



**PennState Law**

Center for Agricultural  
and Shale Law





***Where Will Pennsylvania's Solar Future Be  
Located  
and  
How Will It Get There?***



Wednesday, October 25, 2023, 1:00 PM



## ***Brook Duer***

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- 18 years in private practice in Lancaster County
- 12 years at the Pennsylvania Department of Agriculture (8 years as Chief Counsel)
- Penn State Ag Law Center since 2019.



### **PENN STATE CENTER FOR AGRICULTURAL AND SHALE LAW**

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### **CENTER MISSION AND BACKGROUND**

The Center for Agricultural and Shale Law conducts research and educational programs to serve a wide variety of stakeholders including agricultural producers, landowners, mineral interest and royalty owners, business professionals, judges, attorneys, legislators, government officials, community groups, and the general public. Center programs are funded in part by the Commonwealth of Pennsylvania through the Pennsylvania Department of Agriculture. The Center for Agricultural and Shale Law is a partner of the National Agricultural Law Center (NALC) at the University of Arkansas System Division of Agriculture, which serves as the nation’s leading source of agricultural and food law research and information.

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**United States Department of Agriculture**

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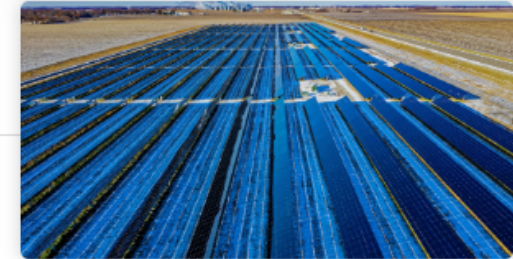
Welcome to the Center for Agricultural and Shale Law

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HOME > VIRTUAL RESOURCE ROOMS > SOLAR ELECTRICITY GENERATION ON RURAL LANDS

# SOLAR ELECTRICITY GENERATION ON RURAL LANDS



## VIRTUAL RESOURCE ROOM NAVIGATION

- HOME
- CENTER RESOURCES
- GRID AND DISTRIBUTED GENERATION
- GENERAL AND BEHIND THE METER SOLAR RESOURCES
- AGRIVOLTAICS

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## Home

Interest in developing and installing photovoltaic facilities for the generation of electricity for sale to the electric power grid across the United States has boomed in recent years. This Virtual Resource Room (VRR) is an attempt to provide resources to understand various aspects of this growth area that have legal components, such as distributed generation, the highly variable processes for gaining any state or local government approvals necessary and the long-term ground leasing process employed by some solar developers.

This is merely intended to be a compilation of information for use by the reader and is by no any means comprehensive as to any particular jurisdiction or legal issue/topic.

*This guide is intended to represent a collection of legal resources relating to solar electricity generation on rural lands. While the Center for Agricultural and Shale Law makes every effort to maintain and update the content furnished in this guide, no warranty or other guarantee is made regarding the timeliness or accuracy of any information provided.*

*The Center for Agricultural and Shale Law is a partner of the National Agricultural Law Center (NALC) at the University of Arkansas System Division of Agriculture, which serves as the nation's leading source of agricultural and food law research and information. This material is provided as part of that partnership and is based upon work supported by the National Agricultural Library, Agricultural Research Service, U.S. Department of Agriculture.*



# Pennsylvania Agricultural Mediation Program

- Who can request mediation?
  - USDA-related issues:
    - Agricultural Loans
    - Wetlands determinations
    - Compliance with farm programs, including conservation programs
    - National organic program established under the Organic Foods Production Act of 1990
    - Agricultural Credit
    - Rural water loan programs
    - Grazing on National Forest System land
    - Pesticides
  - Non-USDA issues:
    - Land and Equipment Lease issues.
    - Family farm transition.
    - Farmer-neighbor disputes.
    - As approved by PA Secretary of Agriculture



## Contact us:

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Website: [www.PAAGMediation.com](http://www.PAAGMediation.com)



An aerial photograph of a large-scale solar farm. The solar panels are arranged in neat, rectangular rows across a field. In the center of the farm, there is a cluster of buildings, including a large white structure and several smaller red and grey buildings, likely a maintenance or control center. The surrounding landscape is a mix of brown and green fields, with a dense line of trees in the middle ground. In the far background, there are rolling hills or mountains under a clear blue sky.

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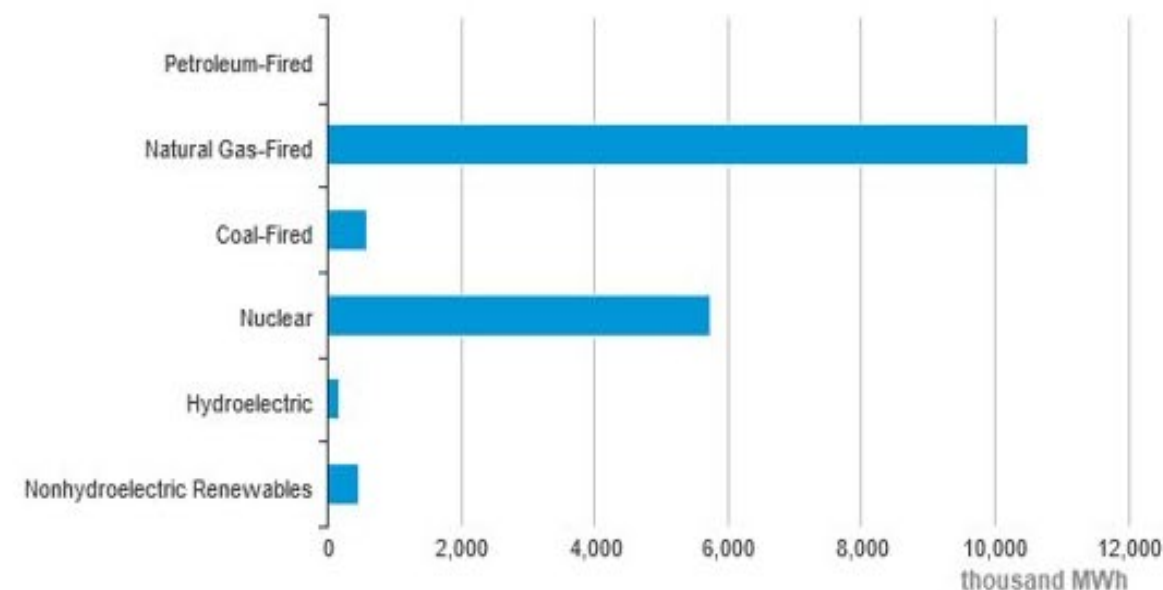
# **GENERAL BACKGROUND**

# Energy Production in Pennsylvania

Rank	State	Total Energy Production (trillion Btu)
1	Texas	23,329
2	Pennsylvania	9,492
3	Wyoming	5,884
4	West Virginia	5,020
5	New Mexico	4,674
6	Oklahoma	4,546
7	North Dakota	4,275

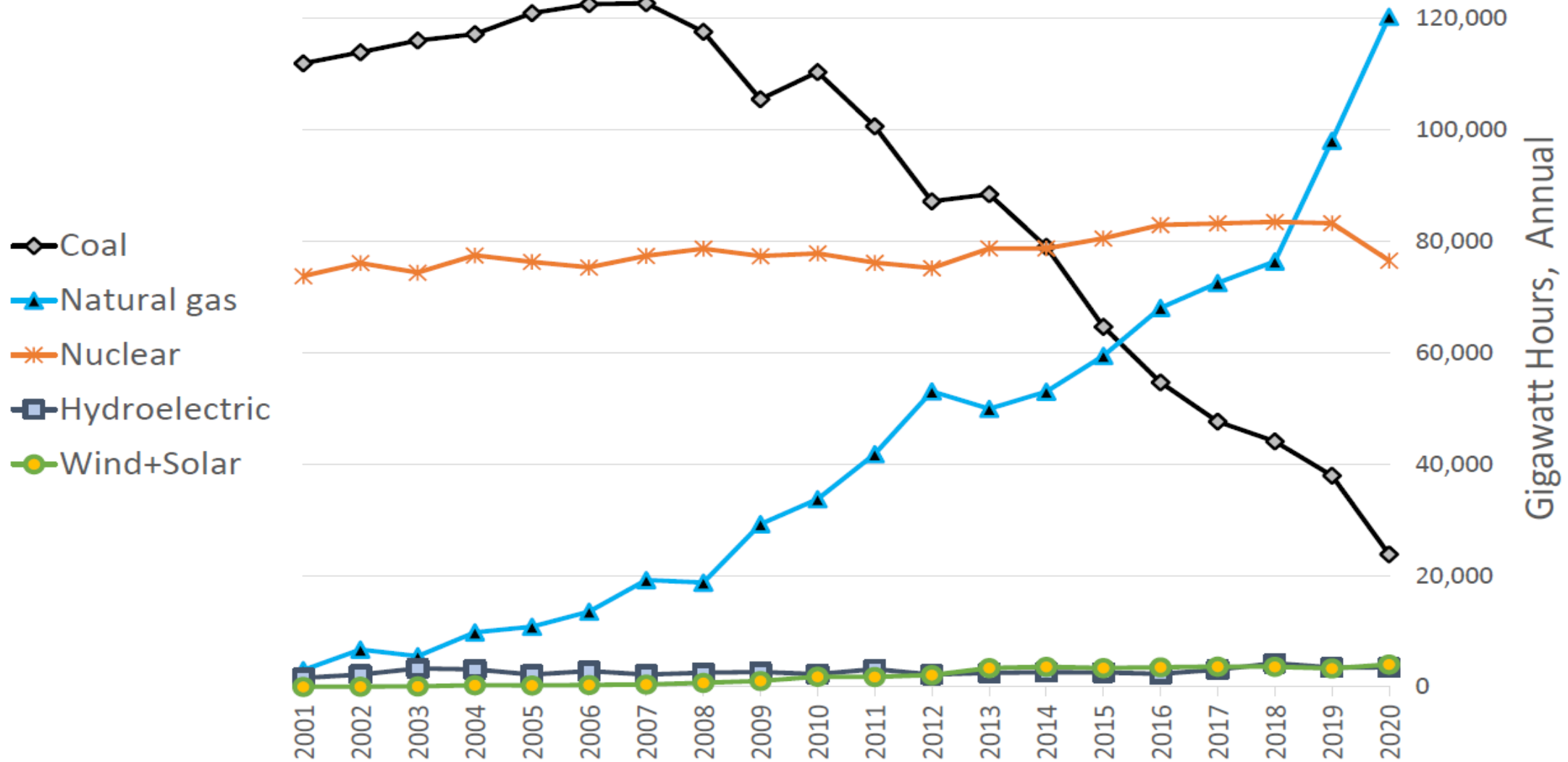
Pennsylvania Net Electricity Generation by Source, Oct. 2022

[DOWNLOAD](#)



Source: Energy Information Administration, Electric Power Monthly

# PA Electricity Generation by Source



# Different Scales of Solar



10 kW home system



500 kW commercial system



5 MW community-scale system



25 MW grid-scale system

## Residential & Commercial

- For on-site energy use
- Rooftop or mounted adjacent to structure
- Measured in kW
- Mature market – available guidance

## Community Solar

### Large Net-Meter / Merchant Generator

- For off-site energy use within community (distribution grid)
- Usually ground mounted requiring multiple acres but potential for rooftop or parking lot installations
- Measured in 100s of kW up to 5 MW
- Current guidelines unclear

## Grid-Scale Solar

- For off-site energy use distributed through transmission grid
- Ground mounted requiring significant acres to reach economies of scale
- Measured in MW
- Emerging market – guidance in development

