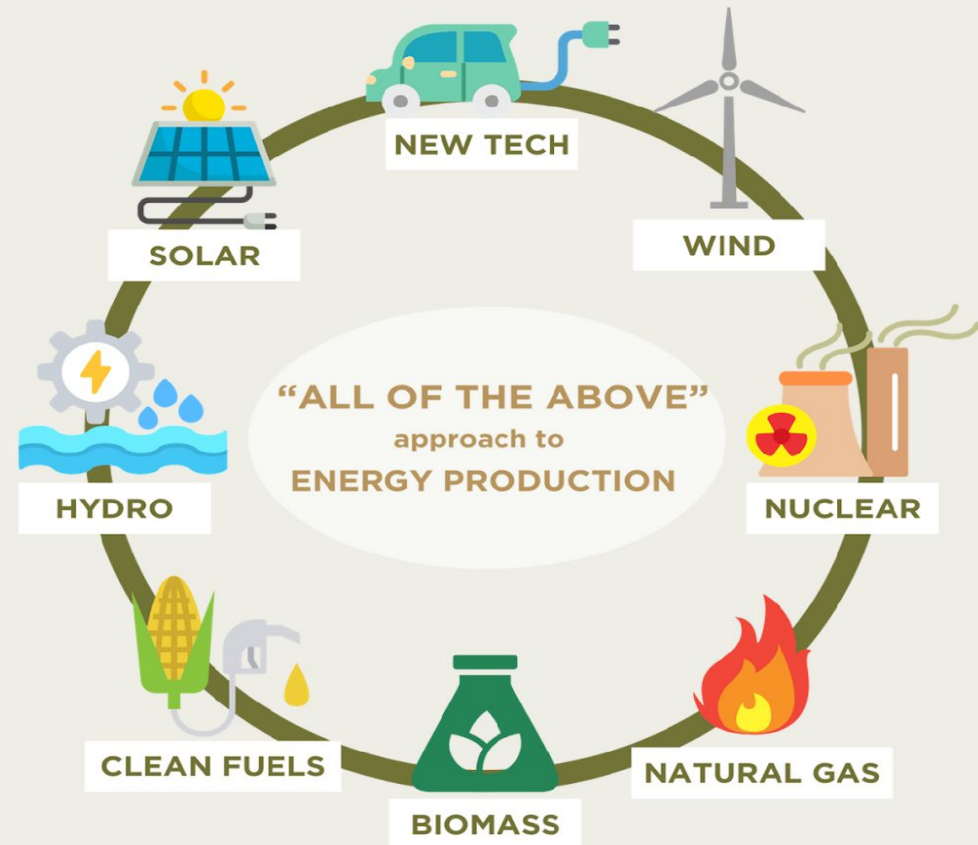




Legislative Update

WHAT IS ALL-OF-THE-ABOVE ?

Any source of energy the free market says is the most affordable and most efficient should be given a chance to increase our grid's reliability and decrease energy bills!





The Pennsylvania **Land & Liberty Coalition** is a statewide nonprofit organization made up farmers, landowners, taxpayers, business and community leaders, and proponents of an all-of-the-above energy future.



We amplify the voices of **farmers, landowners, and community leaders** who want to protect their private property rights, economically develop their communities, maintain their livelihood, and invest in their future.



Jobs, Economic Development, Land Rights, National Security



THE BOTTOM LINE

We believe in individuals' FREEDOM to invest in their land!

We don't believe government or neighbors should dictate how a family can invest in their land so long as it doesn't impact the health, wellness, or safety of the community.

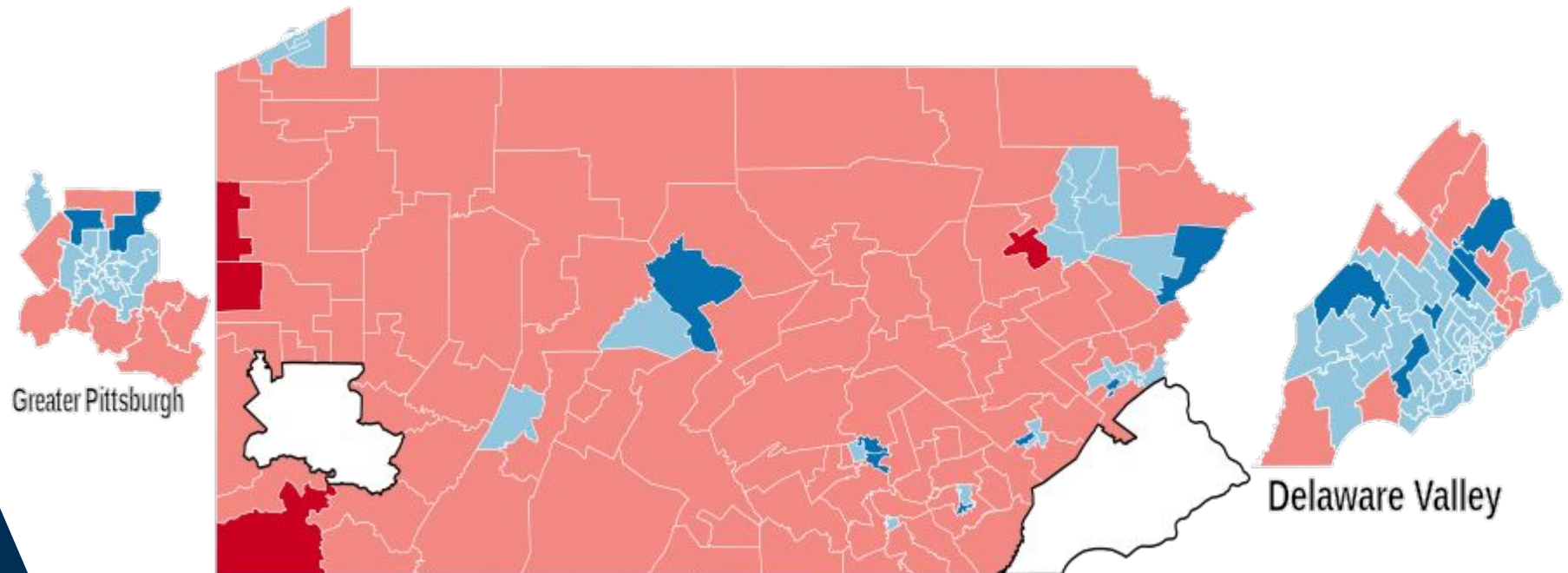
It comes down to **CHOICE** and making the best decision for a family.



• Legislative Update:

• Setting the stage...

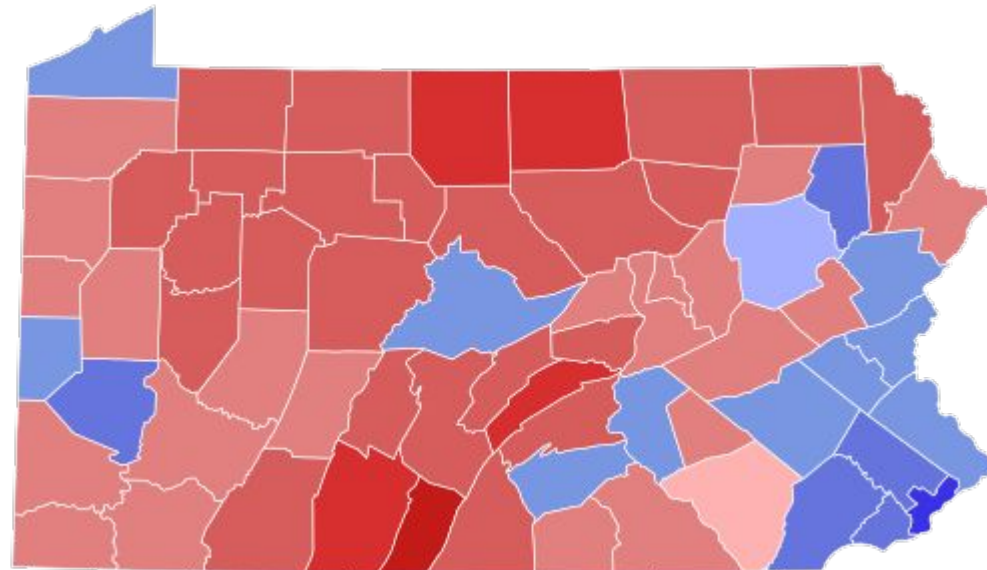
- The 2022 PA Legislative Elections –
- Seat change in PA House: Ds Increase 12, Rs Decrease 12; Ds take the PA House by 1 seat (since increased to a 2 seat majority via a special election).



