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Types of Solar Facilities

- ***"Behind the Meter"*** – rooftop and other locations serving a single user, which may or may not involve some degree of net-metering of excess electricity back to the grid.

- ***"In Front of the Meter"*** or ***"Distributed Generation"***
  - **Community Solar** - not legally authorized in PA presently.
  - **Grid Scale / Utility Scale**

Utility Scale / Grid Scale Solar Development

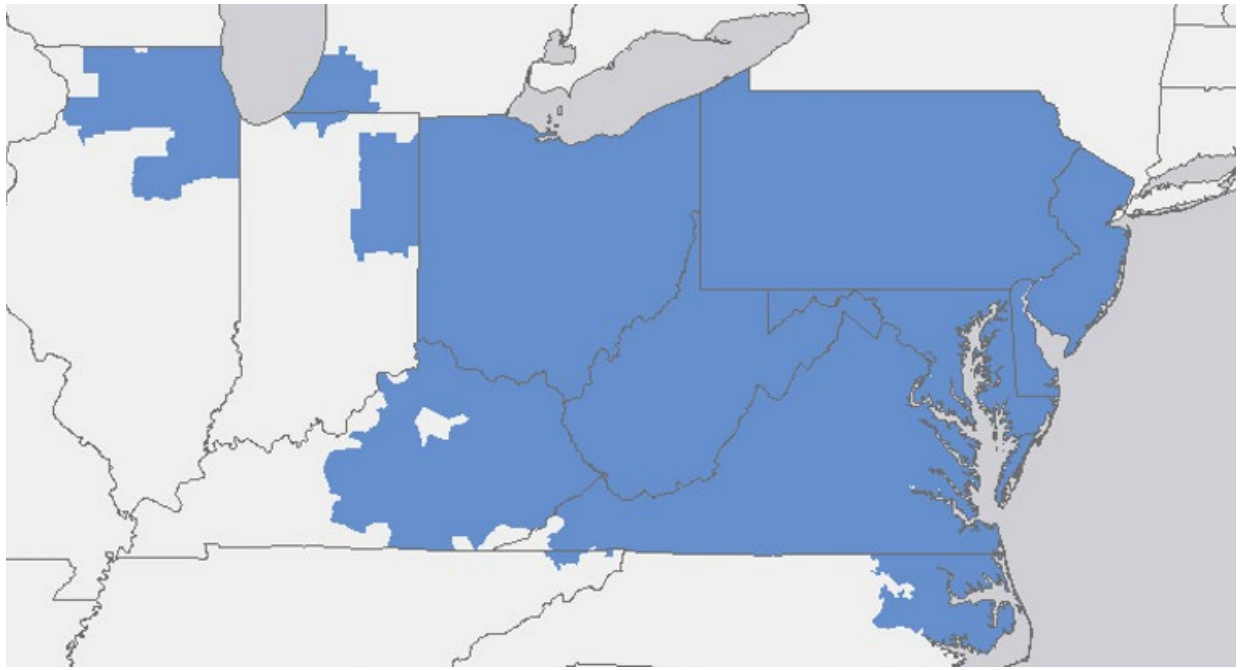
- Photovoltaic (PV) electrical generation ***for the purpose of wholesale sale of electricity to the transmission grid***.
- A private ***solar developer*** secures acreage (by lease or purchase) upon which to install a solar array and "sets up shop" generating electricity and selling it to grid.
- There is ***no regulatory role of the Pennsylvania Public Utility Commission*** or state laws applicable (except generally applicable requirements, e.g. stormwater management, E&S controls during construction, electrical codes, etc.).
- This is private land development the siting of which is subject exclusively to local municipal control through zoning, land development ordinances, etc.

