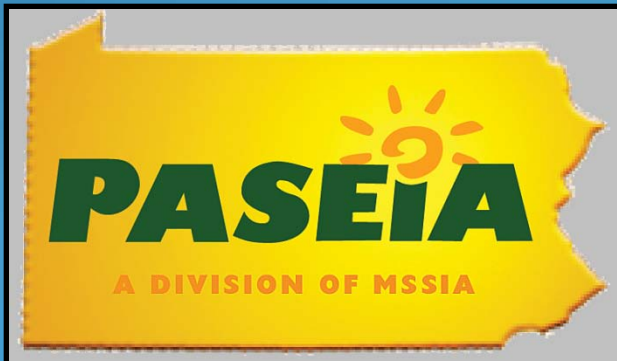


# Pennsylvania Update

MSSIA – 1st Qrtly Mtg - 2020



# Solar Update Highlights in PA – 2/11/2020

- Current in-state solar PV capacity in PA is 435 MW, from a total of 23,821 systems, as of 2/2/2020.
- PJM Queue for PA – 4.8 GW (181 applications: Active, Engineering/Procurement, or Under Construction);, Projected that 250 MW will materialize
- Just announced (Competitive Power Ventures) – 150 MW Maple Hill solar farm planned to be installed across two townships in Cambria County, PA (could begin construction by the end of 2020),
- Far exceeded the AEPS 0.5% solar requirement for 2021.
- Community Solar – HB531 Introduced in February, 2019, then SB705 was introduced on June 11, 2019. The bipartisan list of legislators continues to grow, with 84 co-sponsors (31 Rs) of HB 531, and 22 co-sponsors of SB 705. The PA Farm Bureau has also endorsed these two bills. Still getting pushback from utilities regarding net metering issues. We need to push to get community solar passed in the Spring, 2020. On October 21, 2019, HB1970 introduced – Utility version of community solar (Duquesne Power) – in disguise (its really a PA solar retail supplier); no solar industry input on this bill; opposed by most of the solar industry. – don't expect this bill getting any traction.
- AEPS-2 – SB600 & HB1195 were introduced in April, 2019: 30% renewable energy by 2030, which includes 10% in-state solar by 2030 – After much lobbying, these bills didn't get very much traction. Now have a revised this bill language:
- AEPS-2 – Revised: 18% renewable energy, including 5.5% in-state solar (1.75% DG / 3.75% Grid Scale) by 2025; same trajectory as SB600/HB1195, but shorter timeline. More republican legislators are interested in this revision.
- Philadelphia Energy Authority Solar Incentive Program – About to Launch: \$0.10/watt for commercial and \$0.20/watt for residential systems; anywhere in Philly; first come-first serve; Program total \$500,000. The City has posted the draft regulations for the Philadelphia Solar Rebate. The regulations need to be posted for 30 days (until February 2nd). As soon as the Law Department finalizes the regulations, the program will open applications for the new Solar Rebate. Also Solarize Philly still going strong!