- **Legislative Update:**

- **Setting the stage...**

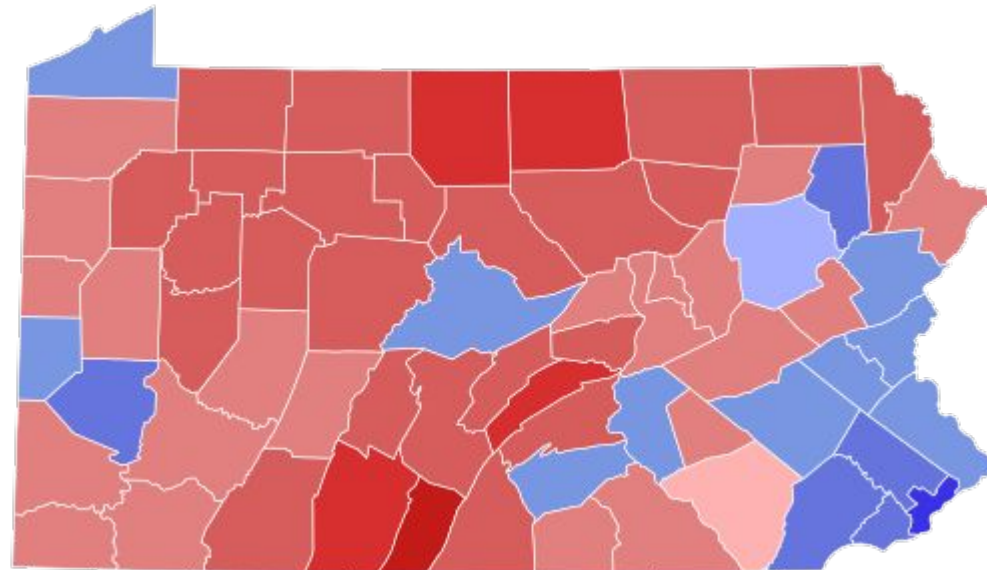
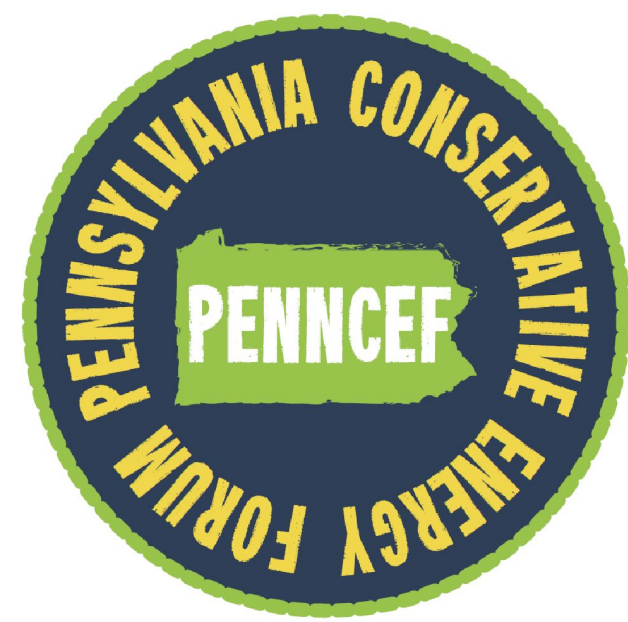
- **The 2022 Gubernatorial Election –**
- **Shapiro wins by 56.5% to Mastriano's 41.7%**



- **Legislative Update:**

- **Setting the stage...**

- **The 2022 Gubernatorial Election –**
- **Shapiro wins by 56.5% to Mastriano’s 41.7%**



• Legislative Update:

- Shapiro vetoes school vouchers proposal (one year ago).

The Philadelphia Inquirer

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[POLITICS](#) > [PENNSYLVANIA](#)

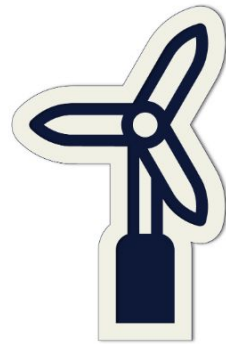
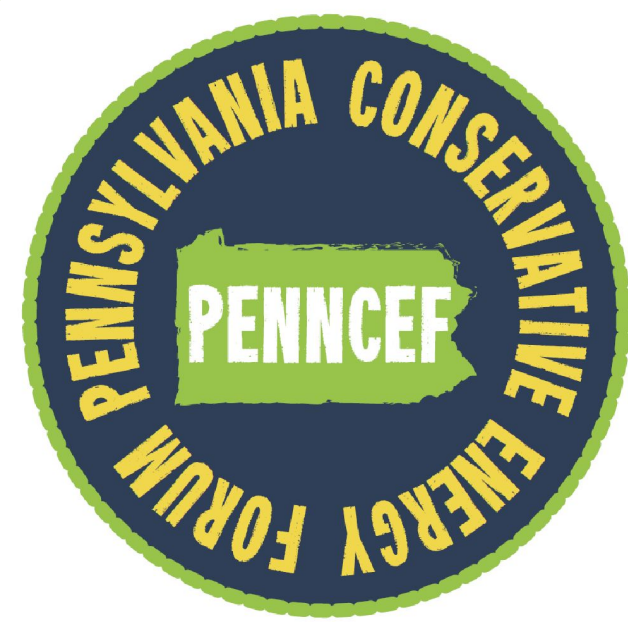
Pa. House OKs a \$45.5 billion spending plan, as Gov. Josh Shapiro plans to veto his own school voucher proposal

As the House approved a \$45.5B billion Pa. budget, the governor said he'd kill the school plan to avoid an impasse.



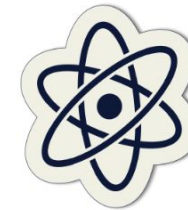
• Legislative Update:

- Fast forward to one year later... Shapiro introduces his legislative energy proposal.



Pennsylvania Reliable Energy
Sustainability Standard (PRESS)

[Read More](#)



Delivering Clean Energy with
Pennsylvania Climate Emissions
Reduction Act (PACER)

[Read More](#)



**PA SENATE
REPUBLICANS**

PASenateGOP.com

FOR IMMEDIATE RELEASE

March 13, 2024

Senate President Pro Tempore Kim Ward Statement:

Shapiro's Carbon Tax Proposal Stifles Pennsylvania's Energy Potential

GREENSBURG— Senate President Pro Tempore Kim Ward (R-Westmoreland) issued the following statement regarding Gov. Josh Shapiro's proposal to implement a carbon tax, which would stifle Pennsylvania's energy potential:

“There is room in our Commonwealth for all types of energy. We should incorporate the different energy sectors but not on the backs of rate payers which is what Shapiro's proposal does.

“Our Commonwealth needs to be focused on unleashing our energy potential, not taxing it. Doing so would create thousands of good jobs and keep our power grid secure. Shapiro's carbon tax proposal appears to be more aligned with states like California and Washington, who suffer from rolling blackouts and higher energy prices.

“Shapiro says if his proposal is passed, he will drop the lawsuit that is keeping RGGI alive and consumer electric bills high. We have already been on the other end of a deal with Shapiro during last year's budget so the old saying fool me once shame on you, fool me twice shame on me, applies. I am asking Gov. Shapiro to immediately drop the lawsuit that keeps RGGI in place, and then we can begin to have a real and inclusive conversation about the future of Pennsylvania's energy sector.”

###

The Elephant in the Room:

RGGI

- Commonwealth court ruled RGGI to be an unconstitutional fiat-implemented tax last year...
- Now, the fate of RGGI rests with the State Supreme Court.
- Gov. Shapiro has stated that he is fighting to preserve RGGI on the basis of “preserving executive powers”.



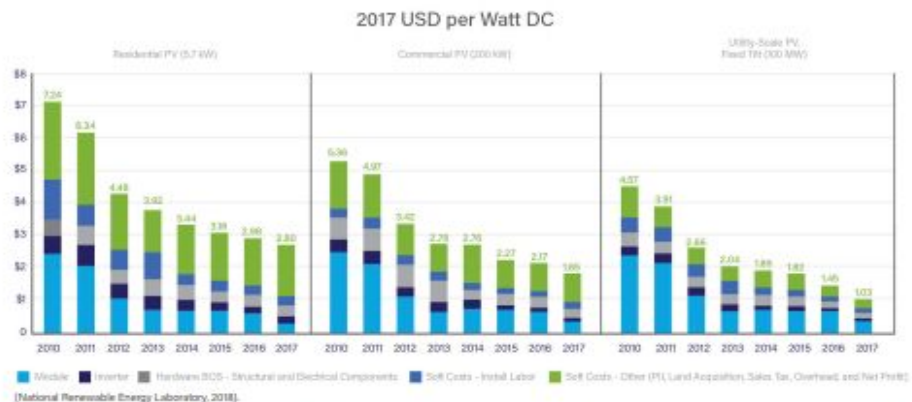


SOLAR PV ELECTRICITY ACHIEVES COST PARITY

A lot has changed in the world of solar PV in the past decade. Contrary to its "high-cost" reputation, the installed cost of solar photo-voltaic (PV) electricity has actually dropped dramatically in the last 10 years – and costs continue to fall. In fact, solar PV should be considered a renewable energy source of choice when considering *both* economics and suitability.