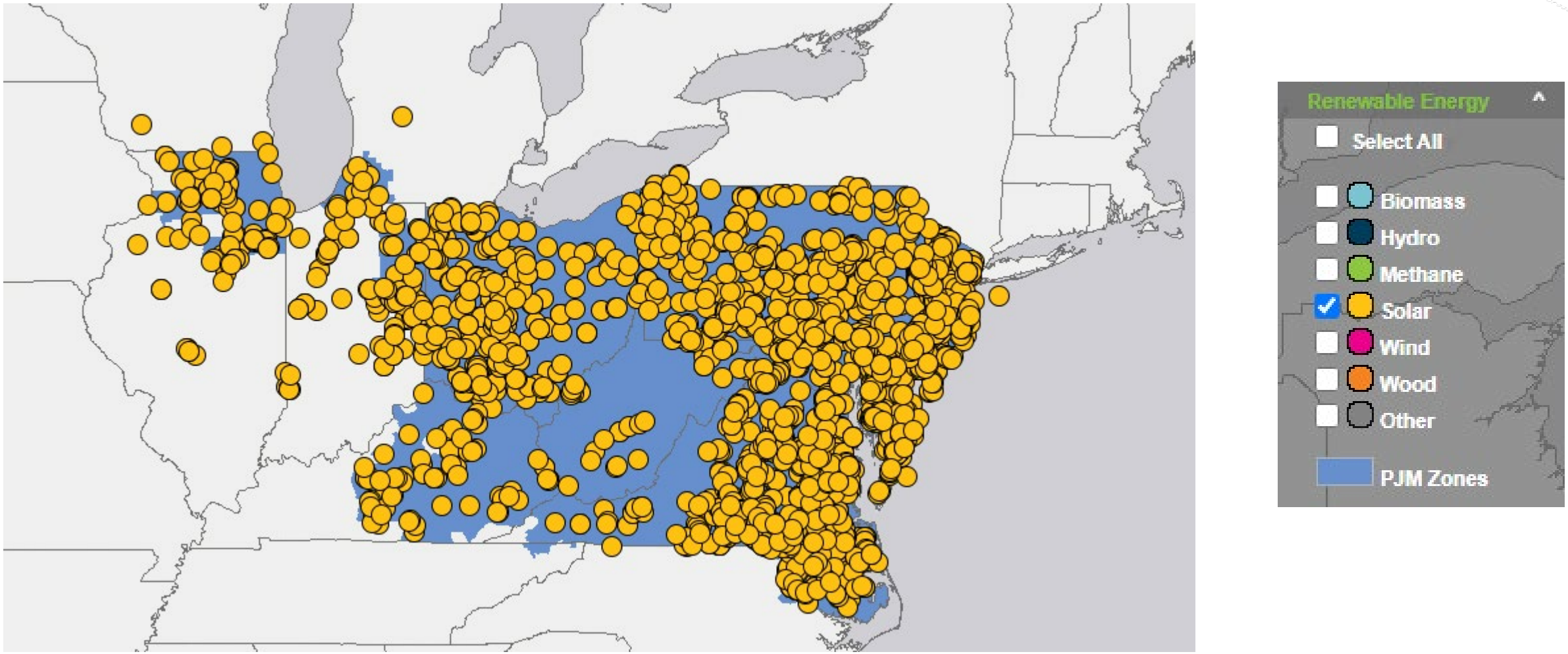
Federal Government Regulatory Role

Federal Regulation of access to the electrical transmission grid

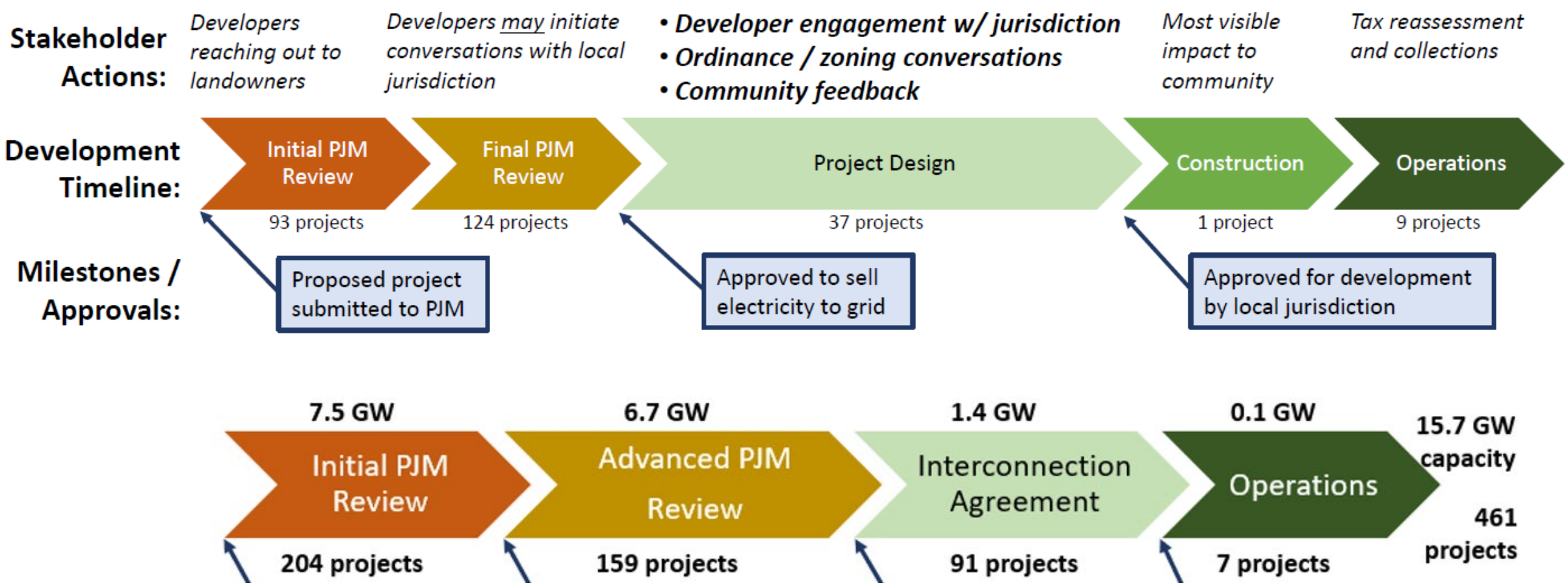
- "Power Pool" / Regional Transmission Organizations (RTO)
- PJM Interconnection, LLC ("PJM")
- PJM is regulated by FERC (Federal Energy Regulatory Commission).

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




Renewable Energy
Select All
Biomass
Hydro
Methane
Solar
Wind
Wood
Other
PJM Zones

Solar Development Project Overview



The Leasing Process

Leasing vs. Purchasing?

- PV electrical generation is very capital intensive. Can't invest until a project is a guaranteed "go."
- Engineering the process of getting the electricity to the grid is complex.
- Making a project economically viable is the key. Not every site works.
- Multiple variables are involved in each project, few of which are under the solar developer's exclusive control.
- As a result, it is a game of numbers – a lot of possible projects may be investigated, very few are going to be built. Option to Lease fits the bill.

Caveat

- Things can and have moved rapidly in this fledgling industry. Most likely, they will continue to do so over the next few years.

- We'll talk about what might be considered a *"generic"* example of a grid-scale solar leasing relationship. We may see all kinds of variations on this theme in coming years.

- Every circumstance and solar developer may be unique and have their own approach and employ unique terms that may vary from what is presented here.

The Two Parts of a Solar Development Lease

- ***Preliminary Letter of Intent:*** Sometimes there is a preliminary **"Letter of Intent"** document, which may be simply a 1-page form. The primary reason for this is to get the landowner to sign a confidentiality clause so that future terms, especially monetary, are not disclosed to others.

1. **Option Agreement** – approx. 10-15 pages

2. **Lease Agreement** – approx. 40-60 pages (attached to the Option Agreement)

- **If a landowner signs the Option Agreement = also agreeing to the terms of the Lease Agreement in its entirety.** So, all the hard work from the landowner end is up front. And once signed, cannot back out. The option is *unilateral* = only the developer can back out after the option is signed.

Timeline of the Lease Term

- Option Effective Date (signature on Option Agreement, $$ is paid)

- ***Option Phase*** – developer's *"due diligence"* period
  - Lease Effective Date (signature on Lease Agreement, $$ is paid)

- ***Construction Phase*** (the build out – may be a reduced rent amount)

- ***Operational Phase*** (energy generation – the full rent is paid)
  - Renewals (if any) may be exercised

- ***Decommissioning Phase*** (removal and restoration – $$ still owed, creates leverage to complete)
  - Termination Date (if that ever comes)

1. Option Agreement - Locks in a due diligence period of 1-5 years during which the solar developer decides if it wants to proceed.