# Solar Update Highlights in PA – 2/11/2020

## Continued

- RGGI in PA – Expected \$300M/yr in proceeds; DEP is currently drafting proposed rules, including how the proceeds could be allocated for growing the EE and RE markets; Anti-RGGI bills include HB2025 and SB950t
- C-PACE (Act 30) – To date, the C-PACE program has been adopted in 9 counties: Allegheny, Chester, Lawrence, Lebanon, Lehigh, Montgomery, Northampton, Philadelphia, and Wayne Counties.
- PPL's Petition for DER Management Plan – PPL submitted a tariff petition to the PUC on Distributed Energy Resources (DER) Management Plan in late May, 2019 (to modify their tariffs to monitor and control solar production via a DER management device and smart inverters. DCNR, Sunrun, SEF (PPL) and PA Office of Consumer Affairs, intervening or challenging PPL's petition. Getting very hot!!
- PECO held a Solar Collaborative on 1/30/2020 – Over 50 attendees; covered their ongoing online interconnection application process, discussions on smart inverter solutions, proposing ideas on 10 years contracts for SREC (16,000 per year for two years, 50% from PECO territory and 50% from the rest of PA), and several other topics. PECO plans to have these collaborative meetings every 6 months, going forward.
- House Speaker Mike Turzai (R., Allegheny), one of PA's most powerful conservative representatives, will not run for reelection – very pro gas and a major barrier to renewables moving forward in PA
- Energize PA – HB1100 – a bill that offers hundreds of millions of dollars in taxpayer subsidies to incentivize the building of more chemical and plastics factories in Pennsylvania – recently passed both House and Senate, and on its way to Gov. Wolf, though he's stated he'll veto the bill.
- The Value of Solar for PECO and its Ratepayers Study - in PECO Territory, prepared by Carnegie Mellon University: Concluded that at 5% solar penetration, the value of solar (VOS) in the PECO service territory to be \$0.088±0.006/kWh; and current net metering will have minimal impact on PA ratepayers, increasing bills by about 0.8% at 5% solar penetration.
- Webinar on Net Metering in PA, scheduled 2/28/2020 @ 11am – Rob Altenburg (PennFuture) and Ron Celentano (PASEIA/CES).
- PA Solar Summit March 24 and Advocacy Day in Capitol March 25; So far, Solar Summit presentations on solar PV on brownfields and DEP draft of proposed RGGI program.

# Breakdown Of PV Installations in PA & PJM Queue for PA Solar Applications

Cumulative PV Installed in PA		
Capacity (DC)	# of Systems	Total MW
≤ 15 kW	20,677	160
> 15 kW to ≤ 250 kW	2,960	109
> 250 kW to ≤ 1 MW	139	65
> 1 MW to ≤ 3 MW	35	54
> 3 MW to ≤ 5 MW	8	30
> 5 MW to ≤ 10 MW	1	6
> 10 MW	1	12
<b>Total</b>	<b>23,821</b>	<b>435</b>

\* as of 2/2/2020 as per PA AEPS (PUC)

PJM Queue for PA		As of 2/10/2020		
Status	# of Apps	Total Cap AC MW	Capacity Range	
			Min	Max
Active	163	4,669	1.2	150.0
Engineering/Procurement	15	162	3.0	53.6
Under Construction	0	0	0.0	0.0
Part in Srvc - Under Const	3	5	0.4	3.8
<b>Total</b>	<b>181</b>	<b>4,836</b>		