Solar PV electricity...

- can be installed almost anywhere
- has no moving parts
- offers reliable, measurable energy production
- can produce saleable Renewable Energy Credits
- has federal tax advantages*
- uses solar modules typically warranted for 25 years, including warranted performance



Solar PV is a Better Value than Other Forms of Energy

One way to measure the cost-competitiveness of solar PV is by the "Levelized Cost of Energy" (LCOE). LCOE is a common measure to compare the cost-competitiveness of different types of energy by including initial installation (capital costs), fuel costs, and ongoing operation and maintenance costs.

For new solar PV installations going online in 2023, the total LCOE has decreased to \$45.7/megawatt-hour, according to the U.S. Energy Information Administration. In other words, solar PV is on par with the LCOE of every other energy source – including advanced combined-cycle power plants.** In fact, even without factoring in solar PV tax credits, it *still* has a lower LCOE than coal, nuclear, hydro-electricity and off-shore wind. In other words, cost is no longer a competitive disadvantage for solar PV.

* The federal Renewable Electricity Production Tax Credit (PTC) has expired for new solar investments, but may be extended by Congress in the near future. The federal Solar Investment Tax Credit (ITC) expires in 2021, but is expected to be extended beyond this current sunset date.

**The highest efficiency process of electricity generation utilizing natural gas.



COMMUNITY SOLAR LEGISLATION

ENERGY AND COST SOLUTIONS FOR ...

- Ensure private property rights for homeowners, farmers and small business owners.
- Leverage private investment to support local economic development.
 - Jobs and Economic Development Impact reports have shown that each megawatt of community solar capacity built generates approximately \$1.87 million of total economic impact during construction, operation and maintenance.
- Give individuals the freedom and choice to go solar.
- Provide participants tangible economic benefits and predictable energy bills.
- Help support energy independence and national security with greater local energy choice and development
- Present the opportunity for all Pennsylvania citizens to benefit from economic freedom.
- Enable competition to create low-cost consumer-driven solutions.

PA Homeowners, Farmers and Businesses

Local community solar allows multiple participants to **SHARE THE COST-SAVING BENEFITS OF A SINGLE SOLAR INSTALLATION.**



Community solar projects provide 75% of Americans the right to choose solar energy to lower their electric bills. Community solar is a simple policy tool that provides homeowners, farmers and small business owners the opportunity to choose local, reliable, and cost-effective renewable energy solutions.

WHAT IS COMMUNITY SOLAR?



Community solar legislation de-regulates the solar energy market for all Pennsylvanians. **Now is the time to:**

- Allow multiple homeowners, farmers and small business owners to create single solar projects to the benefit of the whole residential, agricultural or business community.
- Encourage economic freedom, grid independence and the national security benefits of clean & renewable community solar projects!



Home > Topics > Latest News > Community solar facility bill passes state house



PHOTO/GETTY IMAGES

Community solar facility bill passes state house

Stacy Wescoe // March 29, 2024 // 2 Minute Read



▶ Listen to this article

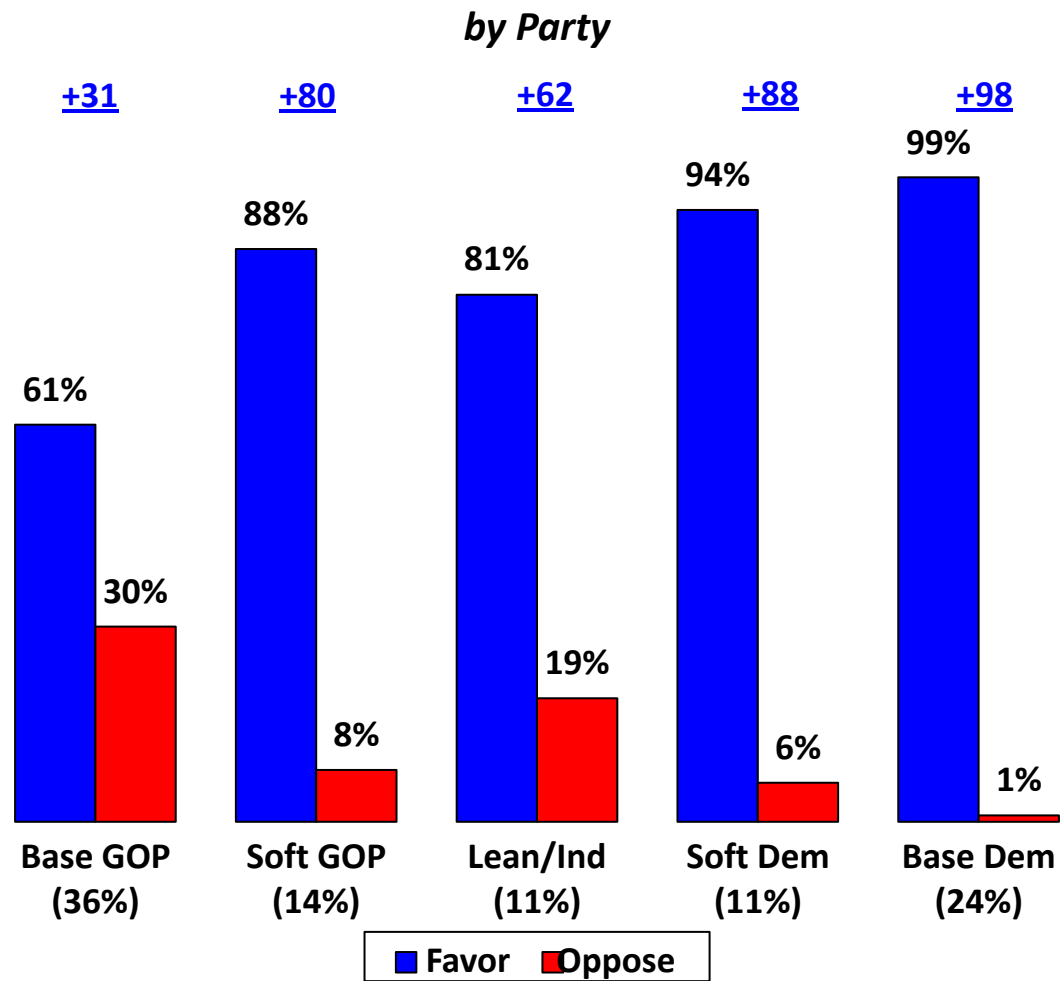
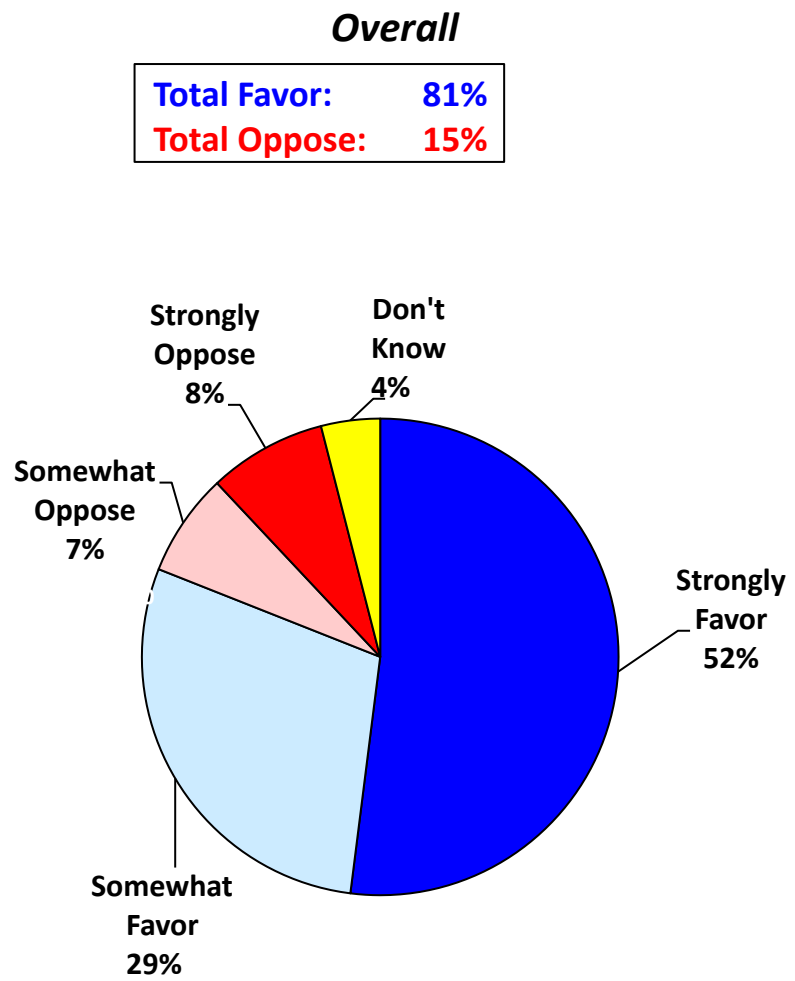
A bill that would make it easier for homeowners in Pennsylvania to save money with solar technology has been passed by the State House of Representatives.

