

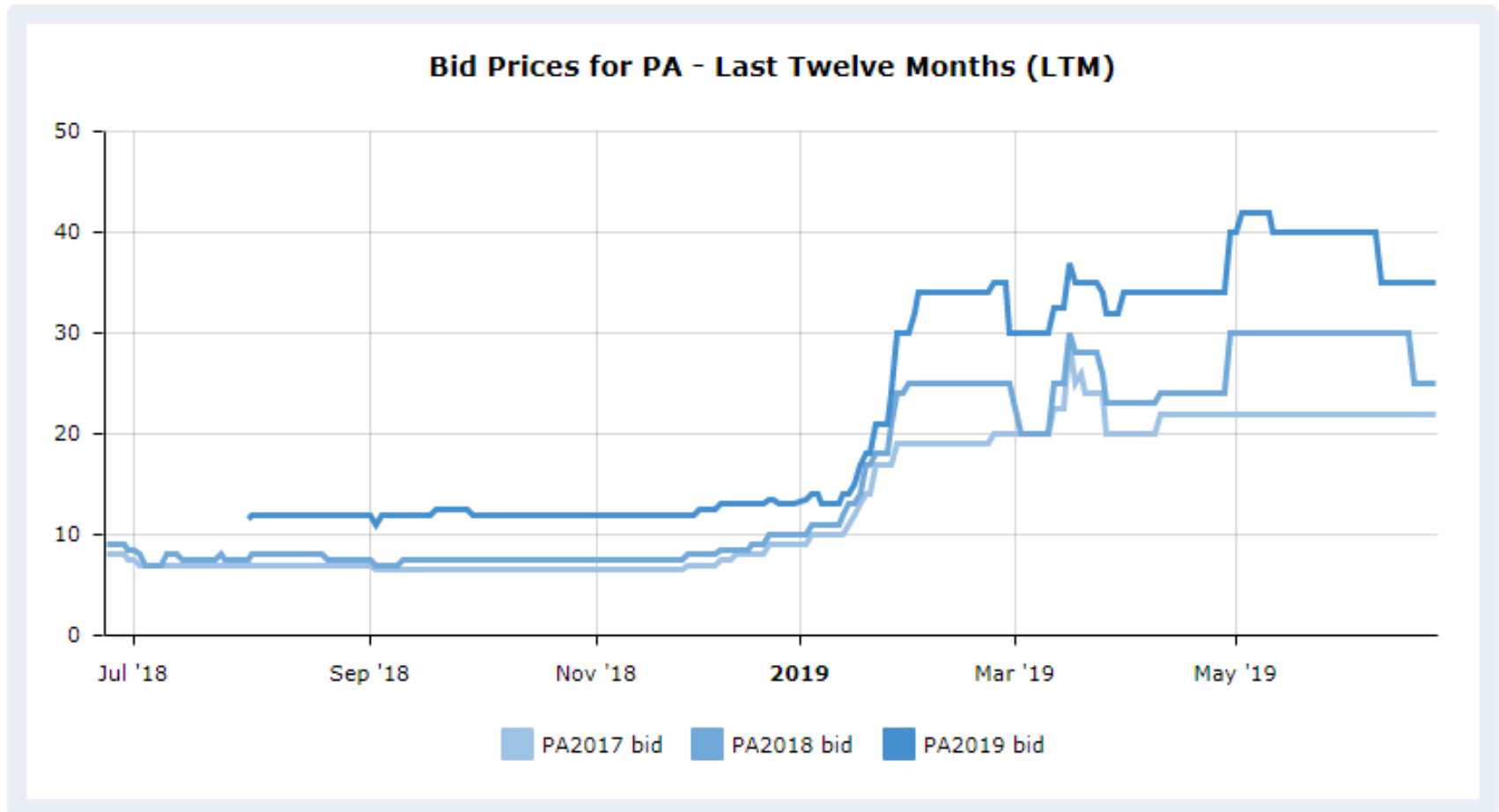
# Solar Update Highlights in PA – 6/25/2019