- $$$ to landowner for development exclusivity, access rights to investigate the site & confidentiality.
- ”Feasibility Study” / The developer obtains a full title report, full survey, investigates legal hurdles, etc.
- The developer is weighing all circumstances to determine viability -- financially and otherwise.
- No ground is broken; all costs incurred are on the developer. Landowner still possesses, can farm, etc.
- If the developer decides to proceed, the landowner cannot back out. The option is unilateral.

2. Lease Agreement - If the solar developer decides to proceed, the Lease Agreement is sent to the landowner to sign in a defined period of usually days. There is no chance to renegotiate terms. (It is just an old-fashioned “Ground Lease.”)

"Competing Legal Interests" must be considered*

- The landowner may have "encumbered" the property in various ways, through such things as:
  - mortgages, other liens or leases, rights of way and easements, enrollment in various governmental programs such as Clean & Green (preferential property tax assessment), FSA/NRCS administered programs with conservation practices requirements, or even an agricultural conservation easement or private conservation easement.
- Before signing, a landowner must consider how these interests will be impacted by a solar lease, and how their existence will impact a developer's decision to proceed.
  - The Lease documents generally agree, or it can be negotiated, that the developer pays any financial losses caused by the solar lease's impact upon competing legal interests. But some conflicts with competing legal interests cannot be resolved financially.

* **During the Option Phase, the developer is also analyzing competing legal interests to determine the location's viability.**

Competing Legal Interests (cont.)

Other types of recorded or unrecorded interests:

- **Hunting Lease** – stray rounds will be a problem.
- **Subsurface Rights** – will future subsurface rights development interfere?
- **Existing Easements** – could conflict with the developer's needs.
  - utilities, stormwater, access/roads
- **Enrollment in Government Programs**
  - PA's Clean and Green property tax assessment program does not allow solar development (unless at least 50% of the generated energy is used on-site). Roll-back taxes will be owed, but most leases clearly provide upfront that the developer pays them. If not, must negotiate for that.
  - FSA/NRCS Conservation & Other programs – solar leasing is too new for definitive answers on all programs so check with the entities involved but the most likely answer for most programs is "no."

Competing Legal Interests (cont.)

- **Existing Mortgage or other Monetary Liens**
  - The Lease documents require "Subordination Agreements" signed by the creditor, at the developer's request, to make a mortgage or other lien "subject to the lease" so the solar tenant is not evicted in the event of foreclosure.
- **Existing Leases -** Negotiate a buy-out of the tenant to be paid by the developer.

- **Agricultural Conservation Easements -** If PA-government purchased, solar leasing is not permitted.
- **Privately-purchased Conservation Easement -** Depends upon the terms, but highly unlikely that solar leasing is permitted. Can solar leasing be negotiated?

Backstop of Landowner Protection

- **Insurance** – Tenant must purchase & maintain liability insurance naming the Landowner as an ***additional insured*** on the policy for the life of the Option and Lease. Tenant's policy must be primary coverage and on an "Occurrence Basis."

- **Indemnity** - Tenant must indemnify landowner for any costs, losses, liabilities arising from tenant's activities on site. Needs to be all encompassing.

Control and Maintenance

- **Maintenance** is 100% on the developer, as is the right to keep the landowner out. Developer has ***exclusive possession.***
  - Does landowner want control over:
    - herbicides/pesticides/fungicides being used?
    - ground cover on the leased area?
  - Built-in remedies for failure to maintain the lease acreage?
  - Does landowner need occasional temporary access to the leased area?
  - Shared acreage - Should the developer contribute to maintenance of areas over which it possesses an easement?

Decommissioning

- This issue has caused quite a lot of discussion. Is it warranted?
- Most leases have bonding language and a bond payable to the landowner is the preventative measure most needed.
- Define what is the government's interest in restoration?
- A bond payable to the government does not accomplish much.
- Does it make sense for municipal government to require a bond payable to a landowner?
- How does a municipal government "protect" viewshed?

Leasing for Wind Generation – Resources

Leasing issues are nearly identical - wind provided the leasing model for solar.

- Wind Energy Leasing Handbook - Shannon Ferrell, Rusty Rumley, et al. (OSU Ext.).
- Evaluating a Wind Energy Agreement: A Brief Review – Kristine Tidgren, Iowa State U's Center for Agricultural Law and Taxation.
- Legal Issues for Landowners to Consider in Negotiating Wind Energy Easements – Roger McEowen, Washburn School of Law.
- Wind Turbine Lease Considerations for Landowners – NDSU Extension.
- The Pros and Cons of Wind Energy and Leasing Land for a Wind Farm, The Mineral Rights Podcast, Matt Sands, President, National Association of Royalty Owners (CO).
- Farming the Wind: Should You Lease Land for Wind Turbines?, DTN Progressive Farmer, Matthew Wilde.

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Q & A?

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(Extra Bonus Slides)

4 Basic Principles

1. ***This is an industry in its infancy.***
2. ***This transaction is a commercial lease, on steroids.***
3. ***The tenant has some unique needs to understand.***
4. ***This is a long-term business relationship to maintain.***

This is not like anything most landowners have ever seen.

1. This is an industry in its infancy.

- The documents being proposed are **not battle-tested** by use over decades. This is a new industry, with new documents.
- **Landowners should never sign the developer's forms as-is**. There can be many provisions that must be revised for landowners.
- Few things are off-limits for negotiation because ***"deal-breakers"*** have **not yet been established**.
- **Landowners won't be able to negotiate the contract details themselves and will need an attorney.** Few attorneys have worked with these exact forms.
- But the concepts involved are not overly complex from an attorney's perspective. An attorney who negotiates commercial leases is familiar with the basic concepts.

2. The transaction is a commercial lease, on steroids.

- This is a leasing transaction, much like other commercial leases. But **an average landowner is not used to being a commercial landlord**. This is not a farming tenant or a utility easement or a right of way.
- There are legal considerations that a landowner may never have encountered before due to the **sophisticated tenant and sophisticated transaction** being dealt with.
- ***Term:*** The lease may last as long 50 years.
- Permanent Structures: The **tenant is building structures on another's property which are permanent.** (Although they do not become "fixtures" owned by the landlord.)
- One novel legal concept is the "solar easement" over the landowner's surrounding acreage. Otherwise, **there are no unique concepts** like royalties or subsurface rights.