The legislation, which was introduced by Rep. Peter Schweyer, D-Lehigh, would create a community solar

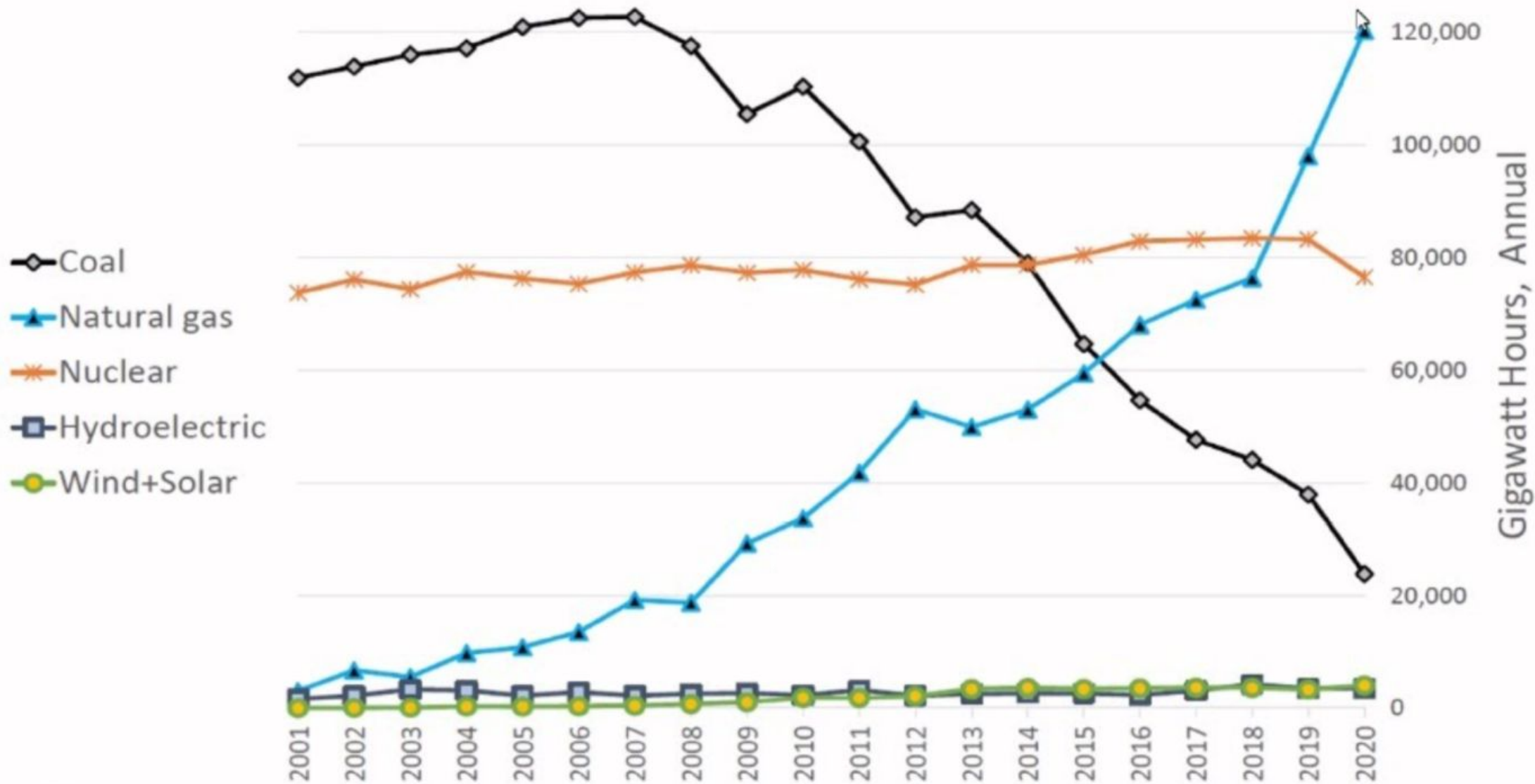


Renewable Energy polls well in PA, and Community Solar is a Slam Dunk.

“Thinking now about some legislation being considered in the state legislature, would you favor or oppose a bill that would allow community solar projects that could be used by multiple homeowners, business owners, and farmers in order to save money and energy costs?”



PA Electricity Generation by Source



PA Farms in Crisis!

2020 USDA Census of Agriculture:

- 6000 PA Farms were lost in 2020
- Lancaster County alone lost more than 500 farms



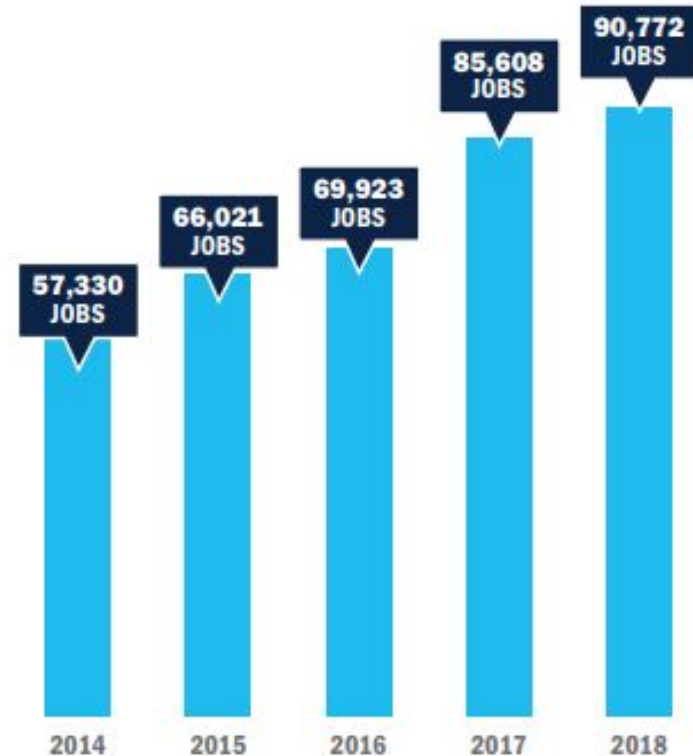
The Way Out: Clean and Renewable Energy on Farms

- Elimination of utility bills
- State and federal tax incentives
- \$ earned from sale of electricity to the grid through net metering
- Diversification of farm as a small business: harvesting both ENERGY and FOOD



ECONOMIC DEVELOPMENT: Renewables Work

CONSISTENT JOB GROWTH³



SMALL BUSINESSES FUEL SUCCESS

2 OUT OF EVERY 3
CLEAN ENERGY WORKERS



are employed by businesses with fewer than 20 employees

- 1-4 EMPLOYEES: **33.3%**
- 5-19 EMPLOYEES: **33.3%**
- 20-99 EMPLOYEES: **22.9%**
- 100-499 EMPLOYEES: **3.8%**
- 500+ EMPLOYEES: **6.7%**

BEYOND THE BIG CITIES: CLEAN ENERGY JOBS THROUGHOUT THE STATE

44%

of Pennsylvania's clean energy workforce is located outside the Pittsburgh and Philadelphia metro areas

**LEADING PENNSYLVANIA
IN JOB DENSITY**

Jefferson County ranks second in the state in clean energy jobs per capita. 31 of the county's 34 municipalities are rural.

11,178

clean energy jobs in Pennsylvania are located in rural areas

Land Rights: A Message that Sells in Pennsylvania's Small Towns



[NEWS](#)

Red voters for green energy? Conservatives say they support solar and wind power too

Rather than fighting climate change, research shows many Republicans like wind and solar power for economic and security reasons.



[Kyle Bagenstose](#)

USA TODAY

Published 5:01 a.m. ET June 10, 2022

During the Cold War, John Lehman served as Secretary of the Navy under President Ronald Reagan. Later, he was appointed a Republican member of the 9/11 commission.

Those experiences led him to see U.S. reliance on “Persian Gulf oil” as a major vulnerability that kept America mired in Middle East conflicts.

Lehman became a champion for renewable energy — “an essential element of energy independence,” he said. He lobbied for it during Congressional hearings, and at his rural estate in Pennsylvania, where a peacock and guinea fowl run the grounds, he installed a 34-kilowatt solar array to provide most of the power he needs.