- Current in-state solar PV capacity in PA is 398.2 MW, from a total of 21,492 systems (18.5 MW, 1,217 systems since March 5, 2019) . The solar requirement by May 31, 2019 was about 449 MW – We're still short!!
- PA Solar Future Plan – Completed; What it takes to get 10% solar by 2030; Link to Plan on MSSIA website. Finishing up last step - . PA Solar Future Implementation Report. Just had webinar on Land Use – Solar Ecology, last week (link will be available on MSSIA website).
- Big Solar in PA – Currently, there are 1.6 GW of solar capacity in the PJM queue with about 250 MW under construction, which demonstrates the growing interest for grid-scale development in the state and the need to create best practices and guidance documents on grid scale development in the near future. (This includes the two 70 MW solar farms previously mentioned).
- Philadelphia Solar Incentive Program – Passed City Council, \$0.10/watt for commercial and \$0.20/watt for residential systems; anywhere in Philly; first come-first serve; Program total \$500,000; administered by Phila. Energy Authority.
- C-PACE (Act 30) – To date, Northampton County, Chester County, and Philadelphia County have passed establishing C-PACE programs in those counties.
- AEPS-2 – SB600 & HB1195 were introduced in April, 2019: 30% renewable energy by 2030, which includes 10% in-state solar by 2030. Have had several lobby days, need to educate legislators and government officials on the huge benefits of this (based on PJM Study, and other studies, further discussed later).
- PECO and Other EDC Interconnection Issues – 4 kV distribution lines continue to be problematic, for PECO, but also they have been extremely slow with processing applications, and requiring added costs and limitations. Signs of sluggish problems with other utilities, as well. PASEIA is looking into surveying many solar contractors and requesting the PUC reconvene an interconnection coalition – best practices, they last hosted over two years ago.
- Community Solar – HB531 Introduced in February, 2019, then SB705 was introduced on June 11, 2019. Much bipartisan support, however now getting pushback from utilities regarding net metering issues.
- Nuke Bailout Bill – Collapsed, TMI plant scheduled to close down. But, expect a new nuke bill coming in Fall session.
- RGGI in PA – PA Guv and others, trying to get RGGI in the budget bill (admin code or fiscal code) in coming days, weeks.

# Current PA SREC Prices

DC MA MD NJ OH **PA**

Latest Bid Price: \$35.00



*This graph is protected by copyright laws and contains material proprietary to SRECTrade, Inc. All bid pricing and notes included are indicative and subject to change. Please contact us for most current markets. If a market is not quoted herein, please [contact us](#) directly for further information.*

# Modernize Pennsylvania's Outdated Renewable Energy Goals



- 1** Expand the AEPS Tier I requirement to 30% by 2030
  - 20% from any resource in Tier 1 (solar, wind, low-impact hydro and others from in-state or out-of-state)
  - 7.5%: In-state grid-scale solar (ACP penalty price capped at \$45)
  - 2.5%: In-state distributed solar (ACP penalty price capped at \$125 with a 15-year lifetime on the credit)
- 2** Long-term contracting for grid-scale renewables, which provides financial security to investors and increases access to capital that is essential to developers. Also produces stable energy prices for electric customers and a hedge against volatile price spikes from other energy resources (coal, gas, uranium) that rely on extraction market forces vs. renewable energy resources that are free (wind, solar, small-impact hydro).
- 3** Include a renewable energy storage study to evaluate the potential benefits of coupling storage with renewable energy to meet expensive peak demand, to provide other benefits to the grid and to save customers money.

In 2004, Pennsylvania enacted the **Alternative Energy Portfolio Standard (AEPS) – 15 years ago**. Act 213 is market-based approach that requires retail electricity suppliers to purchase 18 percent of wholesale electricity from “alternative” generation sources by 2021:

- Only 8 percent coming from Tier I renewable energy resources
- One-half (0.5) percent from photovoltaic solar

The other 10 percent comes from Tier II sources (non-renewable). PA is on schedule to meet these goals.

## Current Percent Renewable Energy Generation

18% United States<sup>i</sup>  
5% Pennsylvania

## Pennsylvania Rankings (2017)

26<sup>th</sup> Installed Solar Capacity<sup>ii</sup>  
19<sup>th</sup> Solar Jobs Ranking<sup>iii</sup>  
18<sup>th</sup> Installed Wind Capacity

Renewables Work for PA is a coalition comprised of almost 70 renewable businesses advocating for Pennsylvania to modernize its Alternative Energy Portfolio Standards by increasing the percentages of renewable energy to 30% by 2030 with 10% in-state solar and energy storage study and goal setting. For more information, visit [www.RenewablesWorkforPa.com](http://www.RenewablesWorkforPa.com).