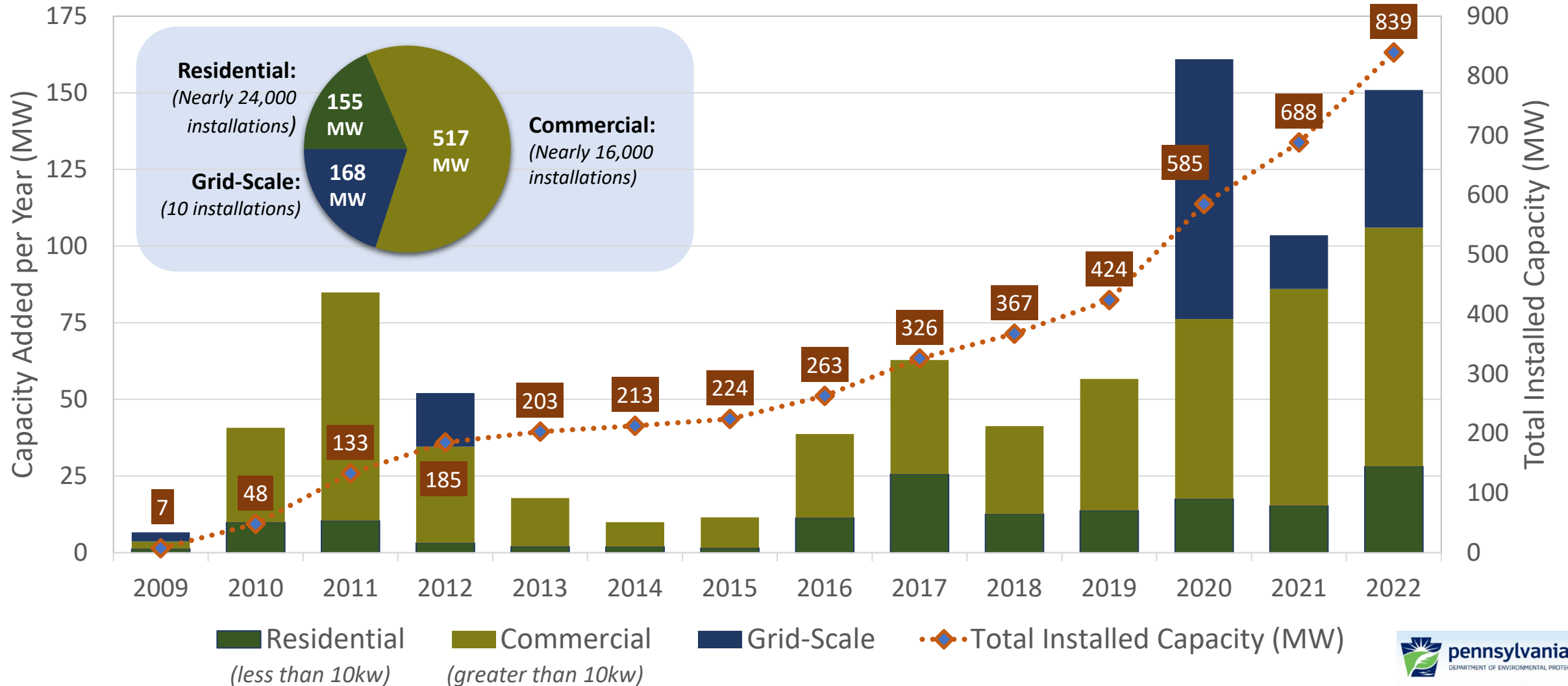


# Utility Scale / Grid Scale Solar Development

- Photovoltaic (PV) electrical generation *for the purpose of wholesale sale of electricity to the transmission grid*. NOT for electricity used on-site, not “net-metering, not “community solar.”
- A private *solar developer* secures acreage (by lease or purchase) upon which to install a solar array and “sets up shop” generating electricity and selling it to grid.
- There is *no regulatory role of the Pennsylvania Public Utility Commission* or other state agency or law (except generally applicable requirements, e.g. stormwater management, E&S controls during construction, electrical safety codes, etc.). This is private land development subject exclusively to local municipal control through zoning, land development ordinances, etc.

# Growth of All PA Solar – 2009 to 2022

## Pennsylvania Annual Solar Installations and Cumulative Capacity (MW)





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# **FEDERAL LAW & REGULATION**

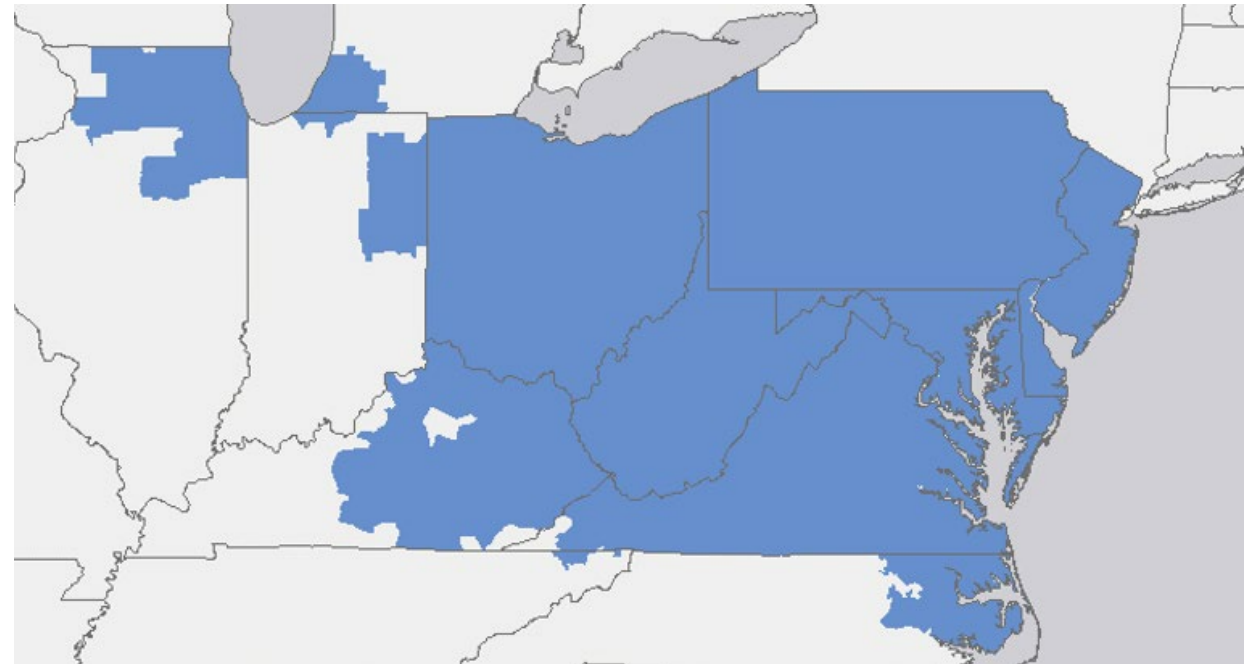


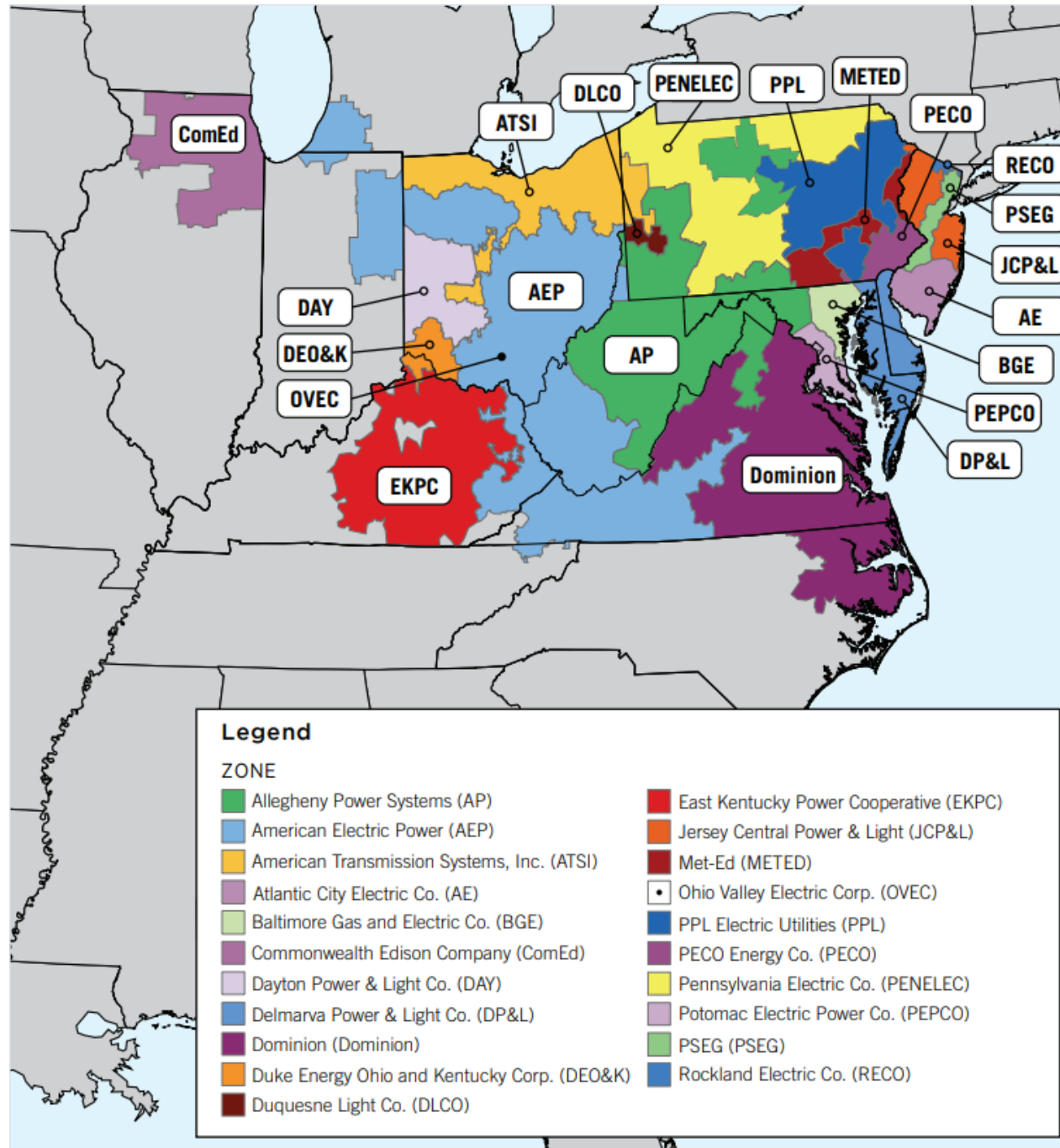


# Federal Regulation of access to the electrical transmission grid

- “Power Pool” / Regional Transmission Organizations (RTO)
- [PJM Interconnection, LLC](#) (“PJM”) 
- [PJM is regulated by FERC](#)  
(Federal Energy Regulatory Commission).