3. The tenant has some unique needs to understand.

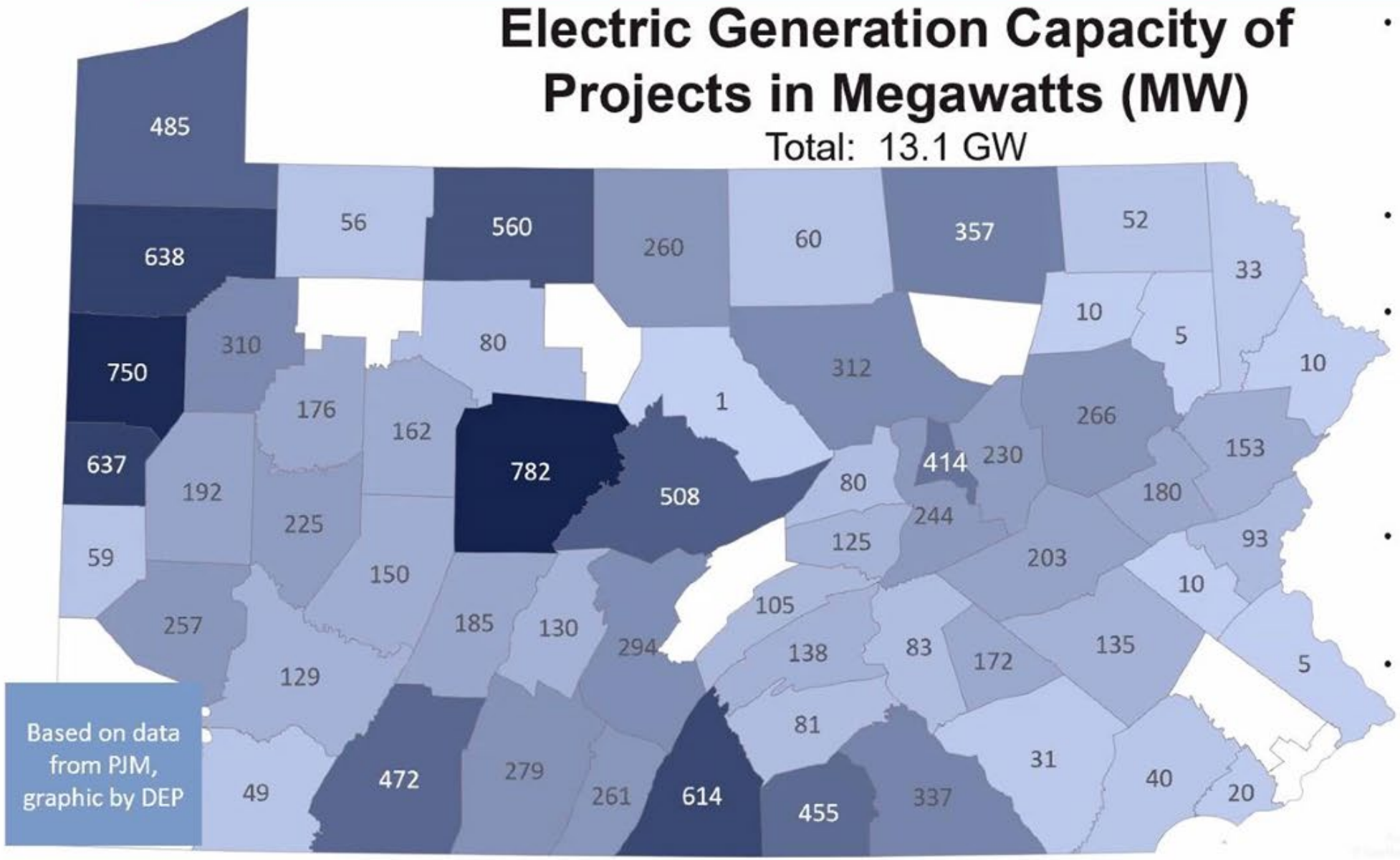
- These are structures of great value and sophistication = **exclusive possession to the tenant** (landowner will be fenced out of the area devoted to electrical generation).
- The **structures, and the income stream they produce, are going to be used as collateral** to obtain financing. This means the tenant's ability to continue conducting its activity on the land must not be interfered with by any entity who holds a previously-recorded or superior property interest in the land (e.g. mortgage holder).
  - All the lease documents will be recorded and the tenant will need "superior" (prior) liens or legal interests "**subordinated**."
- The structures may be sold during the lease term, perhaps multiple times. The ability of the tenant to **assign the lease without landowner approval** will be one non-negotiable term. Landowner may have to negotiate for the same assignment right.

4. This is a long-term business relationship to maintain.

- There will likely be **several tenant identity changes** over the term of the lease and, correspondingly, perhaps some **changes in land ownership** also. Plan and think ahead because this lease impacts heirs/subsequent owners. It also can impact future property value. How, we don't yet know.
- **Property tax obligations** will be a shared responsibility for the duration of the lease. The documents being used agree that the tenant pays any increased property taxes for the entire term.
- The landlord needs to ensure that the tenant maintains the required **liability insurance** for the landlord's protection for the entire term.
- "**Decommissioning**" obligations to remove all equipment and restore the property need to be negotiated and established now, in detail, for an event that may not occur for several decades.