ACRE in Pennsylvania: Relevance of Right to Farm Act to local on-farm solar development

The screenshot shows the PennState Law website. At the top left is the PennState Law logo with the text "PennState Law". Below it is the address "LEWIS KATZ BUILDING, UNIVERSITY PARK, PA". A search bar and social media icons (Twitter, Facebook, LinkedIn, Instagram, Email) are in the top right. A navigation menu includes "ABOUT US", "ACADEMICS", "ADMISSIONS", "CAREERS", "DIVERSITY", "EXPERIENTIAL LEARNING", "FACULTY", "INTERNATIONAL", "LIBRARY", and "STUDENT LIFE". Below the menu is a banner image of a farm with the text "Home | ACRE/Pennsylvania Act 38" and "CENTER FOR AGRICULTURAL AND SHALE LAW". At the bottom left of the banner area, it says "ACRE" and "Center Resources".



ACRE Action in North Beaver Twp, Lawrence County

Central PA News

Tuesday, November 15, 2022

Business Local Government Politics Sports Ethics Schools Gift Guide Real Estate Directory

Farmer to PA attorney general on township law: 'This ordinance is unduly restrictive and strips away the right of farmers from utilizing their land to produce solar energy'

LOCAL GOVERNMENT



July 12, 2022

The Honorable Joshua Shapiro
Attorney General of Pennsylvania
Strawberry Square, 16th Floor
Harrisburg, PA 17120

Dear Attorney General Shapiro:

North Beaver Township responded to my initial ACRE complaint in writing on June 10, 2022 (as posted on your website). I am submitting the following response of my own, because there are specific points that I must express -- to clarify that the Township has violated my Right to Farm.

- 1.) North Beaver Township fails to mention *Frederick v. Allegheny Twp. Zoning Hearing Board (2018)*. I am now citing this important case, in which the Pennsylvania court held that natural gas well pads are an acceptable land use on agriculturally zoned land. The court stated:

"It is without dispute that landowners are entitled to make use of their property and possess the right to 'lease' the subterranean portion to third parties for oil and gas exploration and extraction. For the farmers in the Township and in the Commonwealth, it is often necessary that they receive income from other sources to maintain a way of life, and this need is unquestioned."

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

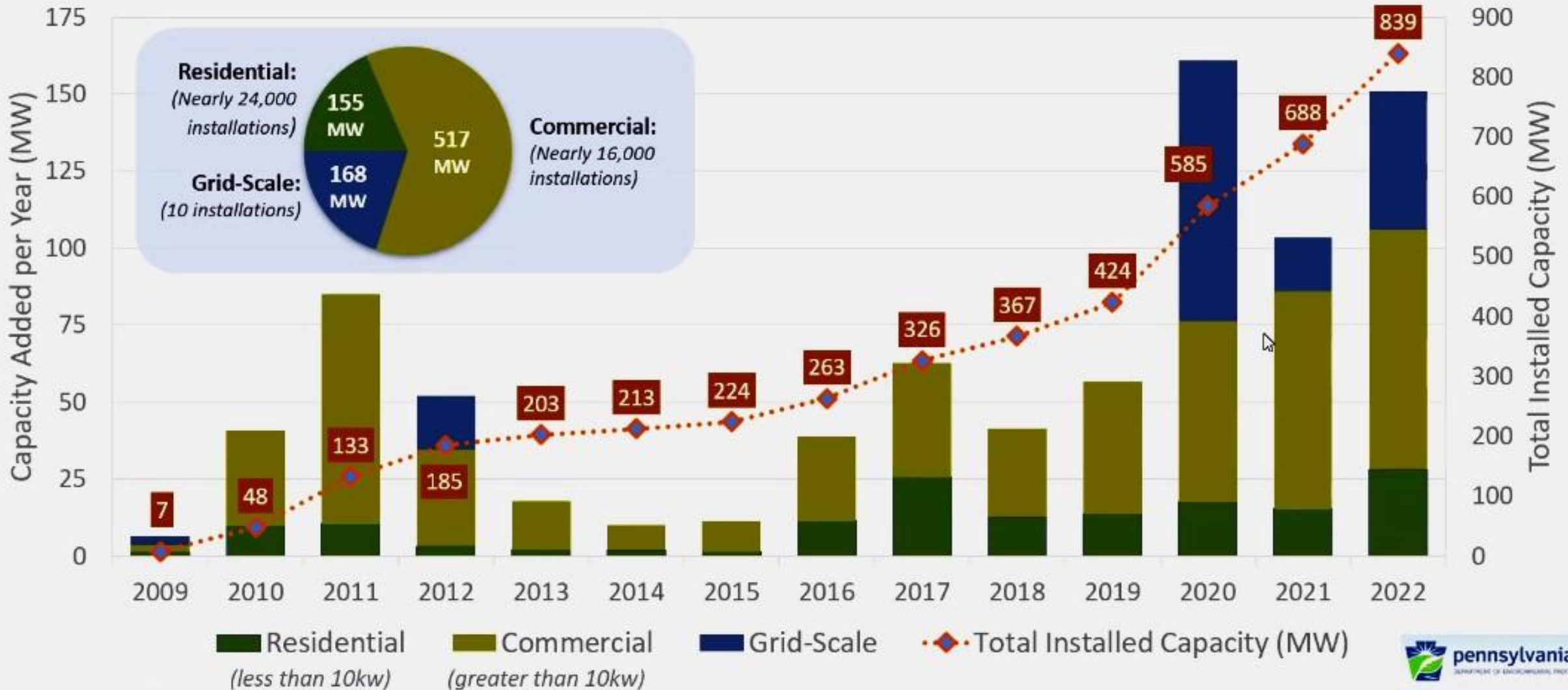
- For off-site energy use within community (distribution grid)
- Usually ground mounted requiring multiple acres but potential for rooftop or parking lot installations
- Measured in 100s of kW up to 5 MW
- Current guidelines unclear

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

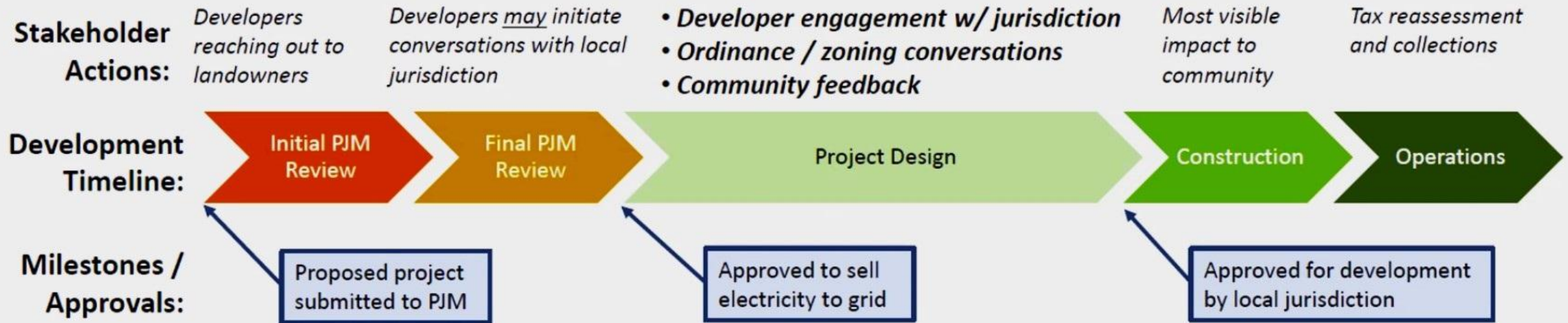
Growth of All PA Solar – 2009 to 2022

Pennsylvania Annual Solar Installations and Cumulative Capacity (MW)





Solar Development Project Overview



What is PJM Seeing on Utility-Scale in PA?

- 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).