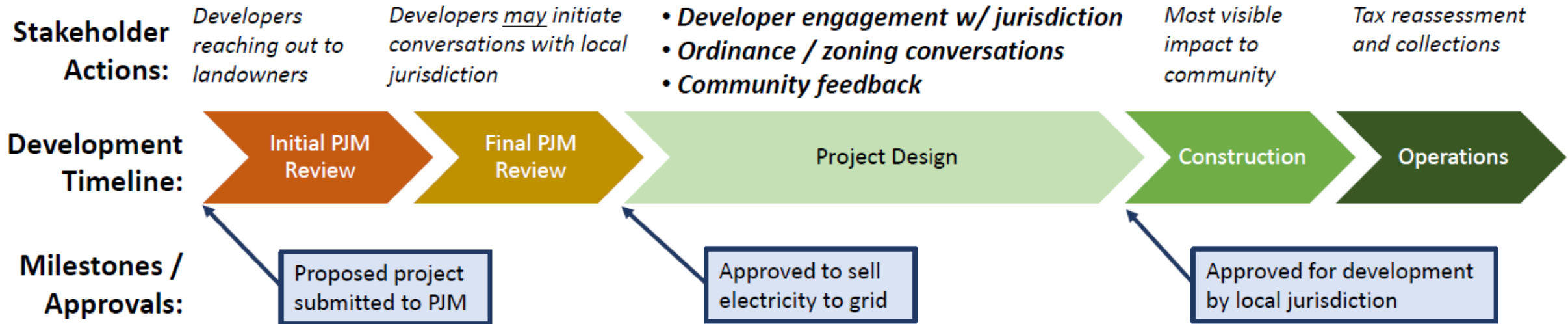
PJM Interconnection coordinates the movement of electricity through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia

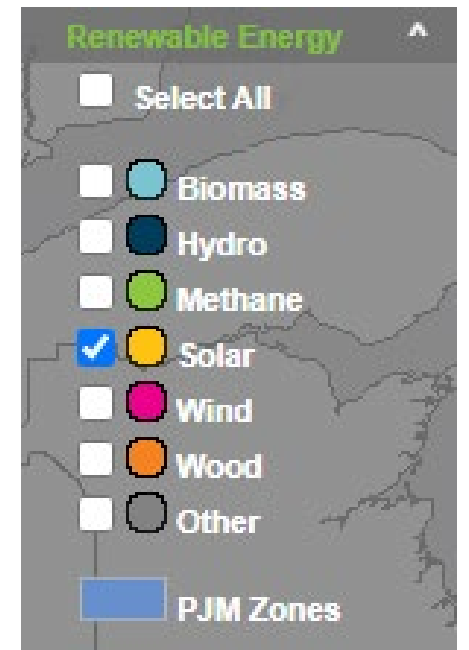
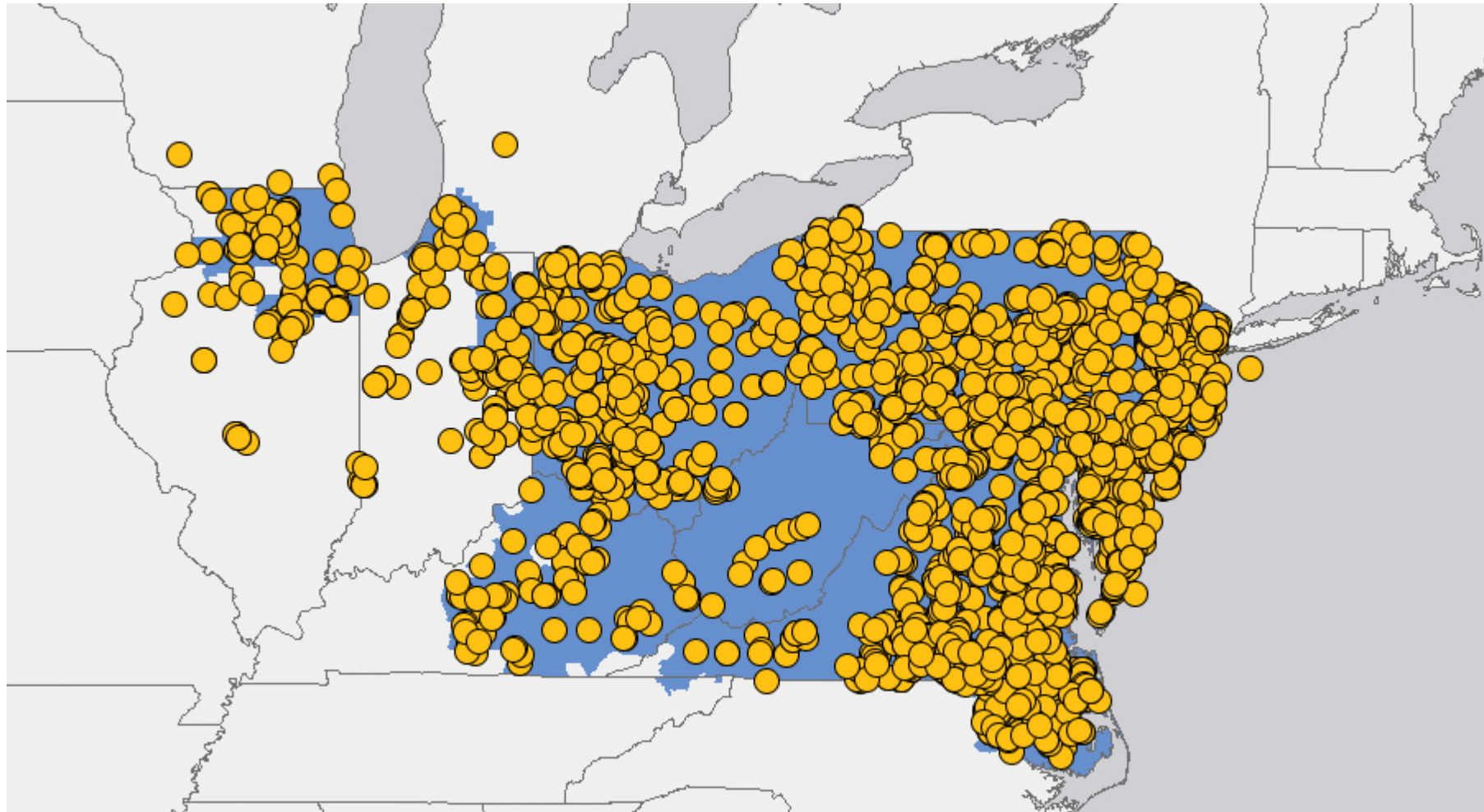






# Solar Development Project Overview





The New York Times

## *The U.S. Has Billions for Wind and Solar Projects. Good Luck Plugging Them In.*

An explosion in proposed clean energy ventures has overwhelmed the system for connecting new power sources to homes and businesses.

REUTERS® World Business Markets Sustainability Legal Breakingviews Technology Inve

Energy | Industry insight

### Largest U.S. grid faces tight timeline to curb wind, solar delays

By Anna Flávia Rochas

January 25, 2023 11:40 AM EST - Updated 7 months ago



CNBC MARKETS BUSINESS INVESTING TECH POLITICS CNBC TV INVESTING CLUB PRO

CLEAN ENERGY

### Wind and solar power generators wait in yearslong lines to put clean electricity on the grid, then face huge interconnection fees they can't afford

PUBLISHED THU, APR 6 2023 9:00 AM EDT

Catherine Clifford  
@CATECLIFFORD  
#CATECLIFFORD

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SUSTAINABLE BUSINESS

### Grid Operator's Energy-Project Backlog Creates Frustration for Renewables Buyers

Indoor agriculture company AppHarvest is among those planning to procure clean power from projects that are awaiting approval from PJM Interconnection, the largest U.S. grid operator

Large volume of projects leading to large volume of violations and upgrades

Too many speculative projects

Too much flexibility in project changes

“First come-first served” cumbersome

## NEED

**Influx of generation entering the PJM queue has caused significant delays in processing interconnection studies:**

- The current interconnection process was not designed to accommodate such a volume of projects.

## GOAL

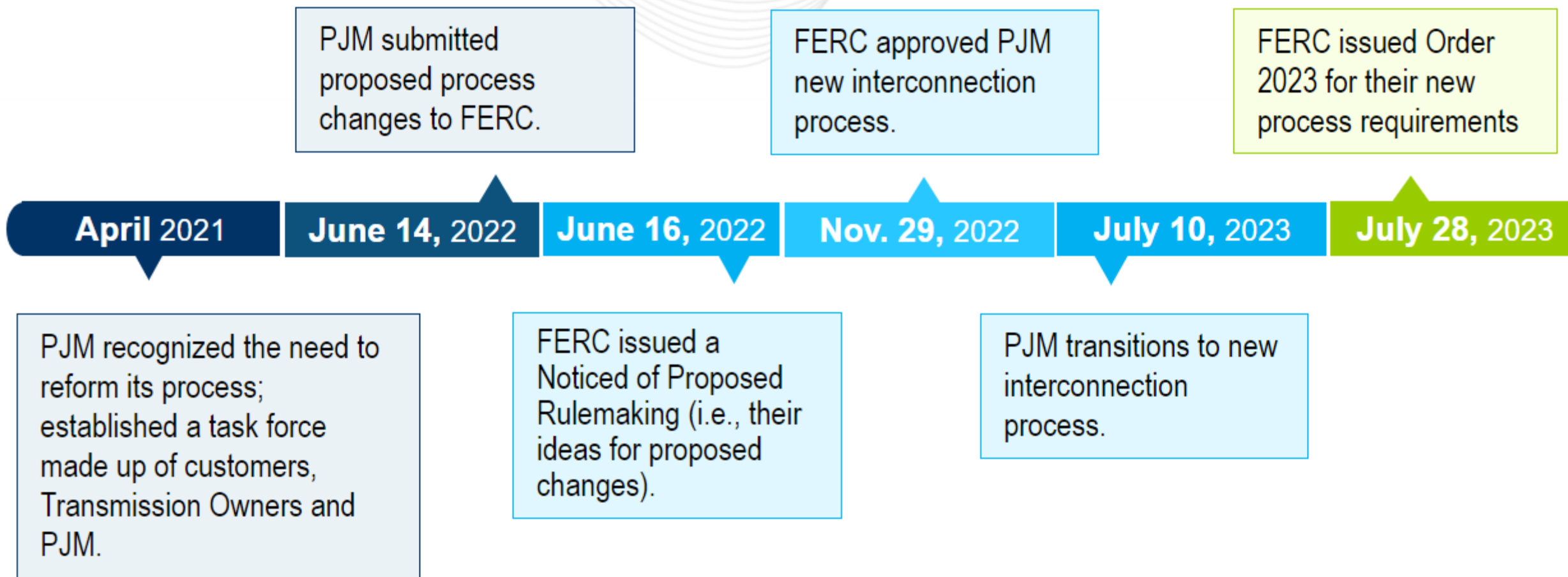
**Reform the queue to better process this higher volume of resources in a timely manner:**

- “First-ready, first-served”
- Address backlog of projects that have accumulated under current interconnection queue process.

## BENEFITS

**The new interconnection process will:**

- Move projects through the queue in a timely manner, including fast-track eligible projects.
- Reduce speculative projects entering the queue.
- Get more renewables into service and help states meet their clean energy goals.





# What is PJM Seeing on Utility-Scale in PA?

(September 2023)

- Since the beginning of this calendar year three new projects have come online, totaling 60 MW.
- 10 projects, totaling 398 MW are currently in some phase of construction (though they may be stalled, waiting for equipment, etc...).
- 86 projects, totaling more than 2.3 GW have received all necessary interconnection agreements, though they may still require local/state permits and zoning approvals.
- An additional 388 projects are in the queue for consideration (these are speculative but total nearly 15 GW of energy).