# Update Pennsylvania's renewable energy goals to **30 percent by 2030**

A reasonable approach to keep Pennsylvania competitive

## Community and Economic Development

Renewable development can benefit farmers and other land owners as well as local municipalities and counties with millions of dollars through land leases, increased property and wage taxes and development fees.

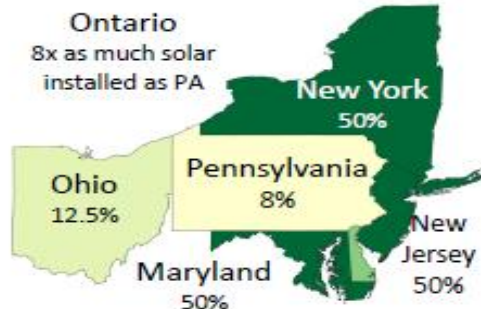
### HECTOR TWP, POTTER COUNTY - 90MW Wind Project

- Pre-construction payment to municipality: \$135,000
- Annual municipal payment: \$202,500
- Lifetime to municipality: \$6.5 million
- On site employees during construction: 160 in 2019
- Corporate Purchaser of Energy: Microsoft Corp.



Photo credit: Walden Renewables: <https://www.waldenrenewables.com/>

## Surrounding State Renewable Energy Targets



Kling Family Focus Farms, EIS Solar, West Milton, PA

## RENEWABLE ENERGY IS A JOBS INCUBATOR

**168%**

Solar job growth increase in U.S. since 2010: 93,000 to 250,000+ jobs.<sup>iv</sup>

**Top Two  
Fastest  
Growing Jobs  
in U.S.**

Solar Installer and  
Wind Technician<sup>v</sup>

**9,209**

# of PA Renewable Energy Jobs in 2019<sup>vi</sup>



**PA DEP Finding  
Pennsylvania's Solar  
Future Plan**

Moving PA to 10 percent solar by 2030 would create about **30,000 direct solar jobs and upwards of 100,000 jobs** throughout the supply chain and could result in a net **economic benefit of \$1.6 billion annually from 2018 through 2030.**<sup>i</sup>

<sup>i</sup> Source: U.S. Energy Information Administration, Bloomberg New Energy Finance, Business Council for Sustainable Energy: <https://www.bcse.org/wp-content/uploads/Sustainable-Energy-in-America-Factbook-2018-Updated-Overview.pdf>

<sup>ii</sup> <https://www.avea.org/Avea/media/Resources/StateFactSheets/Pennsylvania.pdf>

<sup>iii</sup> [https://www.seia.org/sites/default/files/2018-12/Federal\\_2018Q3\\_Pennsylvania\\_2.pdf](https://www.seia.org/sites/default/files/2018-12/Federal_2018Q3_Pennsylvania_2.pdf)

<sup>iv</sup> <https://www.thesolarfoundation.org/national/>; <sup>v</sup> U.S. Bureau of Labor Statistics;

<sup>vi</sup> [www.e2.org/clearjobs/pa2019](http://www.e2.org/clearjobs/pa2019)

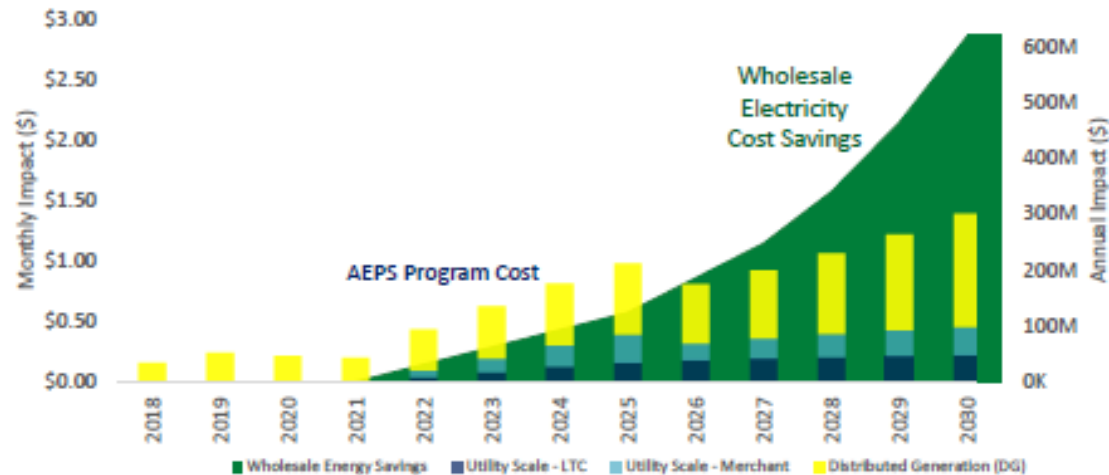


**RENEWABLES WORK FOR PA**

# 10% Pennsylvania Solar Lowers Energy Costs



## Monthly & Annual Bill Impact of 10% Pennsylvania Solar



## PENNSYLVANIA 2030 SOLAR GENERATION STUDY

Transitioning 10% of Pennsylvania's energy generation to solar would significantly reduce the state's wholesale energy costs