Uses of PJM Data

Development Potential



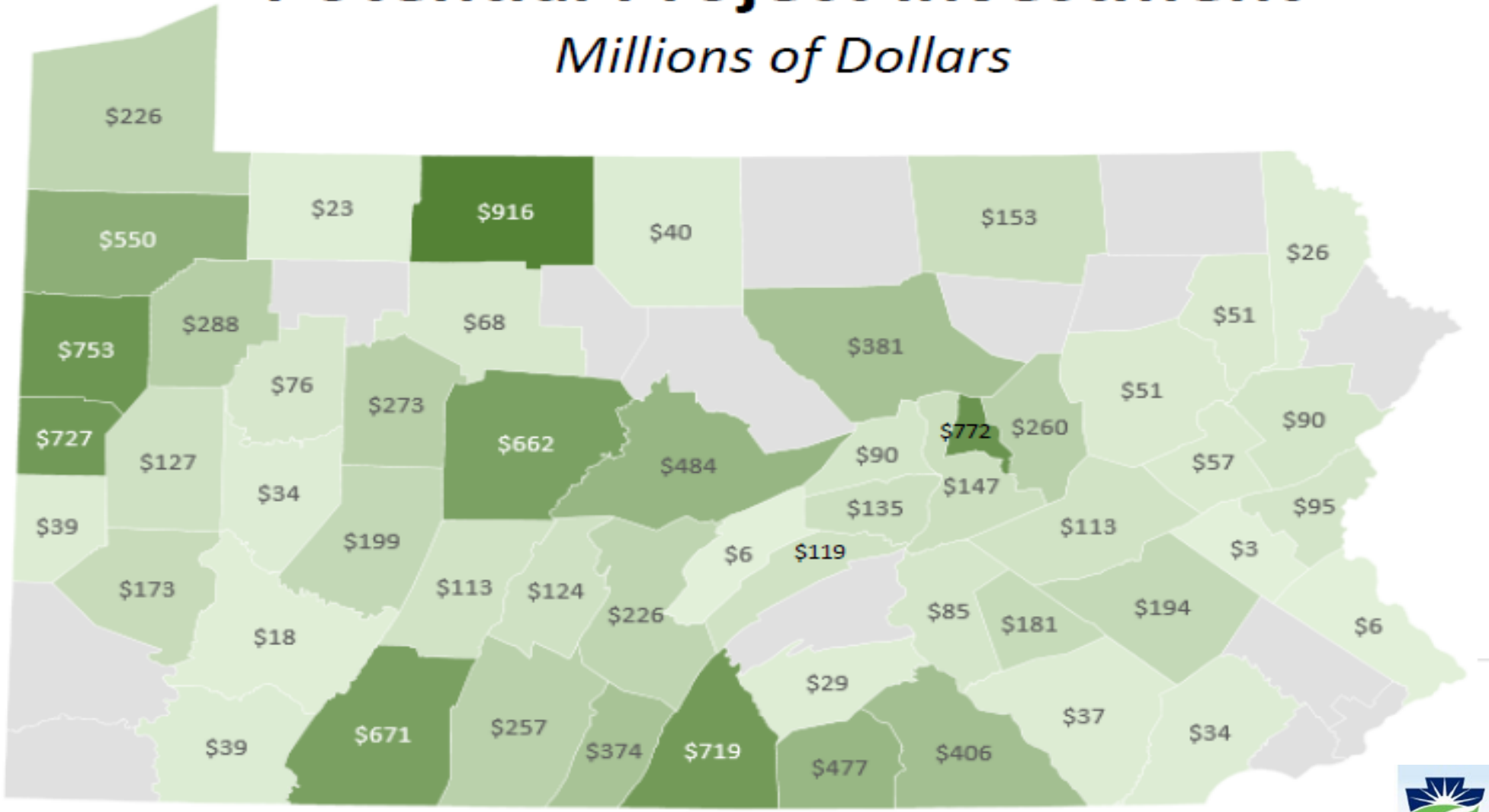
- For reference, the recent reactor decommissioned at TMI was 819MW, and a new gas powerplant in Cambria County is 1,050MW
- Most individual projects are <25 MW
- Largest active project in Design and Construction phase is 32MW in Franklin County. Largest suspended project is 100 MW in Adams County
- Largest project in advanced review is 280MW in McKean County
- Largest proposed in initial review is 400MW in Lawrence County

PennState Extension

This is not current but illustrates what can be developed from PJM on-line data.

Potential Project Investment

Millions of Dollars



Potential project investment is based off an estimated construction cost of $1.13 million per MW

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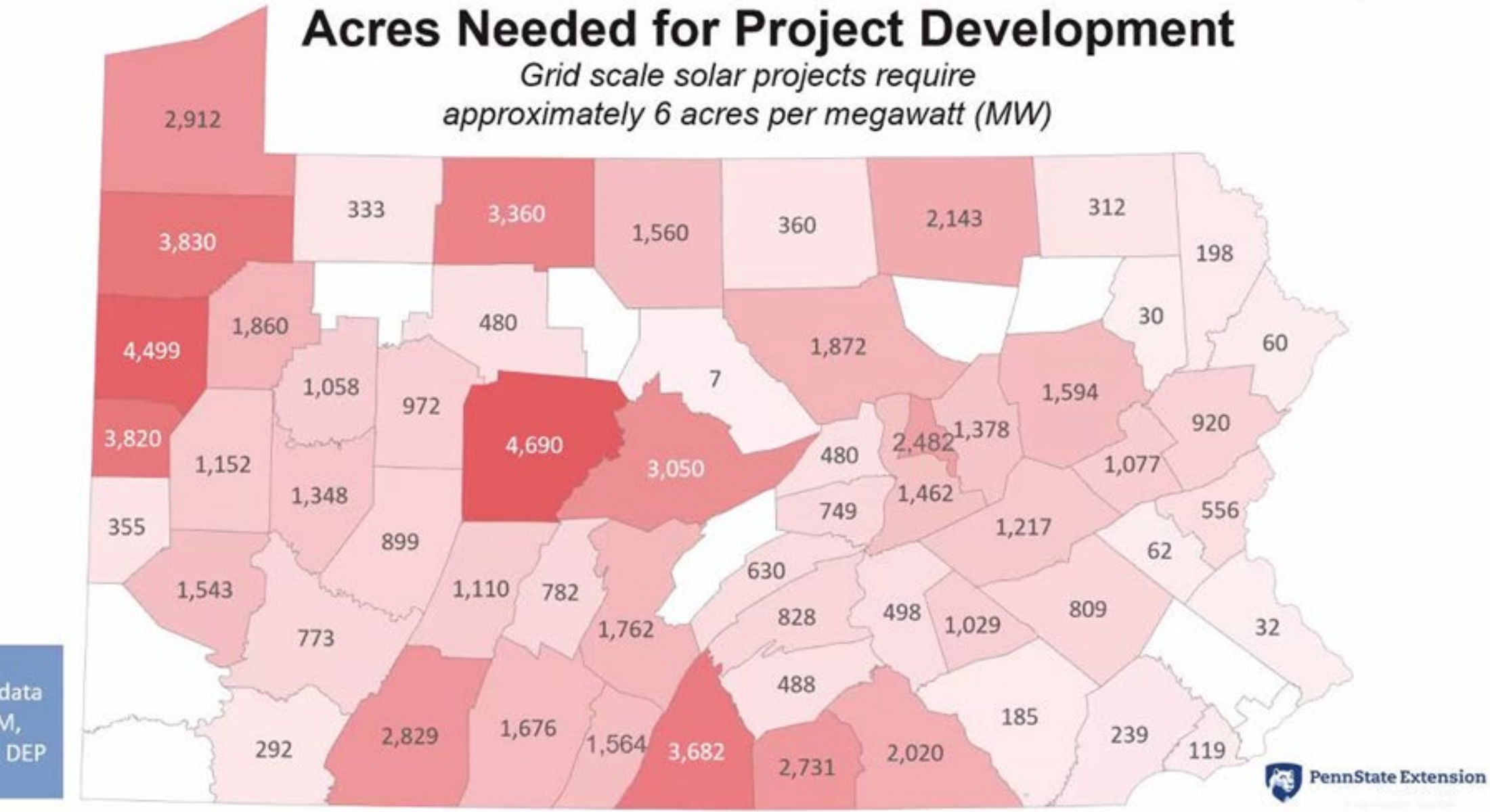
This is not current but illustrates what can be developed from PJM on-line data.