# Development Potential (# of Projects)

## Total Number of Projects in PJM New Services Queue

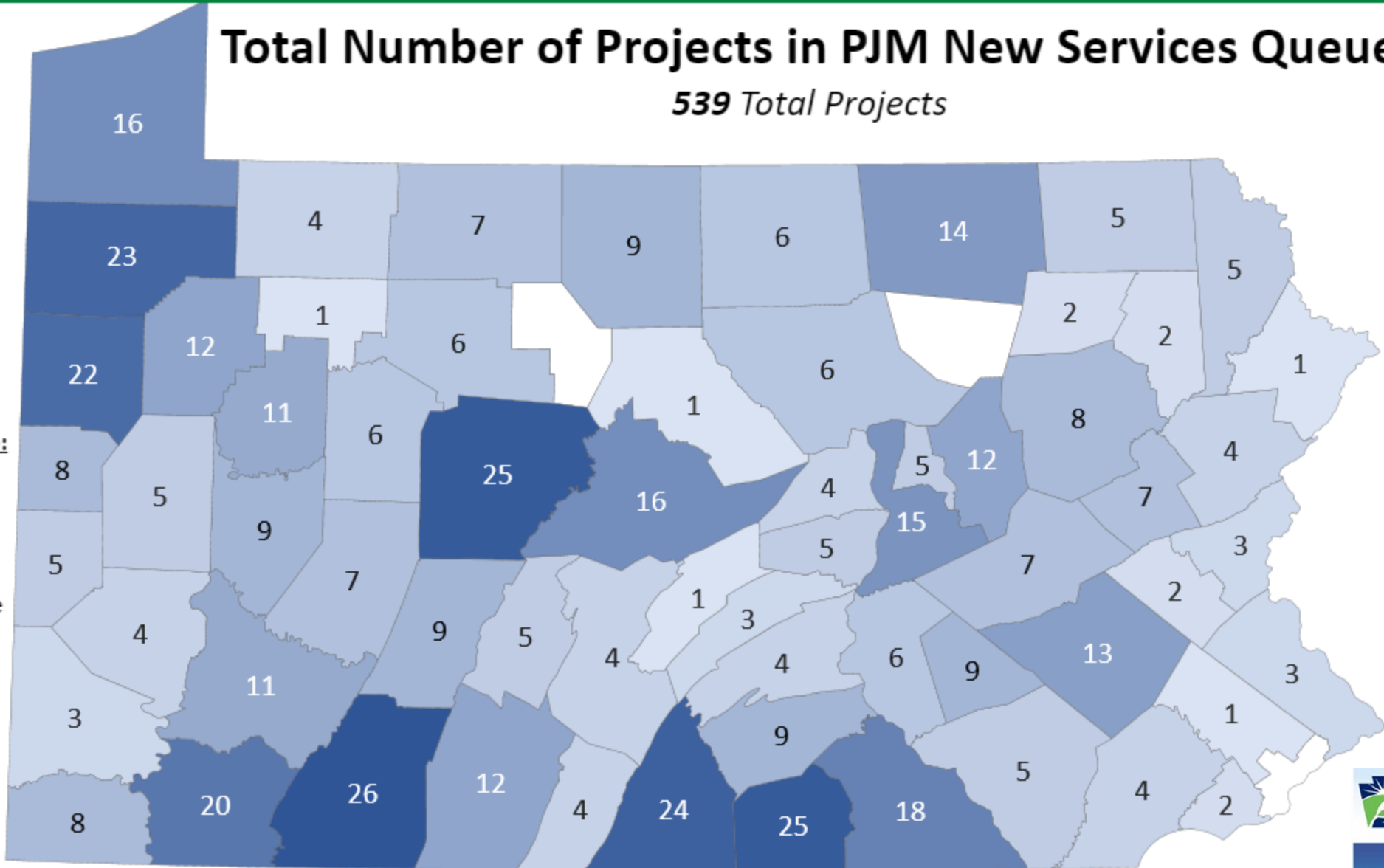
539 Total Projects

### Review Phase:



### Site Land Use Type:

- 80% open / agricultural
- 5% forest
- 15% previously impacted / reuse





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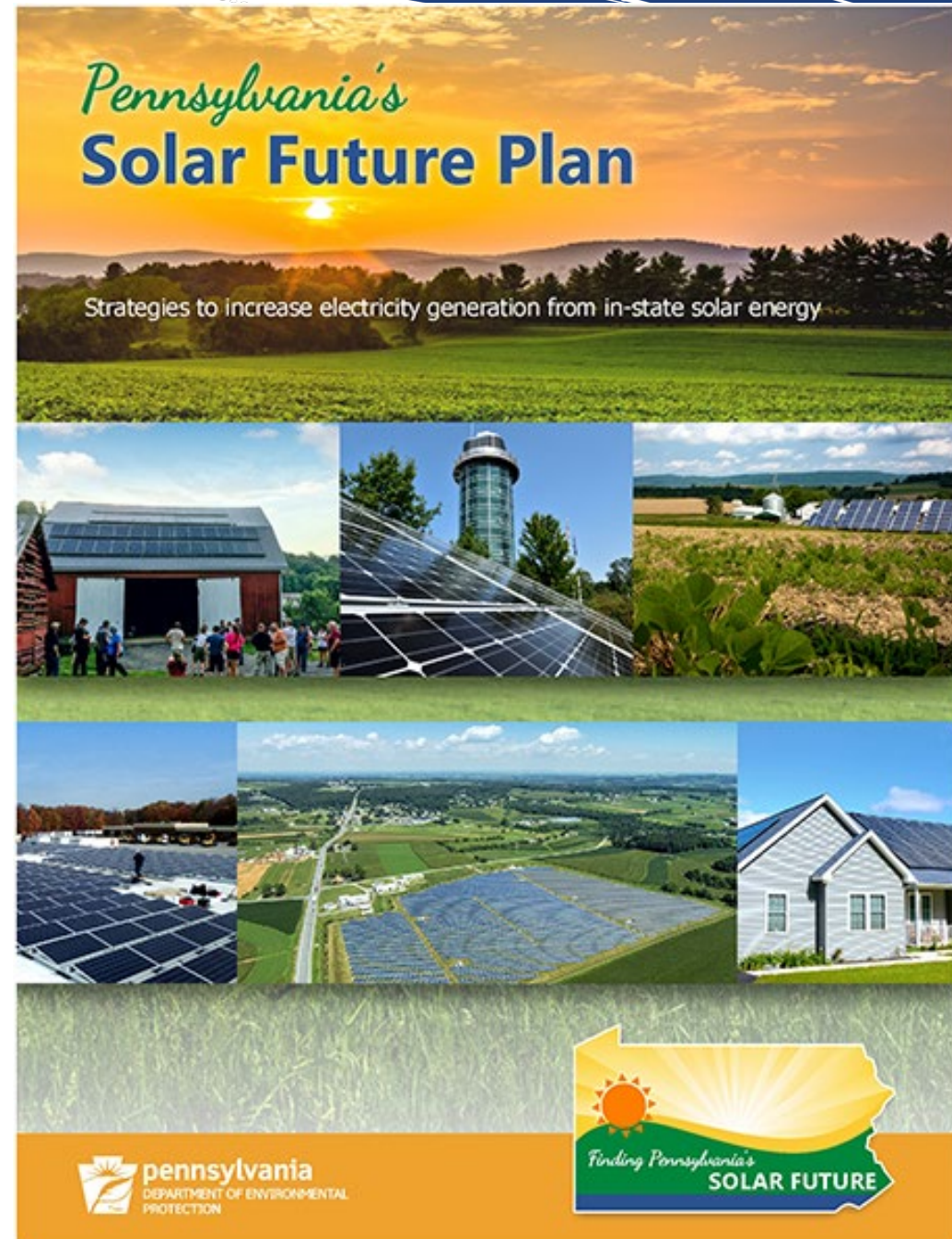
# **STATE LAW & REGULATION**



# Pennsylvania's Solar Future Plan

This is the document that still embodies the Commonwealth of Pennsylvania Executive Branch policy on solar, unless and until the current administration revises it. **It is only policy, not law.**

**Issued in November 2018**



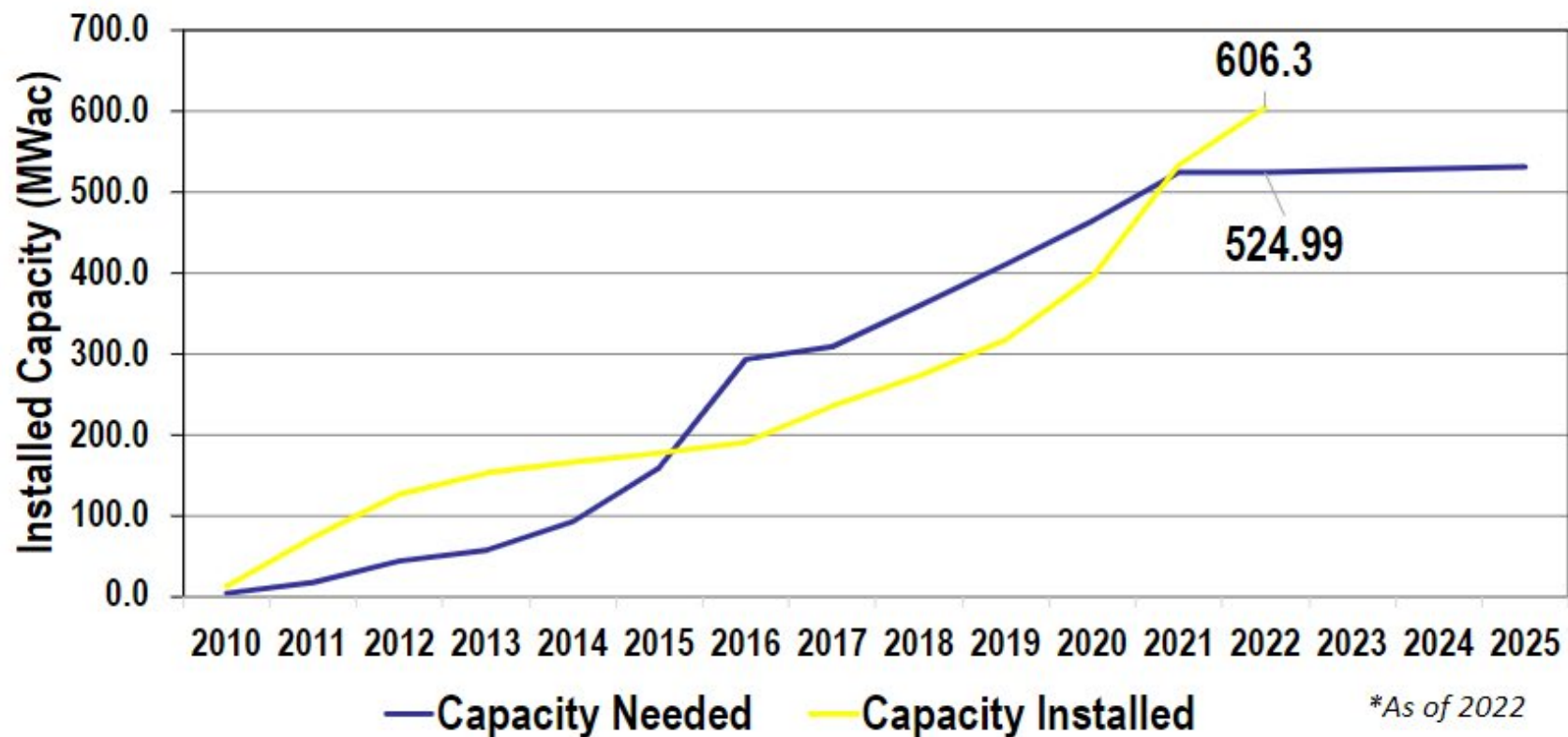


# Where are the state laws?

- **Legal mandate:** *Alternative Energy Portfolio Standard* (AEPS) was enacted in 2004. 0.5% of all electrical production must be solar by 2021 - has been met. *(See next slide.)*
- The AEPS has not been increased by the PA General Assembly. No bill has been moved.
- **The PA General Assembly has not enacted any other legislation regulating utility scale solar development, its siting, or any required regulatory approvals, conditions or parameters. All matters of location, etc. are local zoning matters.**
- **Pennsylvania's Solar Future Plan:** Contains a target set by the Executive Branch is 10% of all electrical production to be solar by 2030. This is non-binding and aspirational.
- **Policy / Guidance Documents:** There are now several more policy documents that are also simply advisory and non-binding statements. Sometimes called “guidance documents.” PDA / DCNR / DEP *(See following slides)*

# Now that We Have Reached 0.5% Solar

Installed In-State Solar Capacity vs. Demand (MWac)



The majority of in-state solar is distributed (i.e. behind the meter). Approximately 70 MWs is grid scale, or directly connected to transmission (i.e. utility-scale). \*As of 2022

Pennsylvania's existing generation fleet capacity for all resources is 46,977 MWs.

### Solar Requirements in PJM RTO

**Delaware – 10% by 2035**

**Washington D.C. – 10% by 2041**

**Maryland – 14.5% by 2030**

**New Jersey - 1.1% by 2031**

**Ohio – 0.5% by 2026**

**West Virginia – No requirement**

**Indiana – No requirement**

**Illinois – 1.5% by 2025**

**Kentucky – No requirement**

**Michigan – No requirement**

**North Carolina – 0.2% by 2020**

**Virginia – has a direct Megawatt (MW) requirement for its utilities, including 1,100 MWs for Dominion by 2035.**



# Commonwealth of Pennsylvania Grid-Scale Solar Siting Policy – housed on [DEP's website](#)

- Prioritize reuse and repurposing of previously impacted lands to make these sites viable alternatives for hosting grid-scale solar development compared to greenfield areas such as agricultural and forested lands.
- Balance potential opportunities of grid-scale solar energy projects with priorities and benefits of agricultural preservation and sustainable forest management.
- Support project siting that elevates equitable sharing of environmental, health, social, and economic benefits while advancing the Commonwealth's environmental and climate justice goals.
- Respect local decision making on the siting of projects within parameters established in existing and informed community-based comprehensive planning efforts.
- Protect landowner interests and safeguard future land uses through informed project planning that includes project decommissioning plans to ensure site restoration following project closure.