### DECREASE WHOLESALE ENERGY COSTS:

Solar would lower Pennsylvania's wholesale energy costs by \$619 million

### COSTS TO DEPLOY SOLAR AND MAINTAIN GRID RELIABILITY:

\$294 million in transmission upgrades would be allocated to new solar projects and funded through private investment

**10%**

OF STATE'S ELECTRICITY GENERATION FROM SOLAR  
7.5% Grid Scale and 2.5% DG

**7,500 MW<sub>ac</sub>**  
CUMULATIVE INSTALLED SOLAR CAPACITY



# 10% Pennsylvania Solar Jobs In Every County



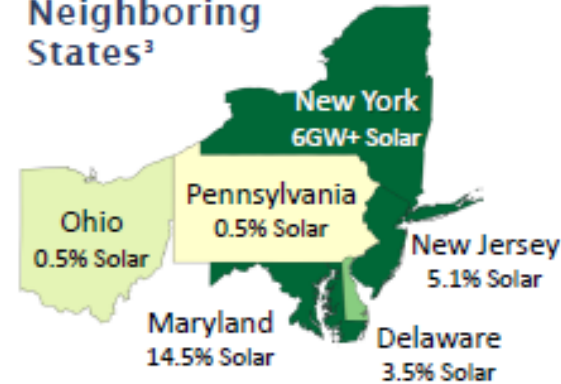
**65,000+**  
NEW SOLAR JOBS<sup>1</sup>

**4,219** 2018 PENNSYLVANIA SOLAR JOBS<sup>2</sup>

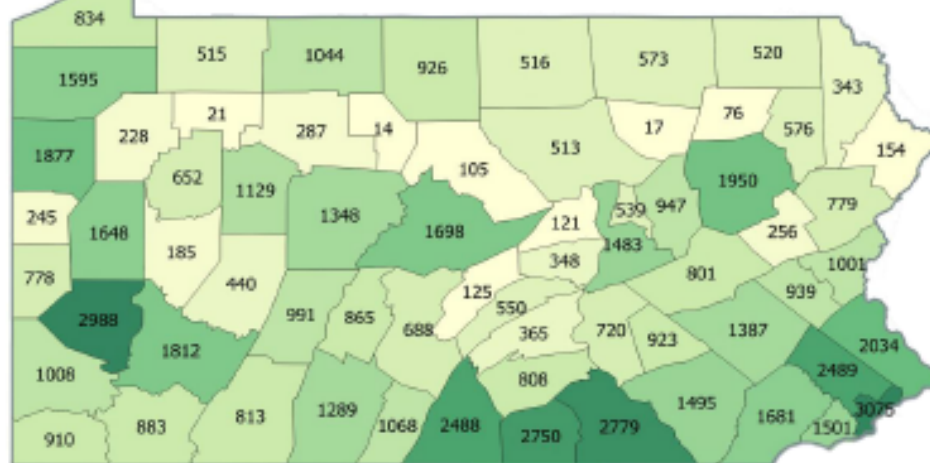
**39<sup>th</sup>** 2018 PENNSYLVANIA RANKING FOR SOLAR JOBS PER CAPITA<sup>2</sup>

**17<sup>th</sup>** 2018 PENNSYLVANIA RANKING FOR SOLAR JOBS<sup>2</sup>

Solar Policy in Neighboring States<sup>3</sup>



## 2030 Solar Job Potential by County



0 Jobs

4000 Jobs



<sup>1</sup> National Renewable Laboratory (NREL), Jobs and Economic Development (JEDI) Model, 2019

<sup>2</sup> The Solar Foundation, National Solar Jobs Census, 2018

<sup>3</sup> DSIRE, 2018; The Baltimore Sun, April 2019; NY State of the State briefing book, 2019