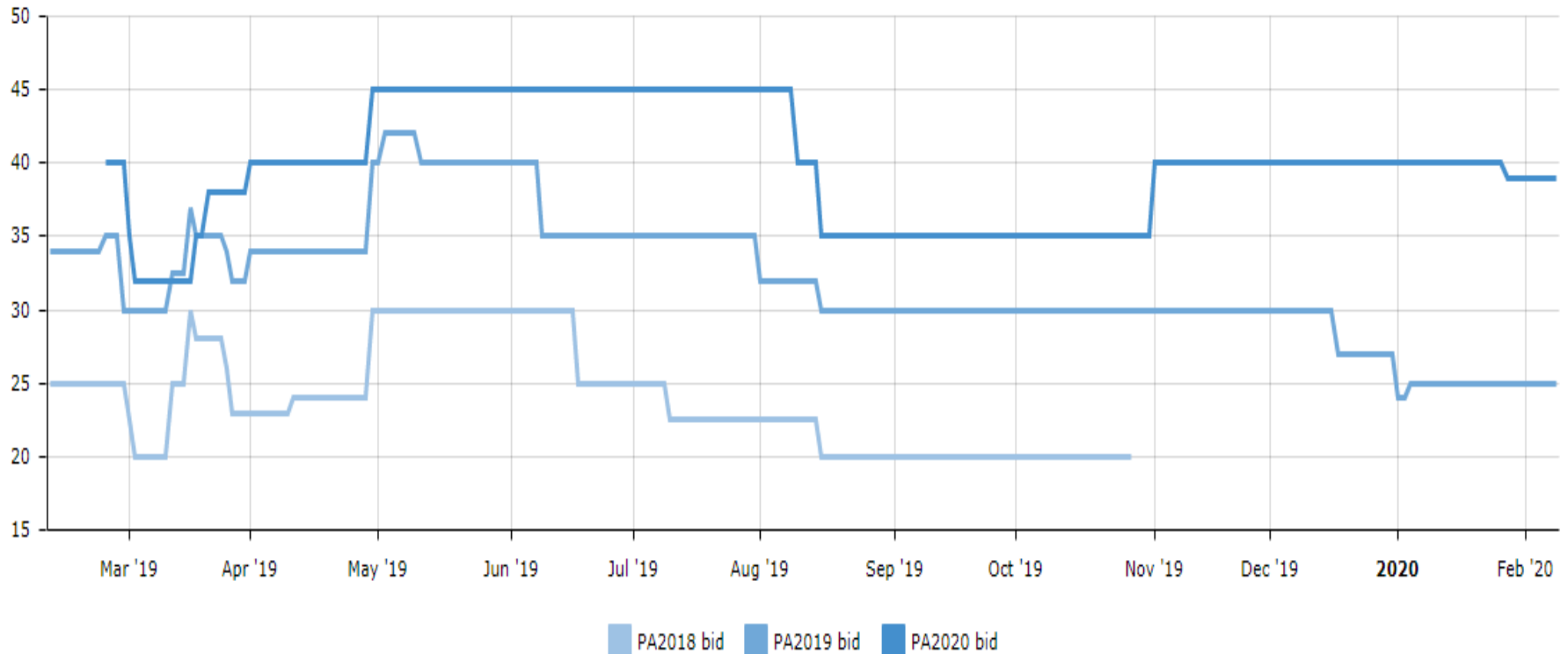
Current PA SACP = \$63.16/SREC

# Current PA SREC Prices

PA

Latest Bid Price: \$39.00

Bid Prices for PA - Last Twelve Months (LTM)



This graph is protected by copyright laws and contains material proprietary to SRETrade, 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 Renewable Energy Goals



## 1 Expand the AEPS Tier I requirement to 18% by 2025

- **12.5%** from any resource in Tier 1 (solar, wind, low-impact hydro and others from in-state or out-of-state)
- **3.75%:** In-state grid-scale solar (ACP penalty price capped at \$25)
- **1.75%:** In-state distributed solar (ACP penalty price capped at \$125 with a 15-year lifetime on the credit)

5.5%

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 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).



**RENEWABLES WORK FOR PA**

# Update Pennsylvania's renewable energy goals to **18 percent by 2025**

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.

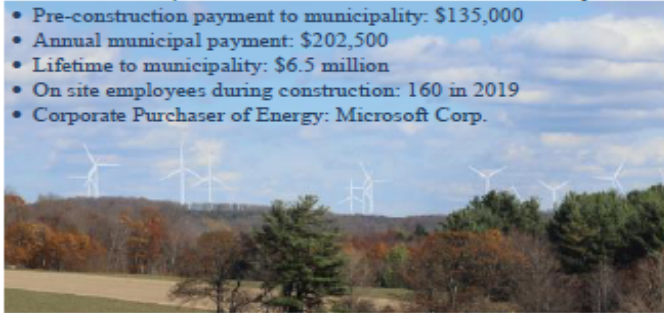


Photo credit: Walden Renewables: <https://www.waldenrenewables.com/>

## 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>1</sup>

<sup>1</sup> Source: U.S. Energy Information Administration, Bloomberg New Energy Finance, Business Council for Sustainable Energy: <https://www.bcsse.org/wp-content/uploads/Sustainable-Energy-in-America-Factbook-2018-Updated-Overview.pdf>

<sup>ii</sup> <https://www.awea.org/Awea/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/cleanjobs/pa2019](http://www.e2.org/cleanjobs/pa2019)



**RENEWABLES WORK FOR PA**