
<td>142,697</td>
<td>173,807</td>
<td>208,859</td>
<td>239,625</td>
</tr>
</tbody>
</table>

*Changes in the number of jobs in the “Other” category between years are not necessarily a reflection of actual increases or decreases in employment, but may instead be due to changes in the types of jobs included in this category.*

**Other Key Findings from Census 2015**

- **Solar jobs continue to be good paying jobs.** The median wage for solar designers is about $27 per hour, while workers in Sales, Marketing, and Customer Service earn about $29 per hour. Solar workers in the Installation sector earn a median wage of $21 per hour, while those in Solar Assembly earn $18 per hour. The median wage for all occupations in the United States is about $17.09 per hour.

- **The solar workforce is larger than some well-established fossil fuel generation sectors**, such as the oil and gas extraction industry, which shed 13,800 jobs in 2015 and now employs 187,200 people. The oil and gas pipeline construction industry, which employs 129,500 workers, lost 9,500 jobs (BLS.gov) during the same period. The solar industry is already three times larger than the coal-mining industry, which employs 67,929 people (JobsEQ 2015Q3). Solar employers surveyed expect to add more than 30,000 jobs over the next 12 months. The expected increase of 14.7% would bring the count of U.S. solar workers to 239,625 by the end of 2016.

- **The solar workforce continues to reflect greater diversity than many industry sectors**, but the solar industry still has much work to do to represent the rich diversity of the overall U.S. population. Women in solar jobs increased by 2% and now represent 24% of the solar workforce. African American solar workers and Latino/Hispanic solar workers saw slight reductions as part of the solar labor force since last year’s Census. Veterans of the U.S. Armed Services, 7% of the U.S. workforce, account for 8.1% of the solar workforce, or 16,835 jobs. While only 6.1% of the U.S. workforce, Asian & Pacific Islanders represent 8.7% of solar workers, an increase of 1.7 percentage points since 2014.

- **The solar economy is local.** Eight in 10 solar installation firms report their customers are located within the state, while project developers responded that nearly 65% of their customers are “in-state”. More than half of all installer firms have 10 or fewer employees. Employers in the installation sector hired an average of 8.85 workers per firm.

- **Solar employers report increasing difficulty in finding qualified workers** as compared to previous Census reports, though it is not yet to a critical level. Nearly one in four solar employers report that they have no difficulty finding the employees they need, but about one in five report that it is very difficult to find qualified employees.

More can be found in the full report, which can be downloaded for free at [www.tsfcensus.org](http://www.tsfcensus.org)

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