

# Pennsylvania Update

MSSIA – 2nd Qrtly Mtg - 2021



# Solar Update Highlights in PA – 6/24/2021

- Current in-state solar PV capacity in PA is **649 MW**, from a total of 30,196 systems, as of 6/21/2021.
- Largest solar PV system in PA was 11.5 MW (PA Solar Park), installed in 2012; Since March 2020, five larger grid scale projects went online: 12.4 MW in Carbon Co.(PA Solar Park II) and four more in Franklin Co. (27.1 MW, 18.2 MW, 27.0 MW & 17.5 MW, now totaling 114 MW.
- PJM Queue for PA – Over 15 GW (434 applications: Active, Engineering/Procurement, and Under Construction-including in partial service); number of applications up 14% over the last two months.
- Some of the large grid-scale solar projects being built:
  - City of Philadelphia - 80 MW solar PPA project in Adams County, PA
  - Penn State - 70 MW in Franklin County
  - SEPTA - 35 MW solar PPA project in Franklin County, PA
  - Maple Hill solar farm - 150 MW Cambria County
  - Univ. of Penn – 220 MW in Franklin CountyAnd more!
- RGGI in PA – Expected > \$300M/yr in proceeds; Proceeds expected to be allocated for growing the EE and RE markets. Huge public support for this, but fierce opposition from many pro fossil fuel legislators.
- SolarAPP – Online solar permitting application software - PASSIA teamed up with Philadelphia Solar Energy Assoc, to implement NREL's SolarAPP into at least a handful of PA municipalities in 2021. Scheduled webinar on July 20<sup>th</sup>, 2021, specifically for Pennsylvania municipality officials, and well as others.

# Solar Update Highlights in PA – 6/24/2021

## NREL Makes Solar Permitting Easy!

Want your Township to save money, improve constituent service, and get more solar done? Learn from the NREL engineers and program staff directly. Bring your questions to this live webinar.



  
SolarAPP

Tuesday, July 20

12 - 1PM

[REGISTER HERE](#)

SolarAPP is now available to every municipality in Pennsylvania FREE of charge. NREL developed this elegant new software to automate solar permitting. It is already in use in 2 states: California & Arizona, and going into many more. Not only is the software free, but NREL also provides free training and technical assistance to municipalities!

If your Township or Borough is already certified at the SolSmart Silver level, adopt SolarAPP and move up to Gold!

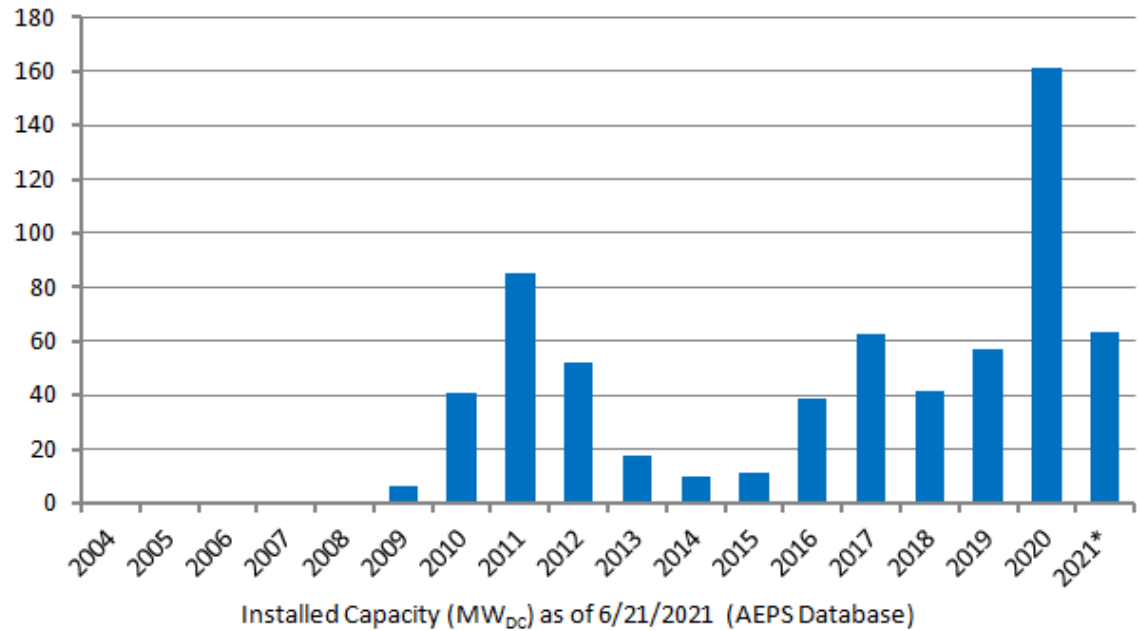
*The webinar is brought to you by the Philadelphia Solar Energy Association, the PA Solar & Storage Association & the Delaware Valley Regional Planning Commission.*