Land Use Impact



This is not current but illustrates what can be developed from PJM on-line data.

PA State Government Law & Policy

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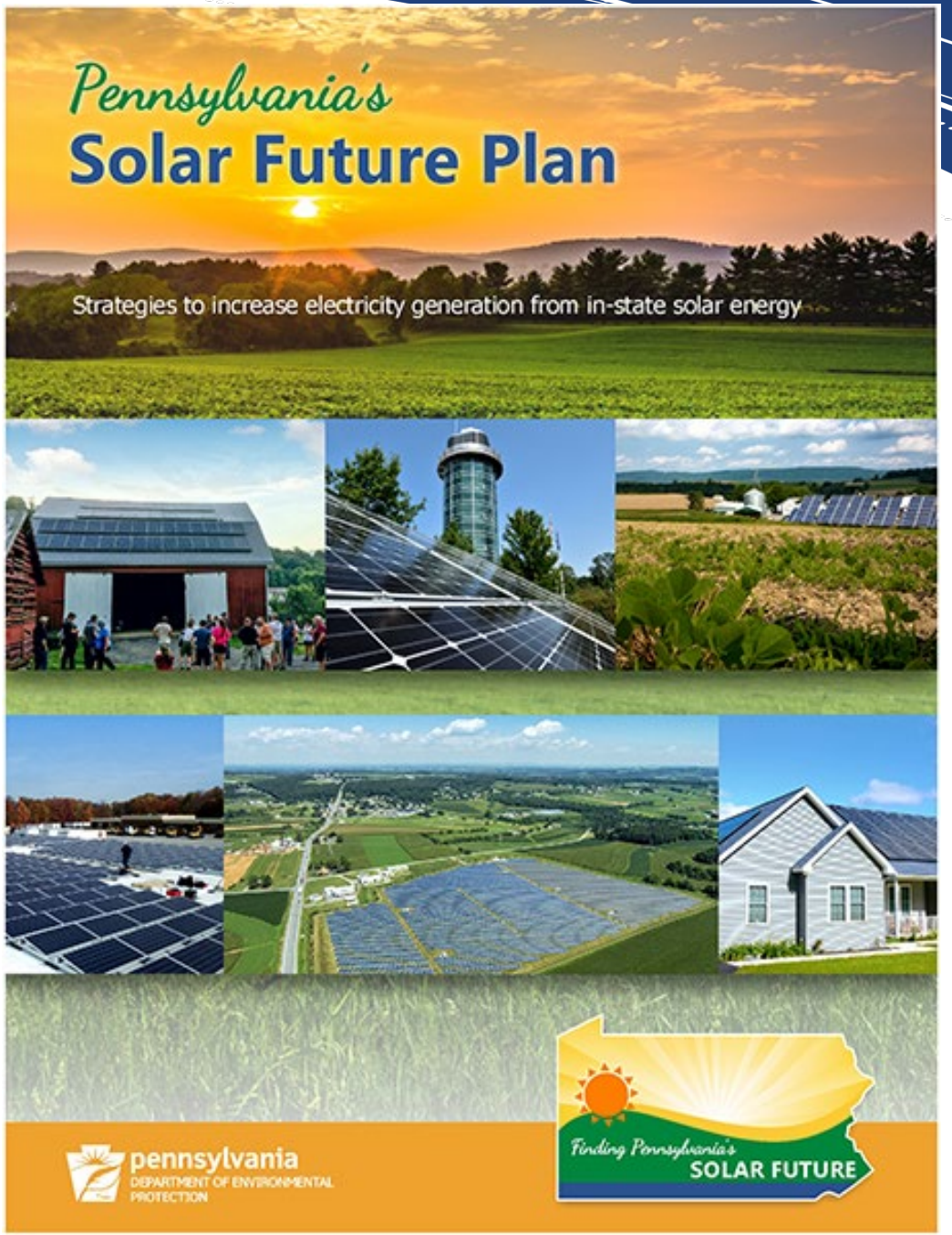
Pennsylvania's Solar Future Plan

This is the document that embodies the Commonwealth of Pennsylvania state government's current policy on solar development in the years to come.