**DEP's website also houses an extensive set of web-based resources at [Solar Energy Resource Hub](#).**



# Agency Guidance Resources



- Deploy solar on non-agricultural and non-forested land whenever possible.
- Class one through four soils should be avoided.
- Ensure that farming can continue, including those lands leased for agricultural production.

[Link to document](#)



- Prioritize the conservation and protection of mature forests, protected recreational lands and wildlife habitat, native wild plant species, and vital ecosystems.
- Avoid areas inhabited by endangered, threatened, and other species of concern.

[Link to document](#)

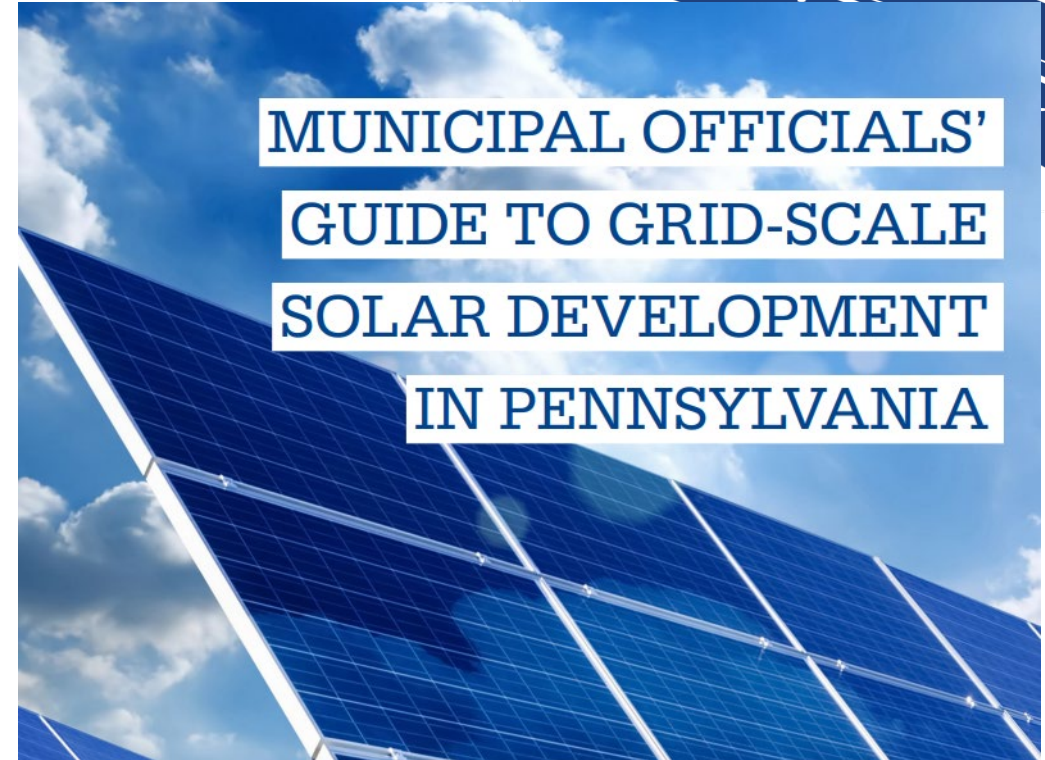


- Supported Penn State with development of ***Municipal Officials' Guide to Grid-Scale Solar Development in Pennsylvania*** (see *next slide*)
- ***Assessment of Opportunities for Grid-Scale Solar Development on Previously Impacted Mine Lands in Pennsylvania*** currently in development
- ***Solar on Schools Toolkit*** to be released soon



# Municipal Officials' Guide to Grid-Scale Solar Development in Pennsylvania

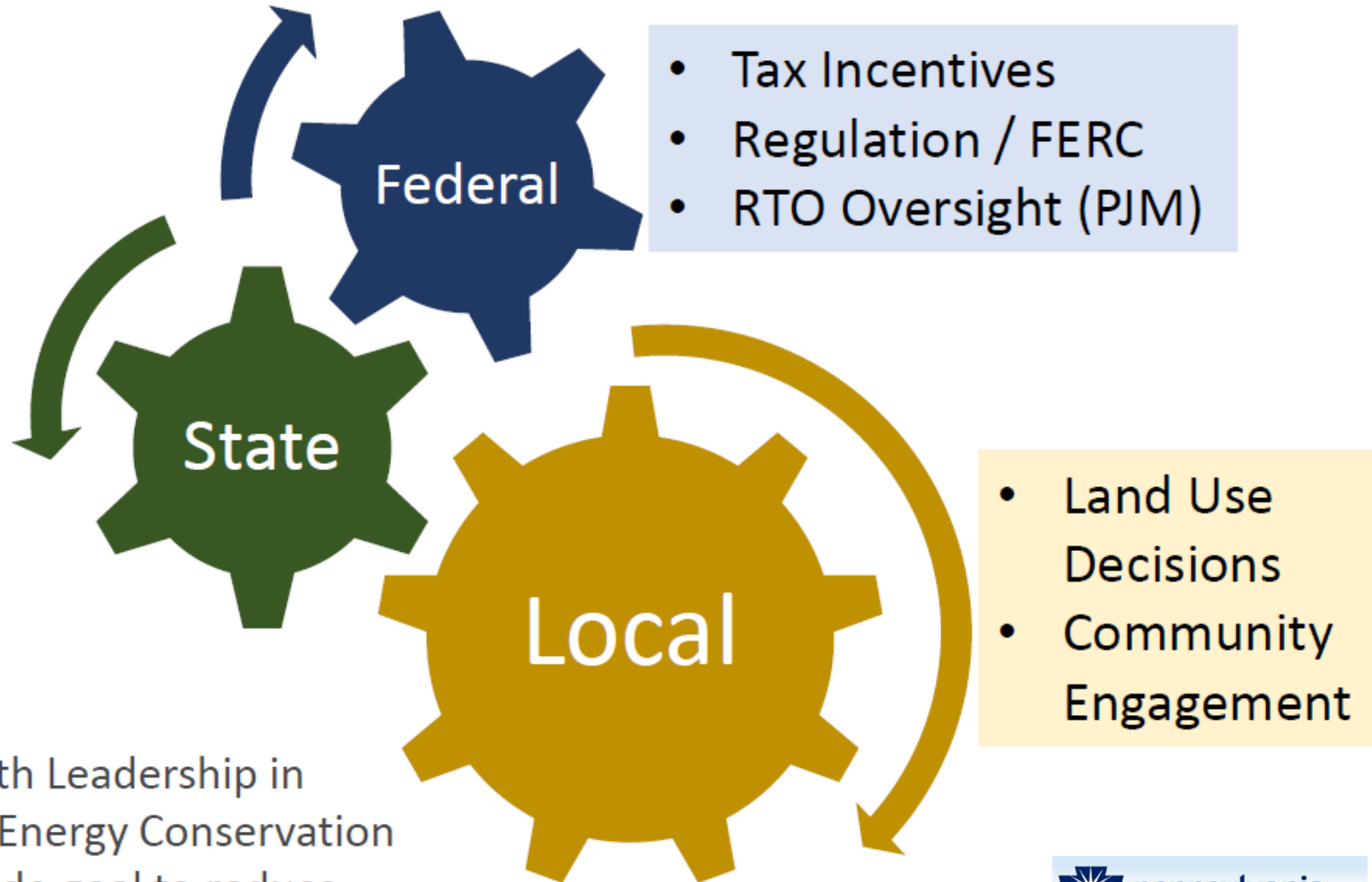
- [1: Grid-Scale Solar “Basics”](#)
- [2: Grid-Scale Solar Technologies](#)
- [3: Physical Impacts of Grid-Scale Solar Development](#)
- [4: Environmental Impacts of Grid-Scale Solar Development](#)
- [5: Land Conversion Issues with Grid-Scale Solar Development](#)
- [6: Localized Economic Impacts of Grid-Scale Solar Development](#)
- [7: Tax Implications of Land Conversions for Grid-Scale Solar Development](#)
- [8: Ordinance Considerations for Grid-Scale Solar Development](#)



# State Role in Grid-Scale Solar Development

## What is the State's Role?

<b>Policy</b>	<ul style="list-style-type: none"><li>• Solar Future Plan</li><li>• Executive Orders</li><li>• Pending Legislation</li></ul>
<b>Leading by Example</b>	<ul style="list-style-type: none"><li>• Power Purchase Agreement(s)</li></ul>
<b>Coordination Across State Agencies</b>	<ul style="list-style-type: none"><li>• Land Use</li><li>• Economic Development</li></ul>
<b>Financial Assistance</b>	<ul style="list-style-type: none"><li>• None at this time</li><li>• <a href="#">SEP for solar mfg.</a></li></ul>



**Executive Order No. 2019-1** (Commonwealth Leadership in Addressing Climate Change and Promoting Energy Conservation and Sustainable Governance) Sets a statewide goal to reduce greenhouse gas emissions 26% by 2025, and 80% by 2050.

# Pennsylvania's Solar Future Plan

## Pennsylvania's Solar Future Plan

Strategies to increase electricity generation from in-state solar energy

- Target 10% electricity (11 GW) from in-state solar by 2030
  - **Scenario A:** Grid-scale solar will supply 65% of the 10% electricity generation
  - **Scenario B:** Grid-scale solar will supply 90% of the 10% electricity generation.
- If 90% of in-state solar comes from grid-scale sources:
  - ~**10 GW** of solar generation
  - ~80,000 acres of land – this represents 0.3% of total land in Pennsylvania
- 15 Recommendations – 4 relevant for today's discussion

# Solar Future Plan Recommendations

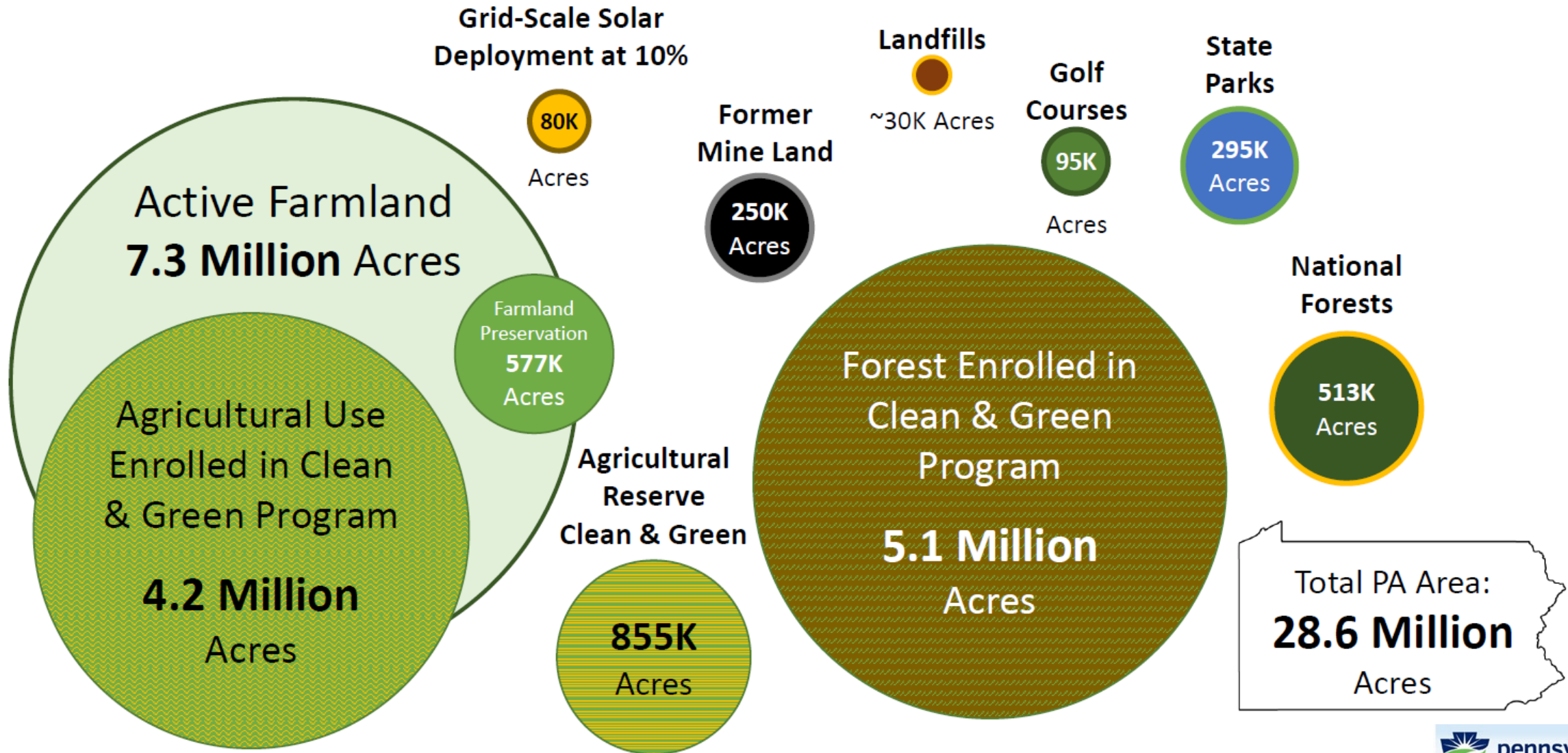
<b>Alternative Energy Portfolio Standards</b>	Increase the AEPS solar photovoltaic (PV) carve-out to between 4 and 8 percent by 2030 and ensure creditable Solar Renewable Energy Credits are limited to those generated in Pennsylvania wherever possible.
<b>Community Solar</b>	Identify and remove the barriers to the deployment of community solar systems in Pennsylvania.
<b>Siting and Land Use</b>	Support the creation and adoption of uniform policies to streamline siting and land-use issues while encouraging conservation.
<b>Carbon Pricing</b>	Implement a carbon pricing program and invest the proceeds in renewable energy and energy efficiency measures.