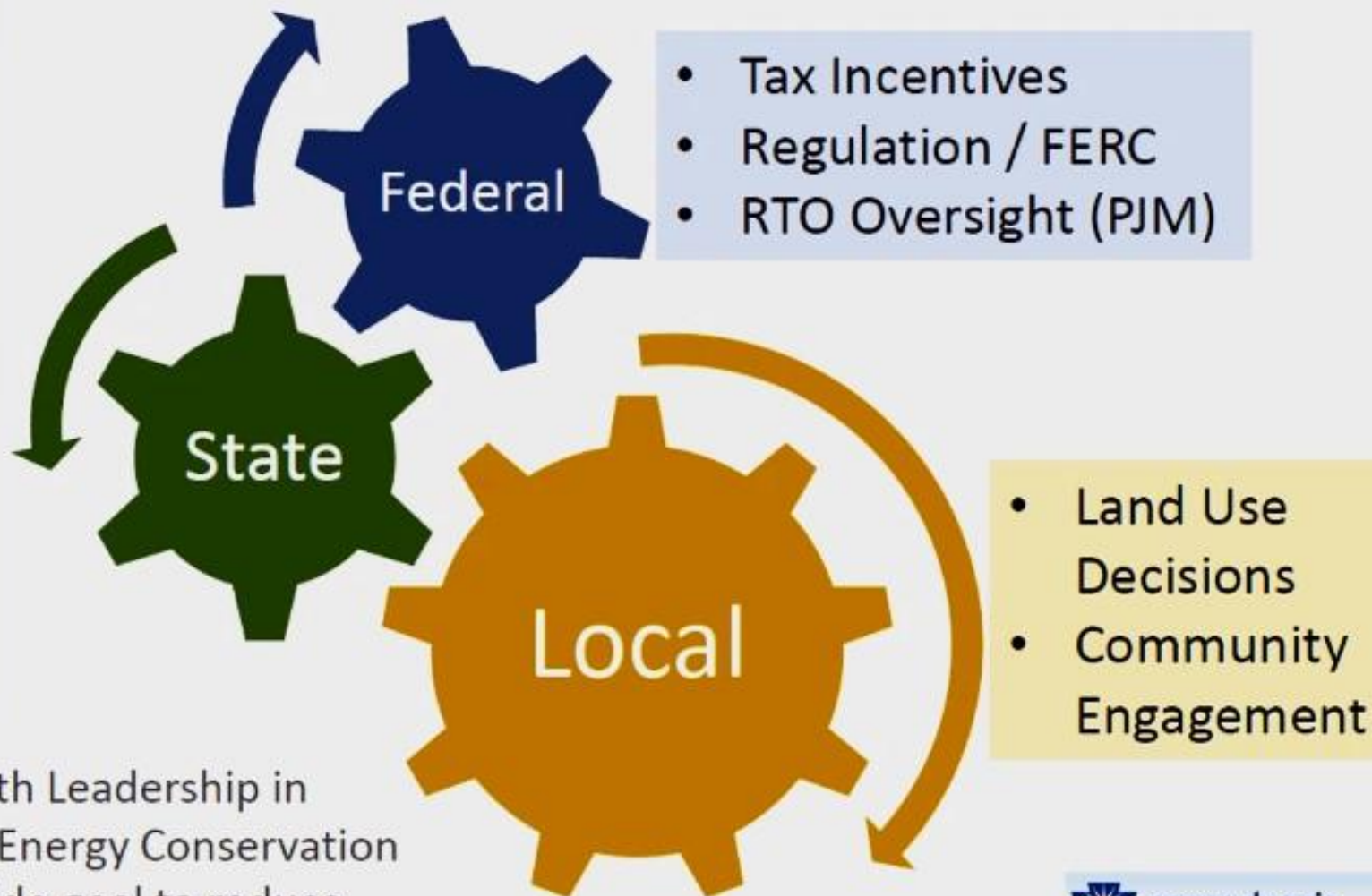
(September 2023)



State Role in Grid-Scale Solar Development

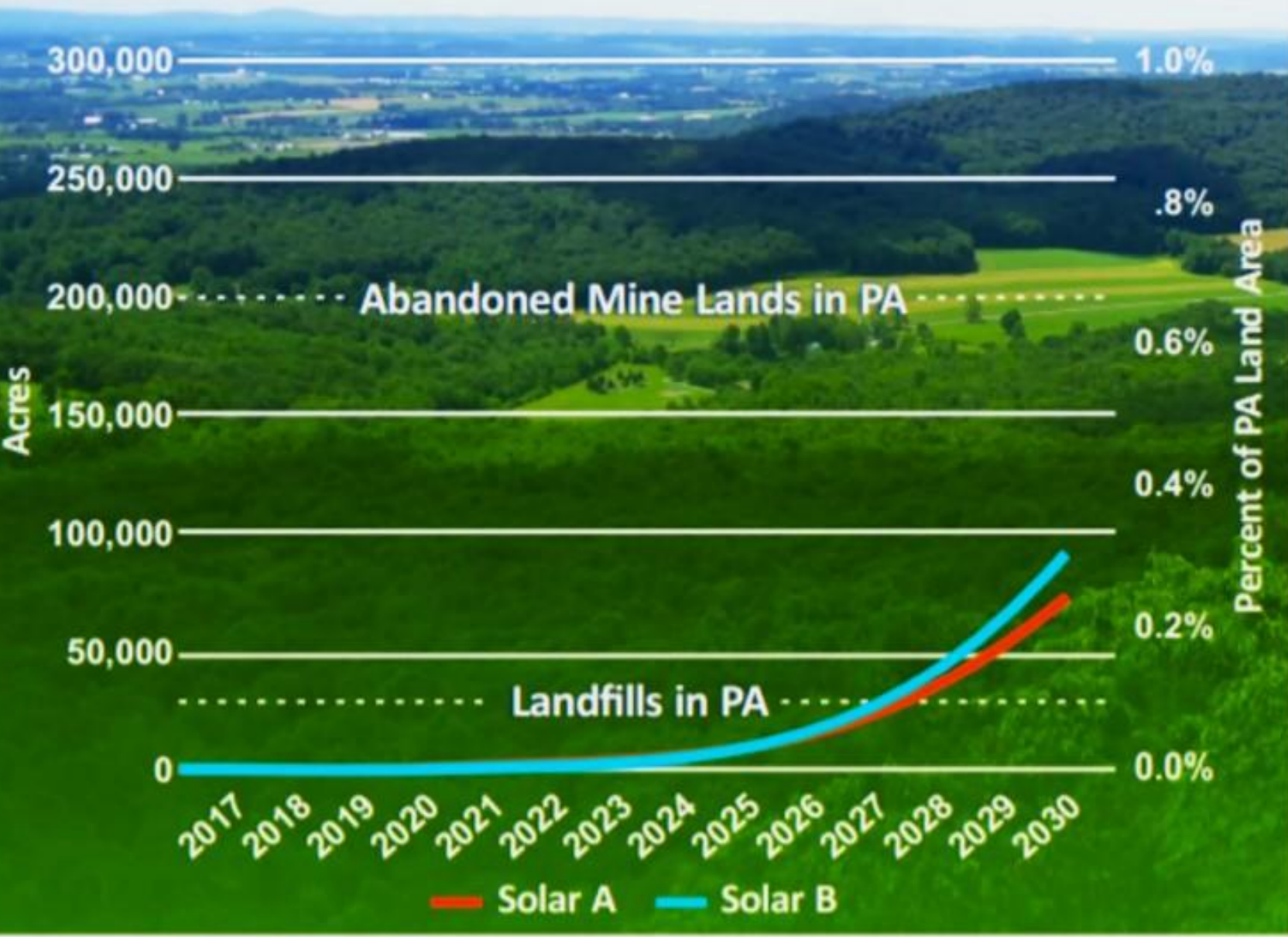
What is the State's Role?

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



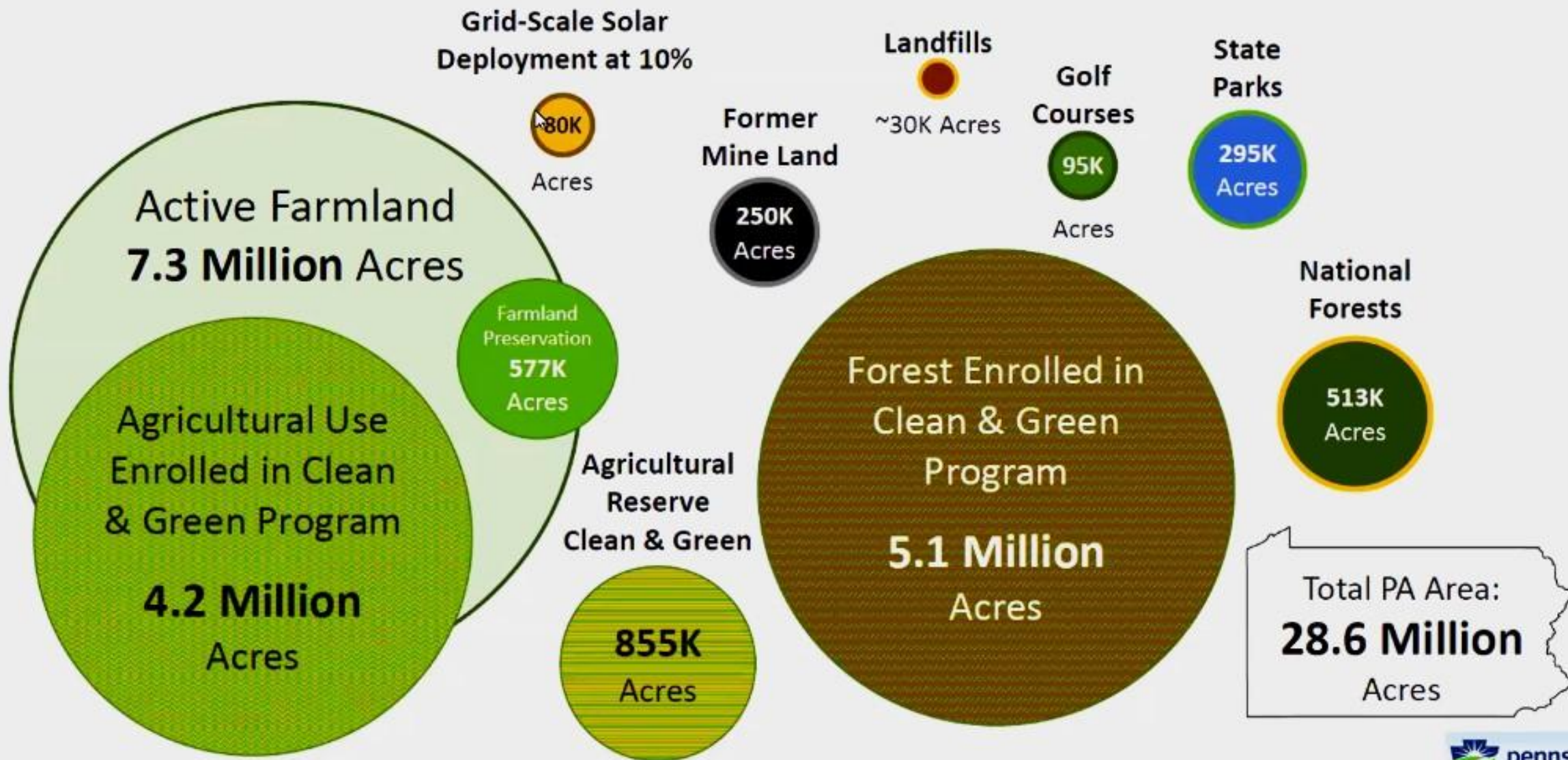
Executive Order No. 2019-1 (Commonwealth Leadership in Addressing Climate Change and Promoting Energy Conservation and Sustainable Governance) Sets a statewide goal to reduce greenhouse gas emissions 26% by 2025, and 80% by 2050.