Issued in November 2018

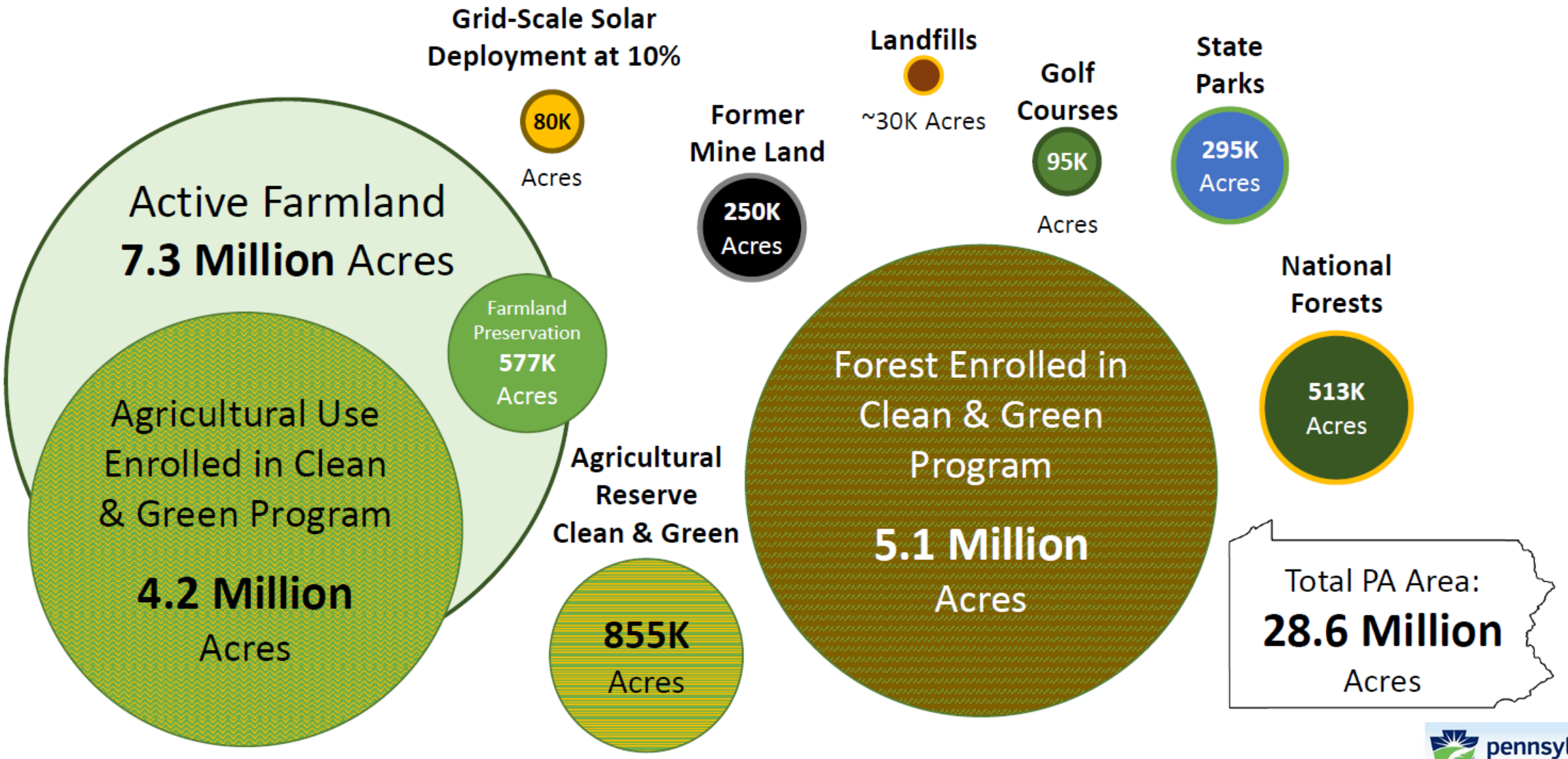


PA's targets / goals :

- Legal mandate: Alternative Energy Portfolio Standard was enacted in 2004. 0.5% of all electrical use must be solar by 2021. That has been met.
- Solar Future Plan: Target set by the Executive Branch. 10% of all electrical production to be solar by 2030. This is only an aspiration.