For more info: [solarapp.nrel.gov](http://solarapp.nrel.gov) or Liz Robinson at: [lizhrob2@gmail.com](mailto:lizhrob2@gmail.com)

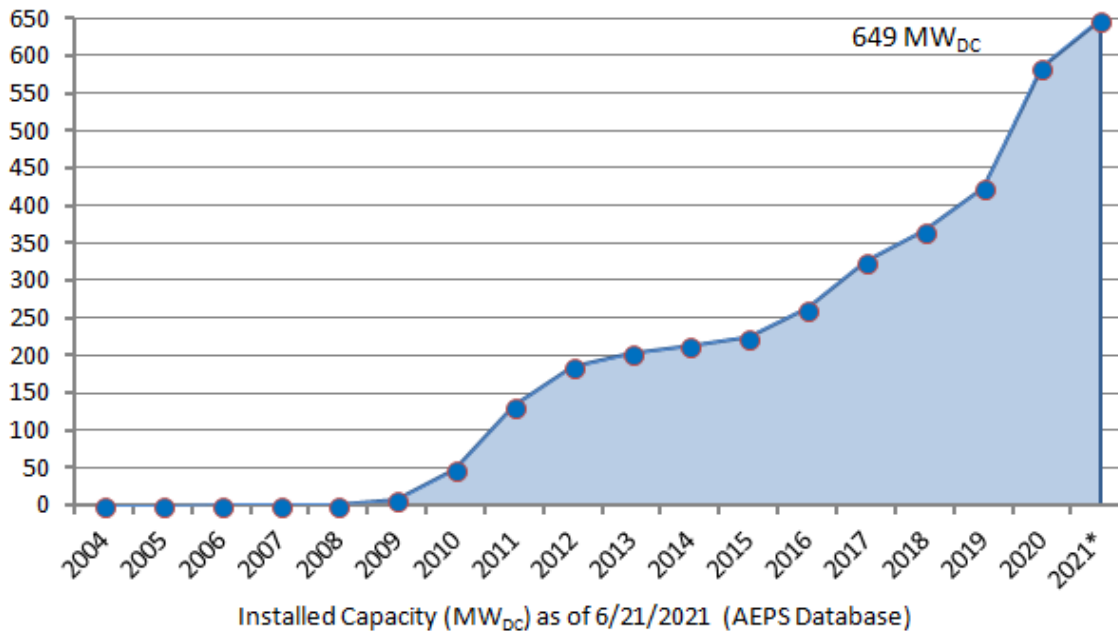