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



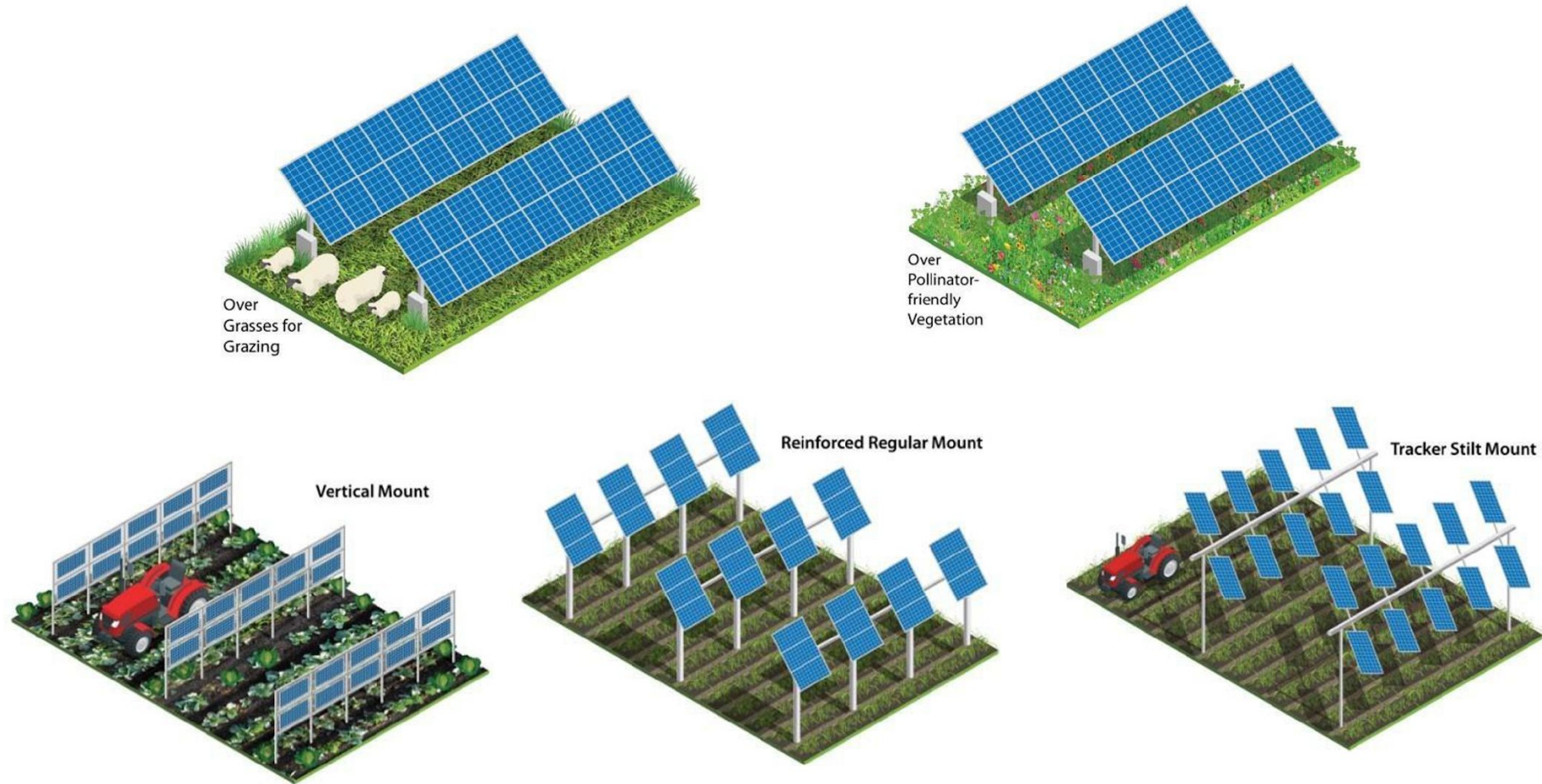
Solar Companies utilize grazing at solar facilities to keep vegetation from

- Shading the pv modules which reduces production
- Encroaching on rotating equipment and inhibiting function
- Allowing nuisance or noxious weeds to propagate
- Impacting worker safety by covering hazards and in some cases poisonous plant and animal species
- Reducing fire hazards at solar arrays
- Lowering maintenance costs as much as possible
- To maintain a clean & orderly site
- Minimize the carbon footprint associated with vegetation control at solar facility
- Increase soil organic matter over the life of the project
- Promote sustainability



Source: PV Field Guide Vegetation Management, Acciona

“Agrivoltaics,” “Co-location” Dual-Use Scenarios



The Solar Grazing Opportunity: Paid Access to Fenced, Shaded Grasslands, and Corporate Partnership



Source: Craig Scariot, Sky Pilot Farm, CO



Source: Christian Stovall, Hidden Mt. Farm, MA



Lewis Fox, Agrivoltaic Solutions, VT



Source: Julie Bishop, Solar Sheep, LLC, NJ - Credit: Dan Charles, NPR



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

Zoning approval remains largely uncharted territory.

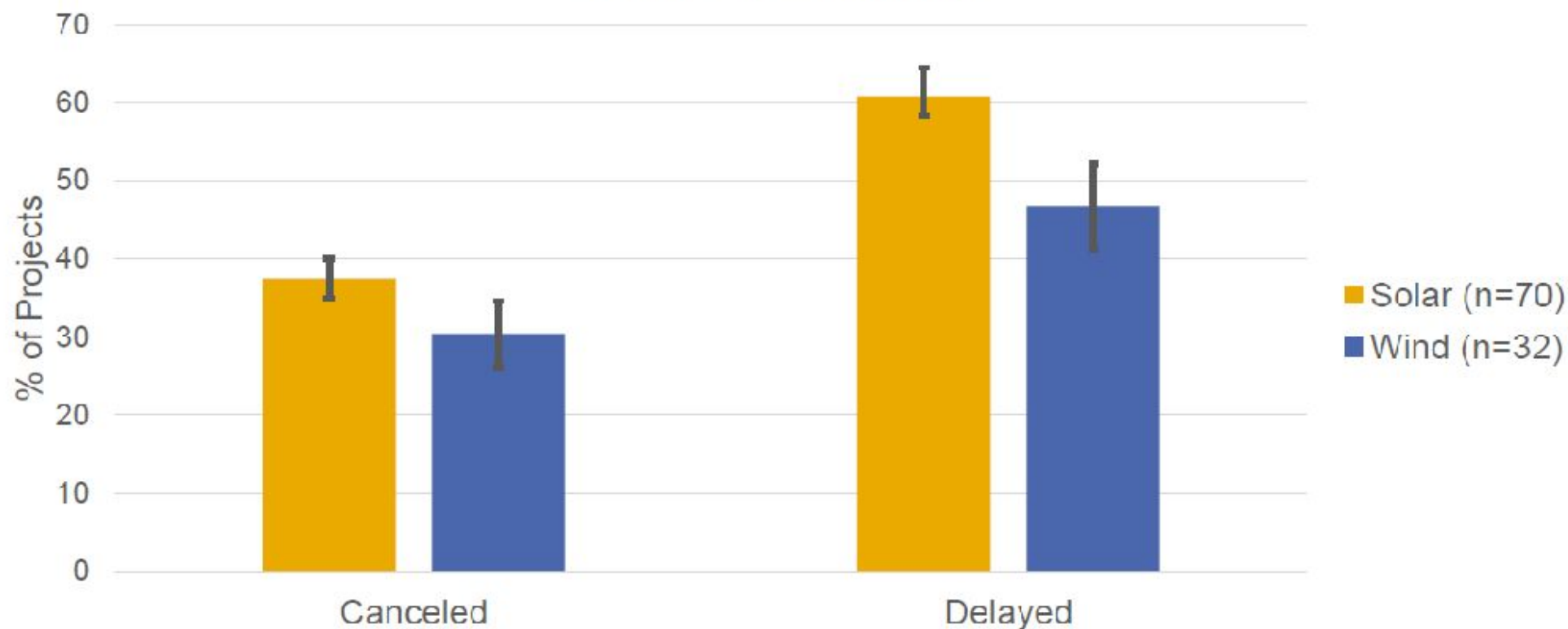
- Unless very recently amended to account for solar electrical generation as a use in a township, PA zoning ordinances will generally require approval of solar through a **conditional use** application to the township supervisors (not the zoning hearing board). (*"Uses not otherwise provided for . . ."*)
 - "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).
-