- **That's it for state government policy.**

Land Use Comparison



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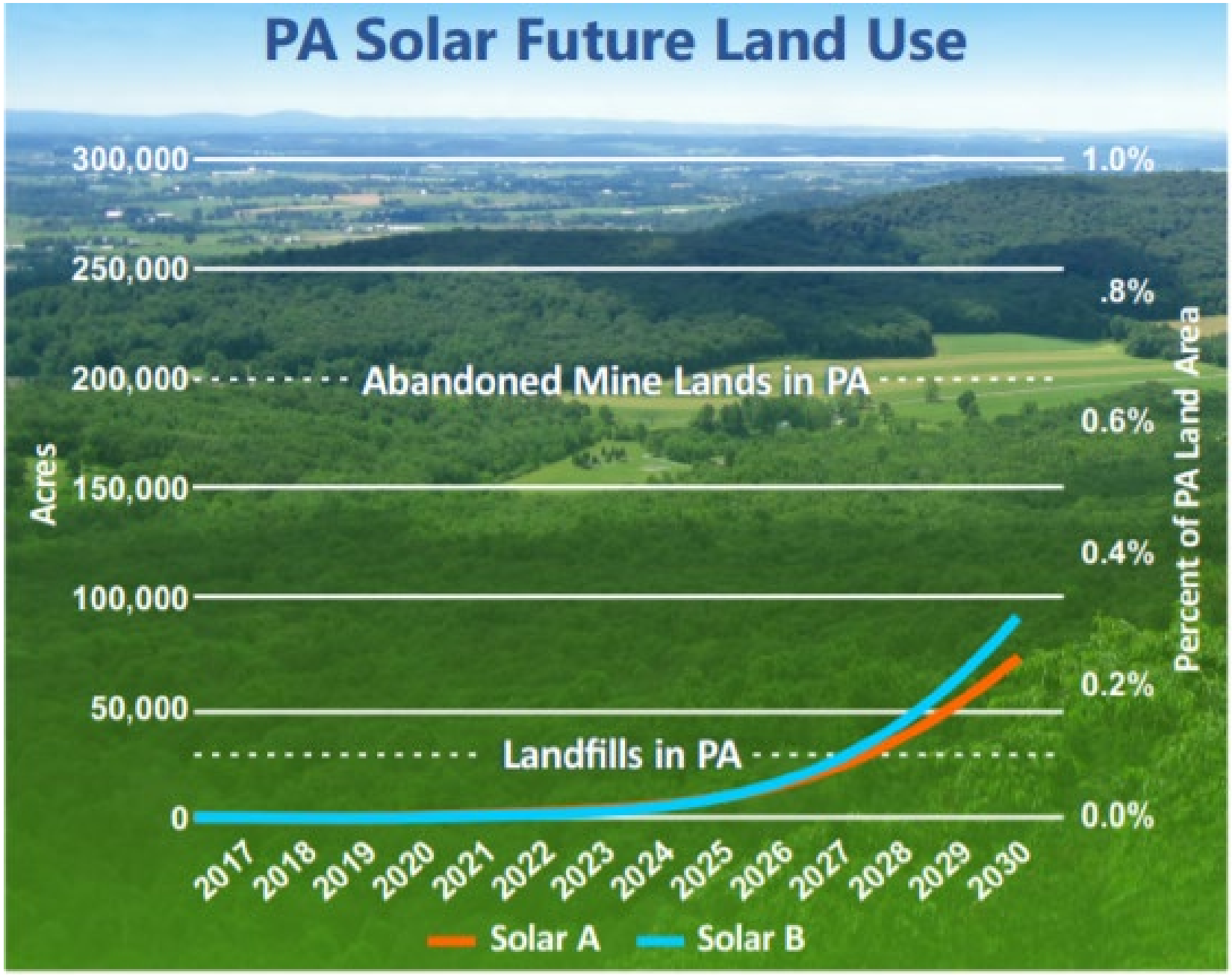
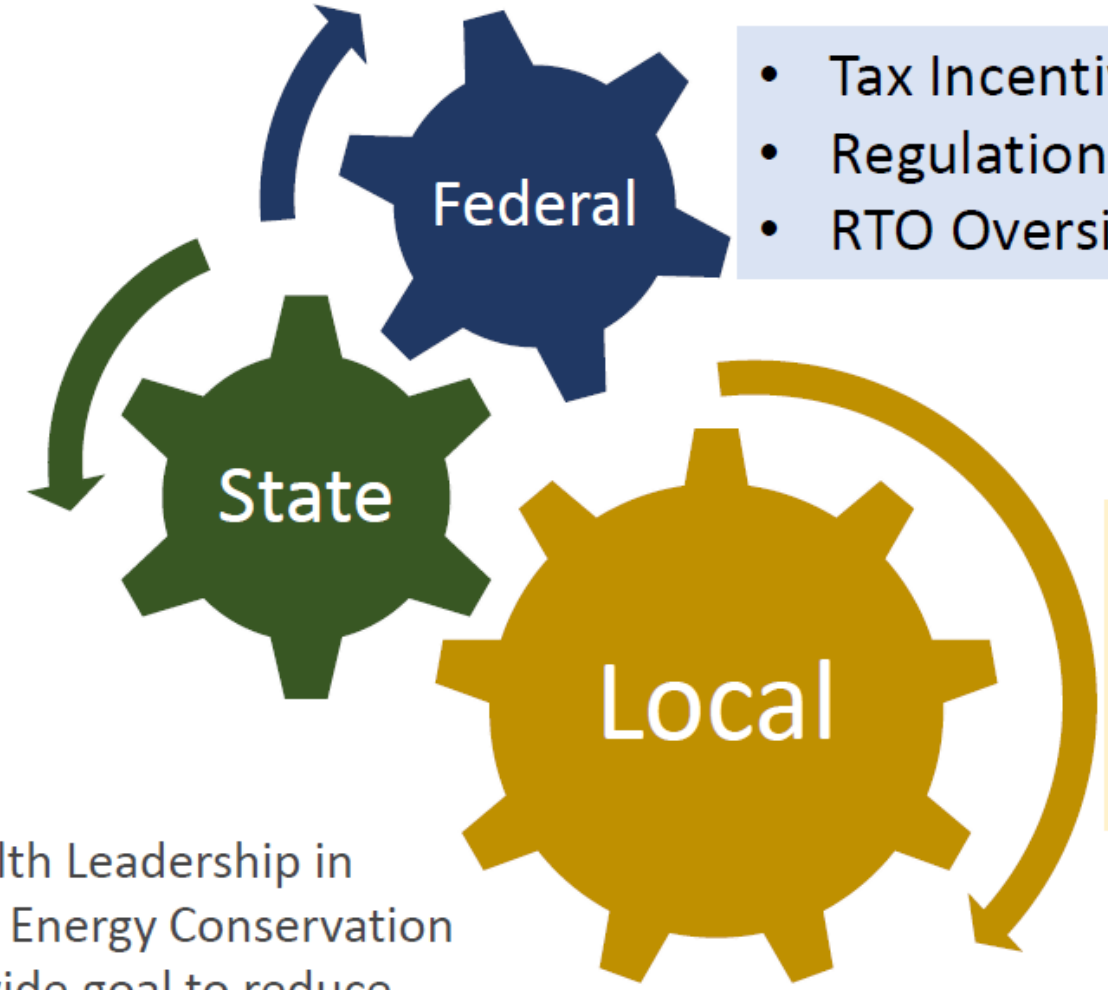

PA Solar Future Land Use
300,000
250,000
200,000
150,000
100,000
50,000
0
Acres
1.0%
.8%
0.6%
0.4%
0.2%
0.0%
Percent of PA Land Area
Abandoned Mine Lands in PA
Landfills in PA
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
Solar A
Solar B

As of 3/22/21, we now have PA PULSE

("Do what I do, not what I say.")

State Role in Grid-Scale Solar Development

What is the State's Role?	
Policy	• Solar Future Plan • Executive Orders • Pending Legislation
Leading by Example	• Power Purchase Agreement(s)
Coordination Across State Agencies	• Land Use • Economic Development
Financial Assistance	• None at this time



- Tax Incentives
- Regulation / FERC
- RTO Oversight (PJM)

- Land Use Decisions
- Community Engagement

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.

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SITING CONTROLS

In the absence of new siting controls, 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 Easements.

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 one penny of federal or PA state money was used to purchase, or reimburse expenses of an entity that purchased, the easement, PV electrical generation for transmission to the grid is absolutely prohibited.

- Privately purchased easements are subject to their own terms.

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

- Doug Wolfgang of PA's Bureau of Farmland Preservation prepared a short document addressing those issues approx. 3 years ago.

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August 2019

Are you a farm owner considering a commercial solar lease?

If so, here are some questions to consider first.

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August 2019

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 as 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.

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

- **Zoning approval is 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).
- "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.).

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THANK YOU!

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Understanding Agricultural Law Webinar Series

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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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