# PA Solar Future Land Use



“Accelerating grid scale solar will require minimal land. **Only 124 square miles (79,200 acres) of land will be needed to increase grid solar sufficiently to generate 10 percent of electricity. This is less than three-tenths of 1 percent of Pennsylvania's total land area of 46,055 square miles.** In addition, land that is already in use, such as landfills and abandoned mine land, could also host grid scale solar installations.”

# Land Use Comparison



# As of 3/22/21, state government (Executive Branch):



The advertisement features a background image of a solar farm with rows of panels stretching across a field of colorful autumn flowers. At the top, the logos for 'lightsource bp', 'Constellation An Exelon Company', and the 'PA' state logo are displayed. The main title 'PENNSYLVANIA PULSE' is centered in a bold, dark font, with the subtitle 'FOR A HEALTHIER, MORE RESILIENT PENNSYLVANIA' below it.

lightsource bp

Constellation  
An Exelon Company

PA

**PENNSYLVANIA PULSE**

FOR A HEALTHIER, MORE RESILIENT PENNSYLVANIA

Pennsylvania PULSE (Project to Utilize Light and Solar Energy) is a clean energy project comprised of seven new solar farms in six counties across Pennsylvania. In total, the 191 megawatt (AC) project will supply 361,000 megawatt-hours of electricity annually to 16 Commonwealth of Pennsylvania agencies, making it the largest solar commitment by any government entity in the United States.

The project supports the Commonwealth's commitment to mitigating climate change by reducing its carbon emissions, with power generation as a leading contributor to greenhouse gas emissions that negatively affect our environment and the health of Pennsylvanians. Pennsylvania PULSE will enable the Commonwealth to reduce its carbon footprint by 157,800 metric tons of CO<sub>2</sub> each year, with new home-grown renewable energy projects that will bring health and economic benefits to Pennsylvania.

- Capacity: **191** Megawatts (AC)
- Electricity Supplied: **50%** of the Commonwealth of PA's annual electricity consumption will be sourced from these new solar assets





# Talking Points of PULSE on solar siting

## **Is it a concern that we're losing farmland to solar?**

Urban sprawl and rural subdividing are the primary contributors to loss of farm ground. Solar energy temporarily sets aside farm ground and protects it from permanent loss due to urban expansion.

## **Can the land be returned to agriculture?**

At the end of the project, the installation will be dismantled, completely removed and recycled. Your farmer neighbors will be able to return to row crop agriculture or pursue the type of agricultural practice that best suits their farm needs at the time.



## Other Talking Points of PULSE

- A mapping tool from The Nature Conservancy was used to confirm that the project sites are not located on high value biodiversity areas or wildlife corridors that are critical for species to adapt and respond to climate change.
- **Revenue for landowners:** The solar farms are located on land leased by Lightsource bp from local landowners, providing families with a diversified and reliable source of revenue while keeping the land in the family for generations.
- **Biodiversity conservation:** Studies have confirmed that solar projects can increase wildlife populations and overall biodiversity by allowing soil and habitat to regenerate from previous intensive land use practices.
- **Soil improvements:** Solar projects can improve the soil for future agriculture. Over the life of a project, soil will be protected from erosion, have far fewer chemicals than traditional farming, and allowed the opportunity to “rest” similar to fallowed parcels under USDA’s Conservation Reserve Program.



## In the absence of new siting controls arising via state law, what are the existing siting controls?

*Standard toolbox* for development pressure on undeveloped lands:

- Local land use controls (zoning).
- Agricultural Security Areas.
- Clean & Green preferential tax assessment enrollment.
- Agricultural Conservation Easement (ACE) purchases.
- NGO funded easement purchases.



# Agricultural Conservation Easements

***Q: What siting controls arise from agricultural conservation easement program?***

A: Unless there are radical amendments to PA's Agricultural Area Security Law and the federal Agricultural Conservation Easement Program (ACEP-ALE), if amount of federal or PA state money was used to purchase, or reimburse expenses of an entity that purchased, an easement, the commercial activity of PV electrical generation for transmission to the grid is not permitted.

Each county program may have its own state-approved parameters for “non-commercial” PV electrical generation as an allowable “rural enterprise.”

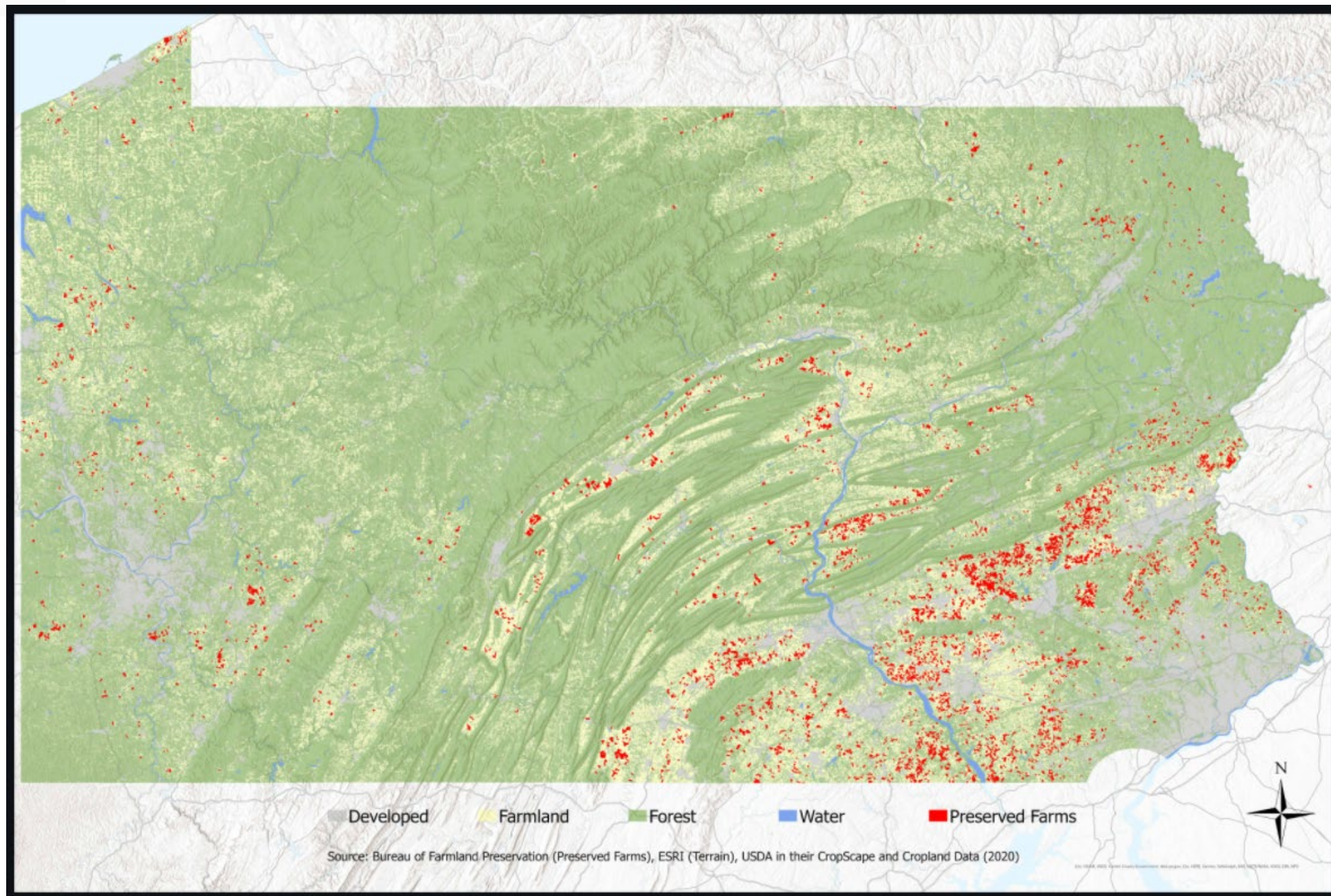
- Privately purchased easements are subject to their own terms.