# PV Capacity in PA Annual & Cumulative

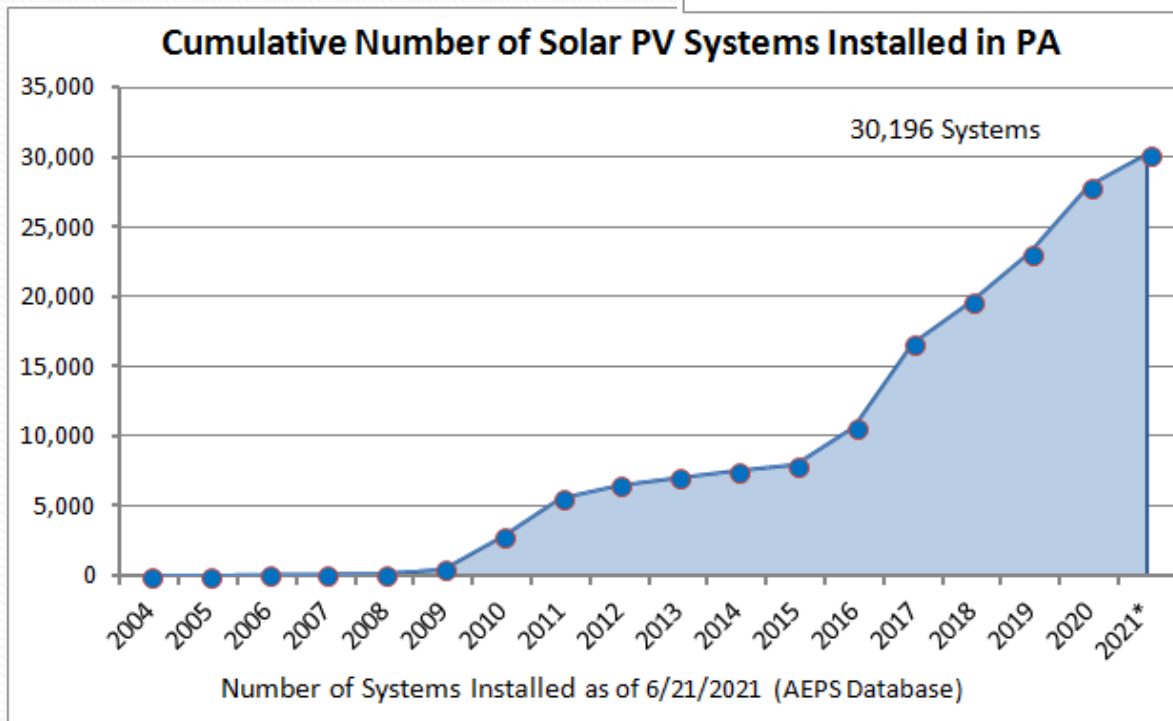
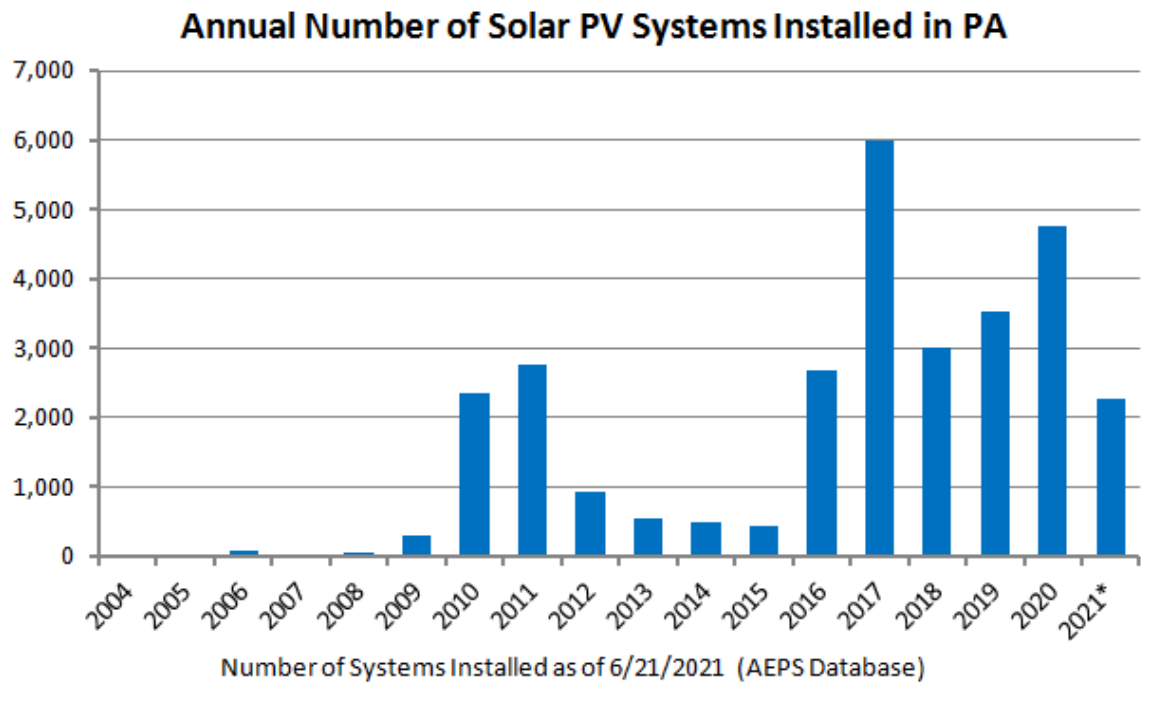
## Annual Solar PV Capacity (MW<sub>DC</sub>) Installed in PA