## 2020 Farmland Preservation Annual Report

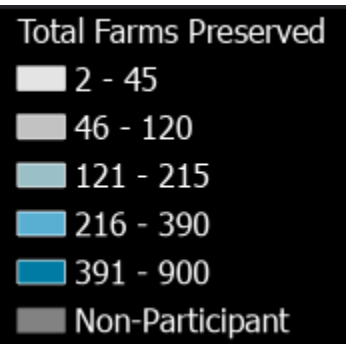
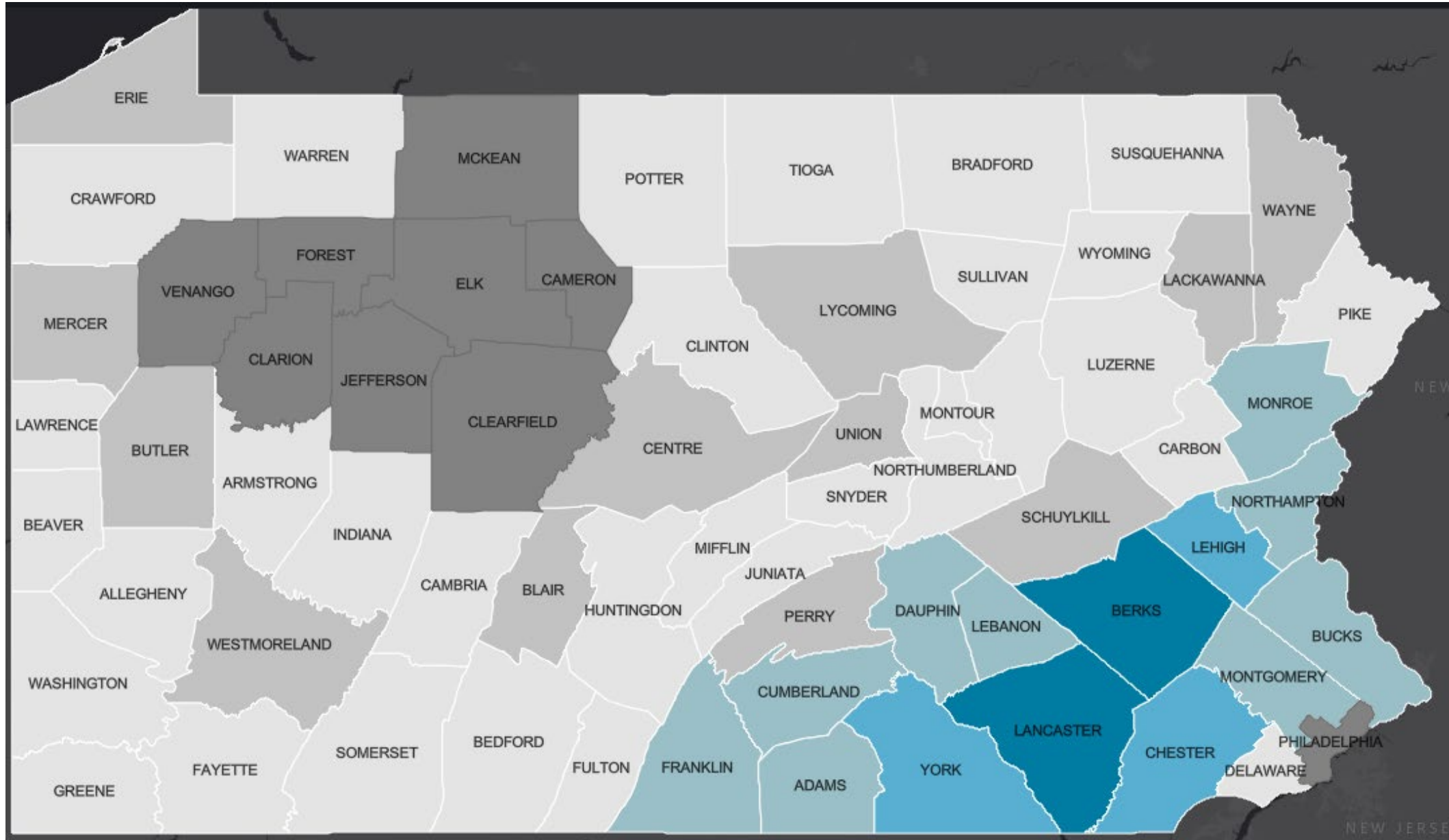
Click [here](#) for  
2018 version  
with finer visual  
detail.

5,869 farms  
596,827 acres





# 2020 Farmland Preservation Annual Report



**AGRICULTURAL CONSERVATION EASEMENT PURCHASE PROGRAM**  
**Jan-20**  
**PROGRAM HISTORY**

**Since 1989**  
**> \$1 Billion public investment in ACEs**

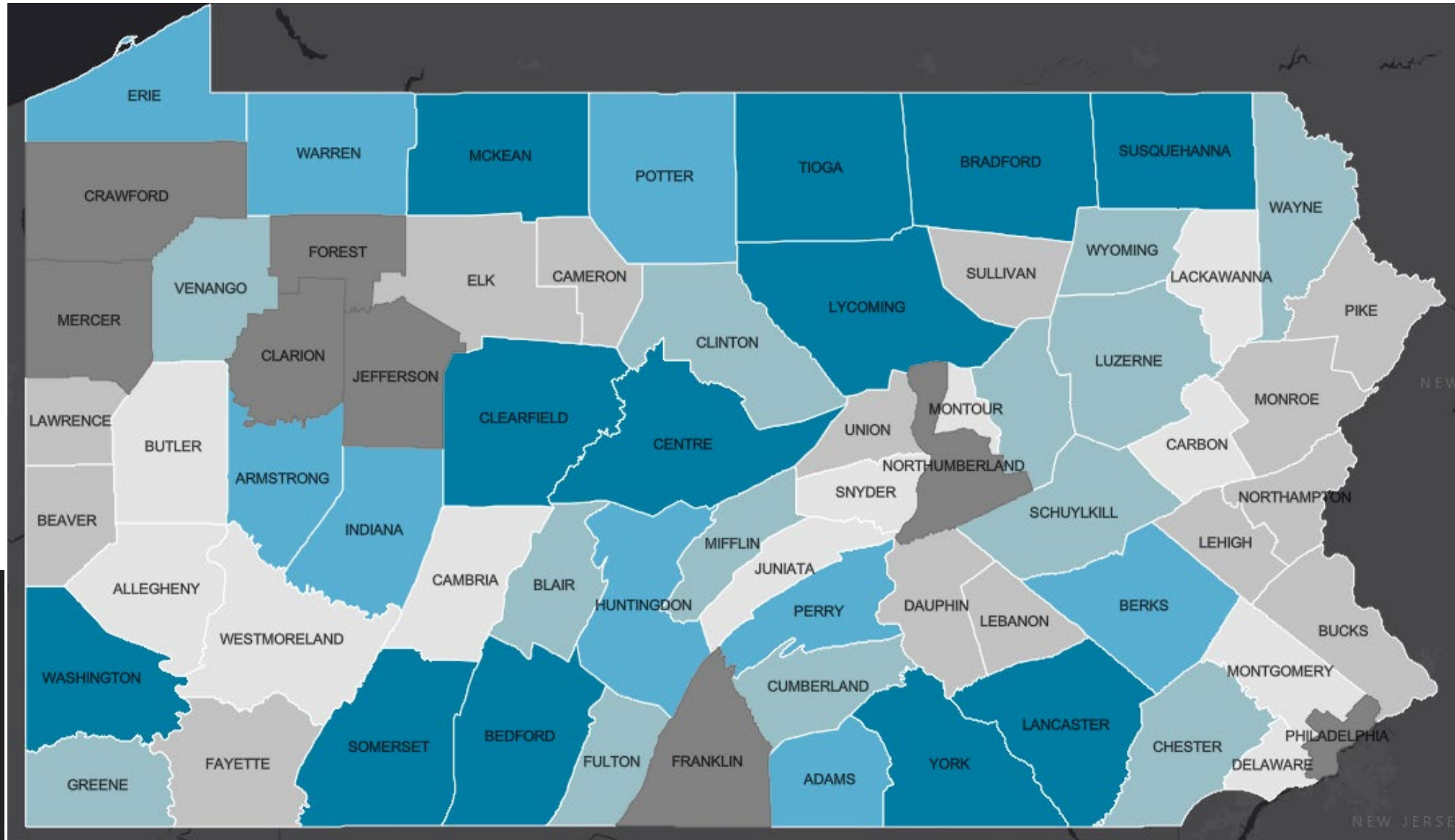
<u>CALENDAR YEAR</u>	<u>STATE FUNDING</u>	<u>COUNTY FUNDING</u>	<u>TOWNSHIP CONTRIBUTION</u>	<u>FEDERAL REIMBURSEMENT</u>	<u>NUMBER OF FARMS</u>
1989	25,000,000	3,417,138			1
1990	20,000,000	2,454,369			21
1991	21,000,000	3,973,515			87
1992	15,000,000	3,822,000			108
1993	19,000,000	5,082,442			169
1994	20,000,000	5,498,113			102
1995	21,000,000	5,792,476			91
1996	31,000,000	6,318,987		1,000,000	115
1997	35,000,000	7,404,865		270,000	155
1998	28,000,000	9,240,574		964,000	195
1999	70,000,000	16,367,116	1,543,282		149
2000	45,000,000	24,307,112	1,170,062		283
2001	47,000,000	23,730,741	353,000	368,700	308
2002	40,000,000	23,912,272	1,510,618	2,318,556	289
2003	40,000,000	25,630,314	1,117,499	3,584,163	249
2004	43,000,000	25,762,300	2,613,252	2,218,183	214
2005	36,000,000	26,236,539	1,315,623	2,467,500	210
2006	102,000,000	45,067,886	1,522,058	882,900	293
2007	40,000,000	37,263,323	3,042,332	736,719	350
2008	33,000,000	41,268,987	1,002,557	3,293,191	307
2009	23,000,000	27,664,185	1,289,577	3,805,479	232
2010	20,000,000	17,047,576	902,780	3,858,057	168
2011	22,000,000	16,546,150	322,966	1,570,087	133
2012	24,000,000	15,857,736	551,346	2,098,803	135
2013	33,000,000	15,433,043	277,000	2,792,673	167
2014	30,000,000	16,562,596	3,380,601	0	200
2015	30,000,000	17,703,423	350,054	0	160
2016	36,000,000	14,096,501	548,921	1,033,550	154
2017	36,000,000	17,210,765	719,752	692,100	198
2018	37,000,000	16,767,619	1,770,494	438,250	185
2019	38,000,000	18,264,081	1,540,048	82,750	208
2020	38,000,000	16,694,161	589,758	148,430	177
<b>Total/Ave</b>	<b>1,098,000,000</b>	<b>552,398,905</b>	<b>27,433,580</b>	<b>34,624,090</b>	<b>5,813</b>



## CLEAN & GREEN Preferential Tax Assessment Enrollment

Avg. tax reduction  
is approx. 50%.

11.2 million acres  
enrolled. (216,000  
parcels)







# What about controls exercised through other state and federal government tools?

- PA's Bureau of Farmland Preservation prepared a short document addressing those issues approx. 4 years ago.



August 2019

**Are you a farm owner considering a commercial solar lease?**

If so, here are some questions to consider first.



## **Are you a farm owner considering a commercial solar lease?**

If so, here are some questions to consider first.

### **1) Is the farm in an Agricultural Security Area (ASA)?**

- a. There are no restrictions or limitations related to commercial solar development on a property that is simply enrolled in the ASA. However, the property will potentially be removed from the ASA when the township does a seven-year review if it no longer meets the evaluation criteria for inclusion in the ASA. There is no penalty for changing use or removing property. The landowner can also submit in writing that they no longer wish to be enrolled and be removed at any time.

## **2) Is the farm in an Agricultural Security Area and preserved through a permanent Agricultural Conservation Easement?**

- a. ASA is a prerequisite for the state farmland preservation program. Unlike the ASA designation alone, if the farm is also subject to a permanent agricultural conservation easement, the landowner may not engage in commercial solar development. The deed of easement is in perpetuity and may not be extinguished.
- b. Energy primarily for use on the farm is permitted under the county farmland preservation program's rural enterprise criteria.

## **3) Is the farm enrolled in the Clean and Green preferential assessment program?**

- a. If the farm is enrolled in Clean and Green, the landowner may not engage in commercial solar development without triggering rollback taxes on the entire enrolled acreage. However, unlike the Farmland Preservation Program, the landowner may break the covenant and pay rollback taxes and be removed. Any remaining eligible acreage after a rollback tax penalty is triggered is automatically re-enrolled unless the landowner wishes to be removed.
- b. Like farmland preservation, energy primarily for use on the farm is permitted under the definitions of eligibility.

#### **4) Is zoning a consideration?**

- a. Zoning is done locally by townships under the authority of the Municipalities Planning Code (MPC). It is possible a zoning ordinance will not identify commercial solar as a specific use. In that case, zoning will need to determine if solar may be permitted as another use expressly permitted. Farm owners should check with townships to make sure land is zoned appropriately prior to executing a lease agreement.

#### **5) Is solar considered “agriculture” by definition in Pennsylvania’s laws?**

- a. Although commercial scale solar is often called a “solar farm”, it does not meet the definition of normal farming activity under the Right to Farm Act. Therefore, it will not receive protection from local ordinances and lawsuits, otherwise given to agricultural operations.

**6) Must I obtain a permit from Department of Environmental Protection?**

- a. A construction stormwater permit may be required if the panels disturb greater than one acre, per National Pollution Discharge Elimination System (NPDES). Farm owners should consult with county conservation district or DEP for additional information.

**7) Is the farm enrolled in federal Conservation Reserve Program (CRP) or Conservation Reserve Enhancement Program (CREP)?**

- a. Solar panels are not permitted on lands subject to CRP and CREP contracts. Specific questions may be directed to the local USDA Farm Service Agency.