## Cumulative Solar PV Capacity (MW<sub>DC</sub>) Installed in PA



# Number of PV Systems in PA Annual & Cumulative



# 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	25,907	205
> 15 kW to ≤ 250 kW	4,063	138
> 250 kW to ≤ 1 MW	164	80
> 1 MW to ≤ 3 MW	45	70
> 3 MW to ≤ 5 MW	10	37
> 5 MW to ≤ 10 MW	1	6
> 10 MW	6	114
<b>Total</b>	<b>30,196</b>	<b>649</b>

\* as of 6/21/2021 as per PA AEPS (PUC)

PJM Queue for PA

As of 6/21/2021

Status	# of Apps	Max Facility Output (MFO)			Total Cap IC Queue Position
		Total Cap AC MW	Capacity Range		
			Min	Max	
Active	370	15,005	0.2	401.6	7,344
Engineering/Procurement	64	561	1.2	31.9	270
Under Construction	0	-	-	-	-
Part in Srvc - Under Const	0	-	-	-	-
<b>Total*</b>	<b>434</b>	<b>15,565</b>			<b>7,614</b>

\* Total Applications categorized as "Solar & Storage" = 82

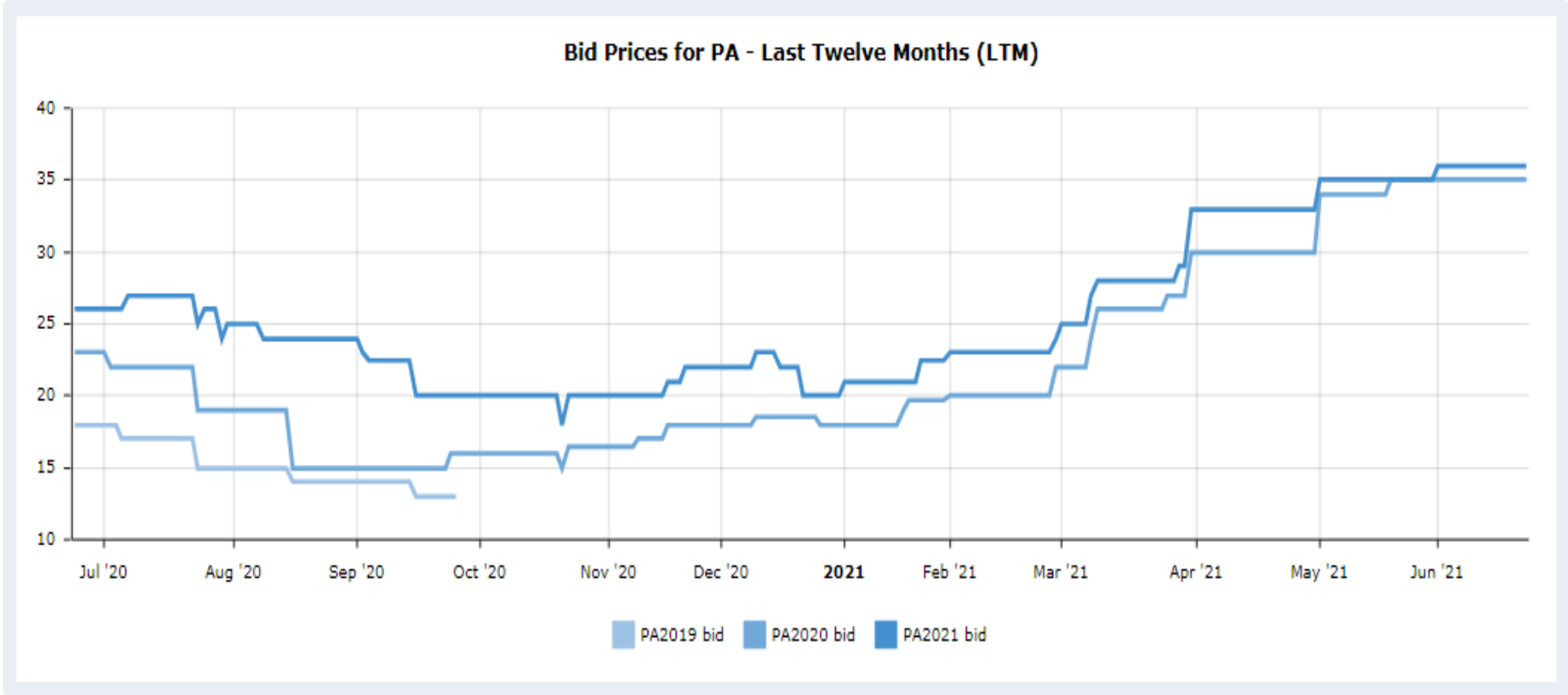


**Current PA SACP = \$74.00/SREC**

# Current PA SREC Prices

PA

Latest Bid Price: \$36.00



*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.*

# Solar Update Highlights in PA – 2/18/2021

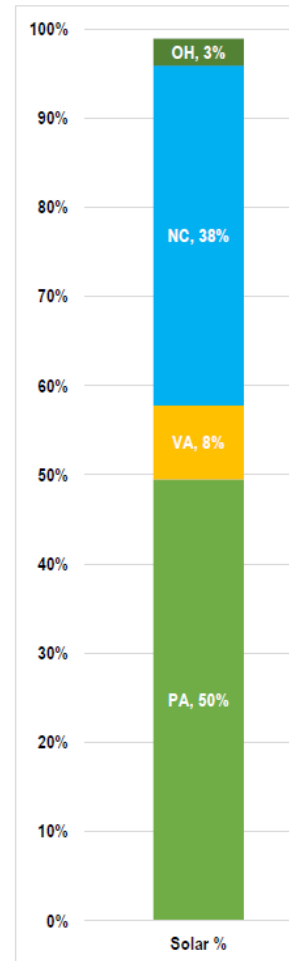
## Continued

As of last year, still about 50% of the PA solar requirement came from out of state projects

Table 4: AEC State of Origin – Used for compliance in 2020

Tier	PA	NJ	MD	VA	WV	IL	OH	DE	NC	IN	MI	KY	TN	DC
Solar	304,271	0	132	50,968	445	3,975	18,552	2,359	234,210	6	3	0	5	0

Chart 1: Percentage of AECs Retired in 2020





# Solar Update Highlights in PA – 2/18/2021

## Continued

PA AEPS HAS REACHED ITS FINAL 2021 GOAL OF 0.5% SOLAR – Which is now flat-lining indefinitely.

Table 7: Estimated In-state Solar Demand and Installed Capacity: 2019 – 2021

Year	Generation Requirement (MWh)	Capacity Required (MW)	Installed Capacity (MWac)
2019	557,611	424	317.2
2020	628,113	478	396.8
2021	704,173	536	534.4

AEPS Report - 2020

Table 5: Estimated Statewide AEPS Cost of Compliance in 2021 (2020 Dollars)

EDC	Solar Credits		Tier I Credits		Tier II Credits		Total Cost
	Credits Needed	Solar Credits @ \$40.00	Credits Needed	Tier I Credits @ \$10.00	Credits Needed	Tier II Credits @ \$3.00	
Duquesne	63,477	\$ 2,539,093	952,160	\$ 9,521,600	1,269,547	\$ 3,808,640	\$ 15,869,333
Met Ed	71,919	\$ 2,876,753	1,078,782	\$ 10,787,822	1,438,376	\$ 4,315,129	\$ 17,979,704
Penelec	68,201	\$ 2,728,042	1,023,016	\$ 10,230,158	1,364,021	\$ 4,092,063	\$ 17,050,263
Penn Power	23,574	\$ 942,944	353,604	\$ 3,536,039	471,472	\$ 1,414,416	\$ 5,893,398
PECO	182,116	\$ 7,284,657	2,731,746	\$ 27,317,464	3,642,329	\$ 10,926,986	\$ 45,529,107
PPL	188,296	\$ 7,531,840	2,824,440	\$ 28,244,399	3,765,920	\$ 11,297,759	\$ 47,073,998
UGI	99,806	\$ 3,992,237	1,497,089	\$ 14,970,891	1,996,119	\$ 5,988,356	\$ 24,951,484
West Penn	5,035	\$ 201,412	75,529	\$ 755,294	100,706	\$ 302,118	\$ 1,258,823
Citizens'	868	\$ 34,711	13,017	\$ 130,166	17,355	\$ 52,066	\$ 216,944
Pike County	354	\$ 14,141	5,303	\$ 53,030	7,071	\$ 21,212	\$ 88,383
Wellsboro	527	\$ 21,070	7,901	\$ 79,014	10,535	\$ 31,606	\$ 131,690
Totals	704,173	\$ 28,166,900	10,562,588	\$ 105,625,876	14,083,450	\$ 42,250,350	\$ 176,043,127