**8) Will the solar panels affect my conservation and best management practices that are part of a conservation plan?**

- a. Farm owners should notify county conservation districts or local USDA-Natural Resources Conservation Service (NRCS) office to update conservation plans as needed. If cost share was received (EQIP, for example), farm owners should first obtain approvals prior to signing a lease agreement.



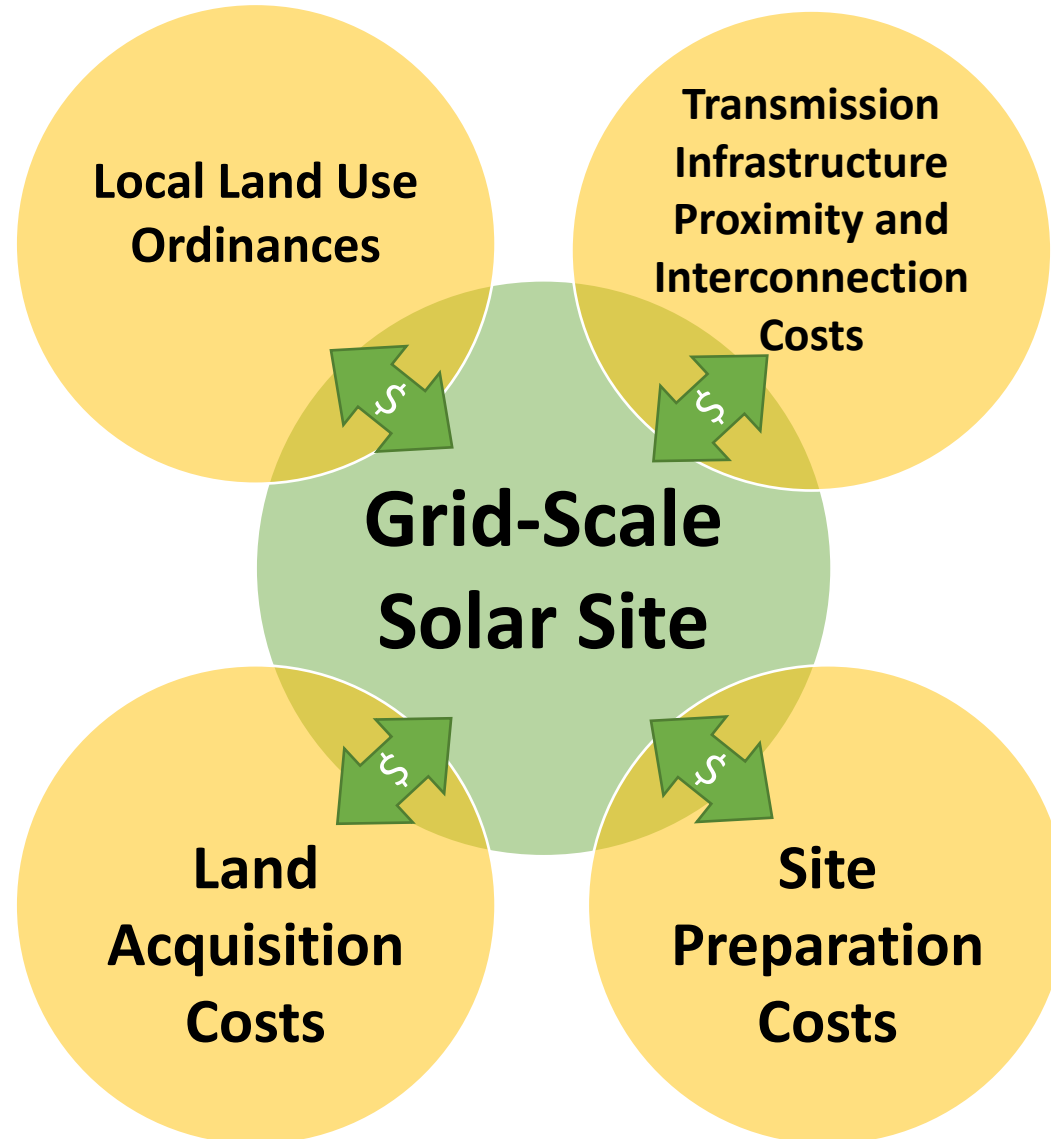
**PennState Law**

Center for Agricultural  
and Shale Law

# **LOCAL ORDINANCES & LAND USE CONTROLS**

# Grid-Scale Solar Site Selection Considerations

- Where does the community stand on grid-scale solar development?
- Final siting authority rests at local government level
  - Productive agricultural land vs. previously impacted sites with lower economic value



- Developer responsible for costs to tie into transmission system as well as any upgrades to lines, substations, etc.
- “Shovel-ready” greenfield site vs. land requiring significant reclamation and/or grading activities



# Zoning approval of the land use is PA's default siting control

## Zoning approval remains largely uncharted territory.

- Unless very recently amended to account for solar electrical generation as a use in a township, PA zoning ordinances will generally require approval of solar through a ***conditional use*** application to the township supervisors (not the zoning hearing board). (*"Uses not otherwise provided for . . ."*)
  - "Conditions" can be attached and there are no controls over how extensive or on what subject matters those conditions may be. That raises the undetermined legal question of whether, and to what extent, townships will be able to "regulate" the full scope of solar electrical generation facilities.
  - If operating pursuant to a lease, the solar developer is 100% responsible for zoning approval (as well as all other government approvals).
-





# Municipal Government Decisions

- Impervious Coverage
- Stormwater ROW
- Impact on Agricultural Soils
- Minimum Lot Size
- Setbacks
- Height
- Vegetative Cover / Pollinators
- Vegetative Screening
- Viewshed Impact
- Decommissioning Plan
- Easements
- Glare / Noise



# Limitations of Municipal Government?

What is the *legal authority*, level of *expertise*, *budget* constraints and *confidence* in township government to:

- Track the current operator (potentially a tenant, not a landowner).
- Criteria, method and manner of grid connection.
- Administer multiple properties/owners making up one “project.”
- Manage approvals for projects traversing multiple townships.
- Establish criteria for decommissioning.
- Establish methods, values and track financial security re: decommissioning.
- Dictate disposition of panels (recycle, etc.).



# Aesthetics/Viewshed

“While the concept of the general welfare of a community in zoning matters includes a consideration of aesthetics, aesthetics alone cannot support a determination that the health, safety and general welfare of a community would be adversely affected by the grant of a special exception.” PPM Atlantic renewable v. Fayette County Zoning Hrg. Bd., 2014 WL 2156744 (citing Heck v. Zoning Hearing Board for Harvey's Lake Borough, 397 A.2d 15, 19 (Pa.Cmwlt.1979), citing County of Fayette v. Holman, 315 A.2d 335 (Pa.Cmwlt.1973) ; Soble Construction Co. v. Zoning Hrg. Bd., 329 A.2d 912 (Pa.Cmwlt.1974)).



# Property Value Impact Study

## Most recent academic study

- [Lawrence Berkely National Lab](#) January 2023 (Salma Elmallah et al.)
- Examined 1.8 million home transactions near 1,500 large-scale projects in six states accounting for over 50% of installed MW capacity for large-scale solar in U.S.
- California, Wisconsin, Connecticut, North Carolina, Massachusetts and New Jersey
- Homes within 0.5 miles experience an average 1.5% decrease in property value compared to homes 2-4 miles away. No statistically measurable impact to homes over 1 mile away.
- A 1.5% decrease is statistically insignificant for an appraisal and therefore supports that solar has no impact on property values.

## Pennsylvania

There is currently only one known sale adjacent to a solar farm in Pennsylvania

- Located adjacent to 13.5 MW Whitetail Solar I Project in Franklin County
- Single-family home with property line 219 ft from closest solar panel sold for 5.25% above market average based on a paired-sales analysis of the area
- Realtor indicated in interview that the property sold without any negative impact from the adjacent solar farm

No known challenges to property tax assessments based on proximity to solar project.



**PennState Law**

Center for Agricultural  
and Shale Law

# Other State Programs



# Ohio Solar Siting Law – Substitute SB 52

- Effective 10/11/21; regulates utility scale solar and wind
- “Large Solar Facility” = Single interconnect (not community solar),  $\geq 50$  MW capacity
- The bill would allow the county commissioners to designate “restricted areas” within the unincorporated parts of the county where “large solar facilities” may not be constructed.
- If a county approves a restricted area, a referendum is submitted to voters. Residents may also petition for restricted area by referendum.



## Ohio Solar Siting Law – Substitute SB 52

- Proponent of a solar facility must hold a **public meeting** in each county where the facility will be located within 90 to 300 days prior to applying for (or making a material amendment to an application) for a *certificate* from the *Ohio Power Siting Board*.
  - OPSB is a pre-existing procedure and board. Under the new law, two “ad-hoc” local residents are seated.
- Up to 90 days after the public meeting, the county commissioners may adopt a resolution that prohibits the construction of the facility or limits its boundaries to a smaller portion of the proposed location.
- Performance bond payable to OPSB; updated amount every 5 years; 12 months to complete “decommissioning plan.”



# Ohio Solar Siting Board Regulations

On July 20, 2023, the Ohio Power Siting Board adopted its initial regulations for “Large Solar Facilities.” They include:

- **Public information:** Siting project applicants must host two public informational meetings for each standard certificate application. The first meeting will describe the scope of the project. The second meeting, held at least 90 days before an application filing, will focus on the specifics of the application.
- **Site grading:** Applicants must provide a preliminary grading plan that describes maximum graded acreage expectations.
- **Drainage and field tile:** Applicants must describe and map field drainage systems and demonstrate how impacts to those systems will be avoided or mitigated, describe how damaged drainage systems including field tile mains and laterals will promptly be repaired to restore original drainage conditions and describe the data sources and methods used to obtain information for field drainage system mapping.
- **Vegetation management:** Applicants must prevent the establishment and spread of noxious weeds within the project, including setback areas, during construction, operation, and decommissioning. Applicants must provide annual proof of weed control for the first four years of operation with the goal of weed eradication significantly completed by year three of operation.





# Ohio Solar Siting Board Regulations (cont.)

- **Noise:** Noise limits for renewable energy facilities cannot exceed the greater of 40 decibels (dBA) or the ambient daytime and nighttime average sound level by more than 5 dBA.
- **Surface water protection:** Solar energy facility applicants must develop and implement a stormwater pollution prevention plan, a spill prevention control and countermeasure plan, and a horizontal directional drilling contingency plan, to minimize and prevent potential discharges to surface waters.
- **Fencing:** Solar energy facility perimeter fencing must be small-wildlife permeable and aesthetically fitting for a rural location.
- **Setbacks:** Solar energy facility panel modules must be setback at least 50 feet from non-participating parcel boundaries, at least 300 feet from non-participating residences, and at least 150 feet from the edge of the pavement of any road within or adjacent to the project area.
- **Regulatory:** Compliance monitoring and reporting requirements to ensure applicants meet the commitments and conditions contained in each OPSB certificate.



# New York Solar Siting Law (part of NYSERDA - N.Y. State Energy Research Dev. Auth.)

- *Accelerated Renewable Energy Growth and Community Benefit Act*
- Effective 4/3/20 – applies to  $\geq$  25 MW projects
- Established a new *Office of Renewable Energy Siting* (ORES)
- ORES regulations issued 3/3/21 (draft regs on 9/16/20)
- **Public & local govt pre-meetings** - mandated >60 days before application
- ORES regulations establish consistent requirements for minimization of project impacts to a variety of resources including noise, viewsheds, wetlands and aquatic resources, protected species, cultural resources and more. State-wide minimum setbacks. Host community benefits mandated.



## **Pending Legislation**

- This webinar's description included the possibility that legislation impacting solar development in PA might have been enacted or have some realistic chance of being enacted in this legislative term. That has not come to pass. In 2024, it remains possible that legislation impacting solar development in Pennsylvania may advance.



# Q & A?





## Thanks to Our Partners

The Center for Agricultural and Shale Law is a partner of the National Agricultural Law Center (NALC) at the University of Arkansas System Division of Agriculture, which serves as the nation's leading source of agricultural and food law research and information. This material is provided as part of that partnership and is based upon work supported by the National Agricultural Library, Agricultural Research Service, U.S. Department of Agriculture.



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