AEPS Report - 2020

# Solar Update Highlights in PA – 6/24/2021

## Legislative Activity –Solar Bills Introduced in Pennsylvania

Excerpts below from PA Solar Center - *PA State Solar Legislative Guide*:

<http://pasolarcenter.org/wp-content/uploads/2021/06/PA-Solar-Center-Solar-Legislative-Guide-1.pdf>

### *Increasing the Renewable Energy Goals in Pennsylvania*

- **HB 1080** and **SB 501** (companion bills) increase the renewable energy goals to 18% with the solar carve out set at 5.5% by 2026. The solar carve out is specified that 3.75% would come from utility scale solar and 1.75 % from distributed generation. The bills call for an energy storage study and for the EDCs to enter into long-term contracts for utility scale solar.
- **HB 1394** would increase the renewables goals in the AEPS to 15% by 2030 with the solar carve out for customer generators (distributed generation) only to 2.5% by 2030. This bill does not include an increase in utility scale solar.
- **HB 1531** would create a new renewable energy scheme (different from the AEPS) that would require the addition of 7% renewables with 2.5% coming from distributed solar by 2030. (These percentages are additive to the current AEPS goals). The bill doesn't specify that the solar carve out must be comprised of in-state generation only as is currently in the AEPS. It does not include utility scale solar. There is no Alternative Compliance Payment (ACP) set for the non-solar renewable goals.
- **SB 300** would increase renewables to 30% by 2030 with 10% coming from in-state solar. The bill is similar to SB 501, but with more aspirational goals.

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### *Community Solar/Shared Solar*

- **SB 472**– This bill provides the mechanism to allow community solar projects up to 5 megawatts (MW) in PA. Community solar developers could build facilities for which subscribers purchase subscriptions and pay for their allocation of solar on their utility bills. The bill includes provisions for a Grid Service Payment (GSP) of \$0.225/watt (DC) per year that developers would receive from the utility through the first five years after passage of the bill. After that point, the Public Utility Commission (PUC) will calculate a value stack payment that subscribers would receive based on the grid services that community solar project provides and the subscribers would pay that amount. No minimum subscription require
- **HB 1555** – This bill, introduced later, is similar to SB 472 above with a GSP of \$0.18/watt (DC) and an added requirement of a minimum subscription level of 75% for the first year before receiving the GSP. . Some other changes are also included, as compared to SB 472.
- **HB 1161** - This bill allows EDCs to issue proposals from solar developers to build solar projects up to 20 MW within their service and enter into long-term Power Purchase Agreements (PPAs). The EDCs can then solicit their customers to become subscribers to the facility to purchase a portion of the power and be credited on their electric bill, similar to a community solar program, but it is really just a green energy supplier.
- **HB1396** - This bill permits community solar and is similar to HB 531 from the previous session. It provides for full net metering benefits to subscribers rather than the GSP as described above, but the full net metering provision was controversial for utilities who voiced some opposition to community solar receiving the full net metering benefit.

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### Solar Bonding Requirements

- **SB284** - This bill requires alternative energy projects included in the AEPS, including solar and wind, that generate power not used for onsite consumption to issue a bond to the Pennsylvania Department of Environmental Protection to cover “hazardous liabilities, decommissioning, to create a reclamation plan, and disposal/recycling of the project.” An amendment to this bill prohibits the use of solar panels that contain polysilicon sourced from the Xinjiang Province in China or that used forced labor in manufacturing.

***NOTE – From Solar Wakeup** - News Of The Day. Bloomberg and Reuters are reporting that the US will start blocking polysilicon imports from the Xinjiang province and name specific companies. We'll be following analysts' coverage on the impacted companies and how this will affect the solar market.*

### Solar Panel Recycling

- **SB 530** - This bill calls for solar panels to be added to the state’s "Controlled Device Recycling Act," which would require solar manufacturers, importers and installers to setup reclamation and recycling programs and include the costs for that in their pricing.