Project timelines, delays, and cancellations



Many projects experience significant delays and at least 30% are canceled

Approximately what percent of siting applications submitted by your company in the last five years were canceled or significantly delayed (≥ 6 months)?

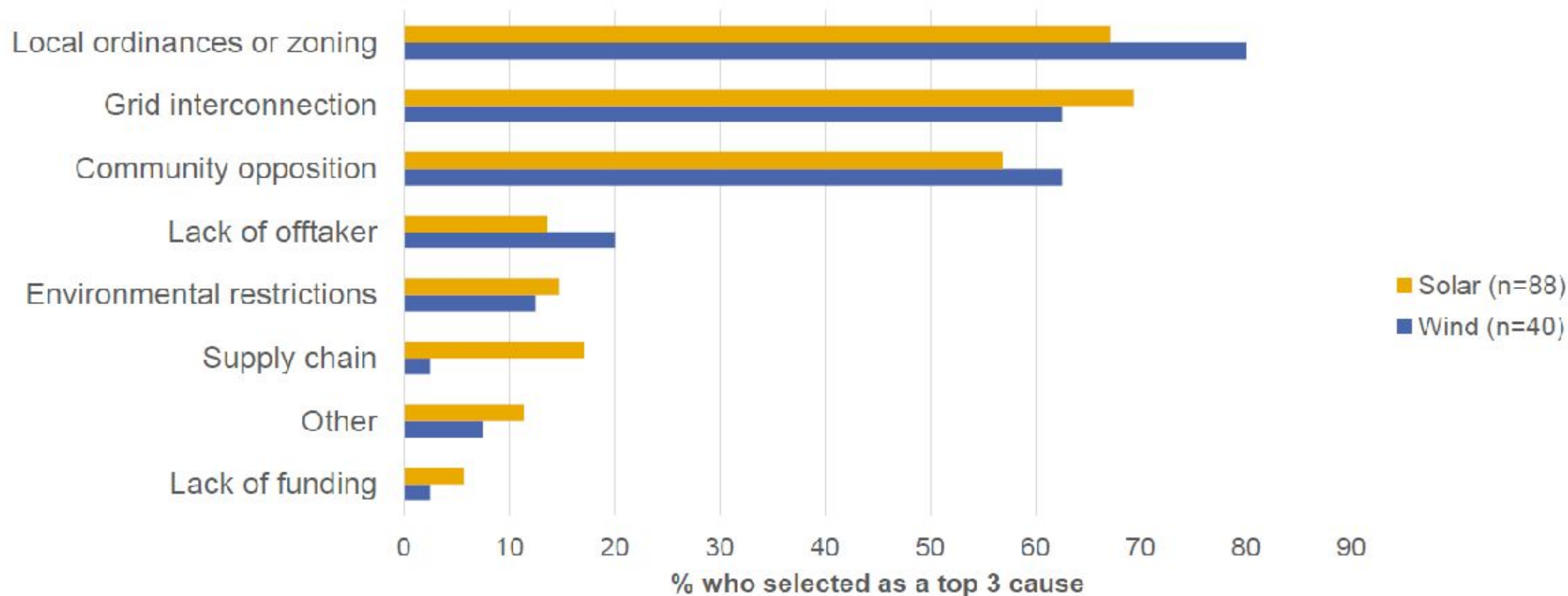


Note: error bars represent standard error throughout the presentation



Local ordinances, interconnection, and opposition are leading causes of cancellation for both wind and solar

Within the last five years, what have been the leading causes of solar project cancellation? (Select one to three)

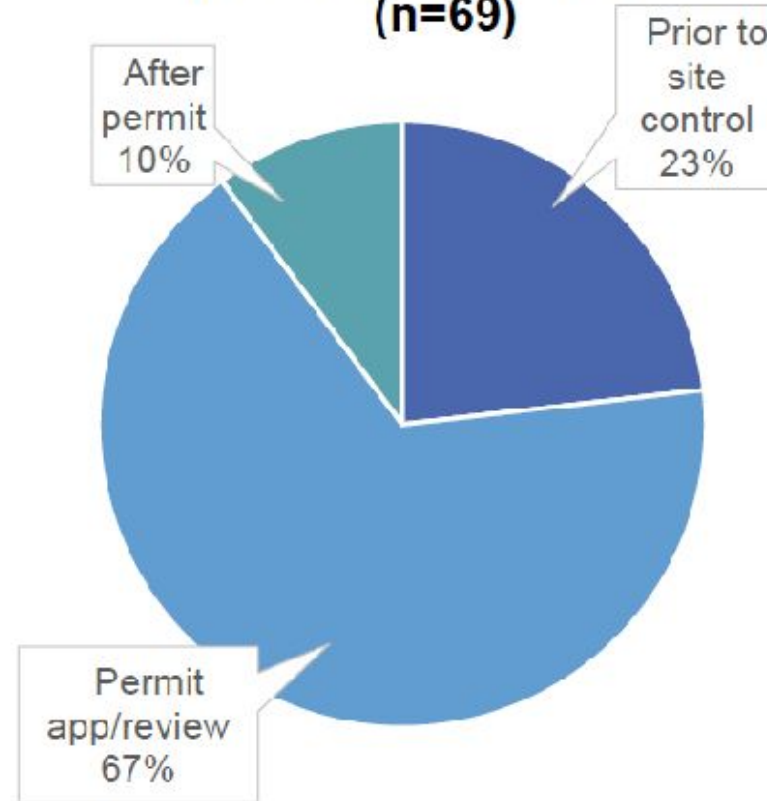


70 respondents provided data about a recently canceled project. Most were canceled during permitting, and the majority did not sell or transfer development assets.

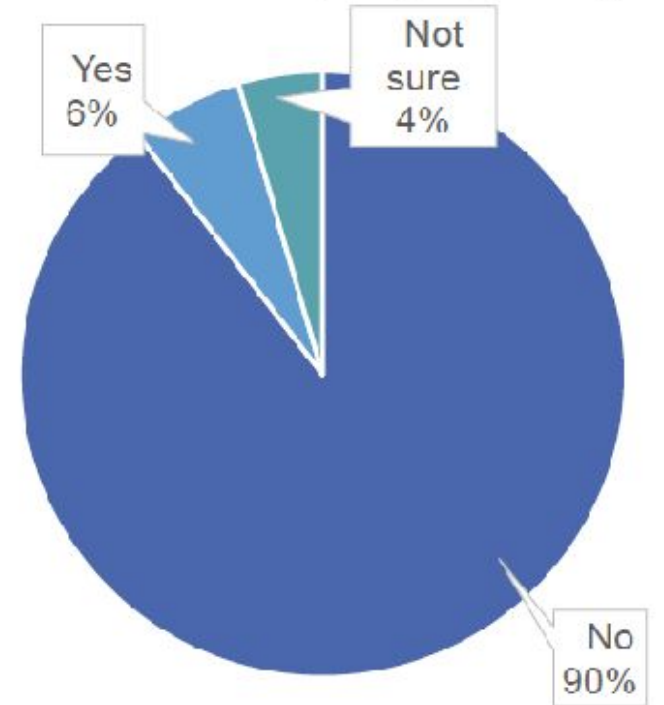
Was this a wind or solar project?

Solar (Including 9 with storage)	42
Wind	21
Wind + Solar	5
Unknown	2
Total canceled projects	70

**During what stage did your company decide to stop pursuing the project?
(n=69)**



Did company sell or transfer development assets of this project to another company? (n=67)

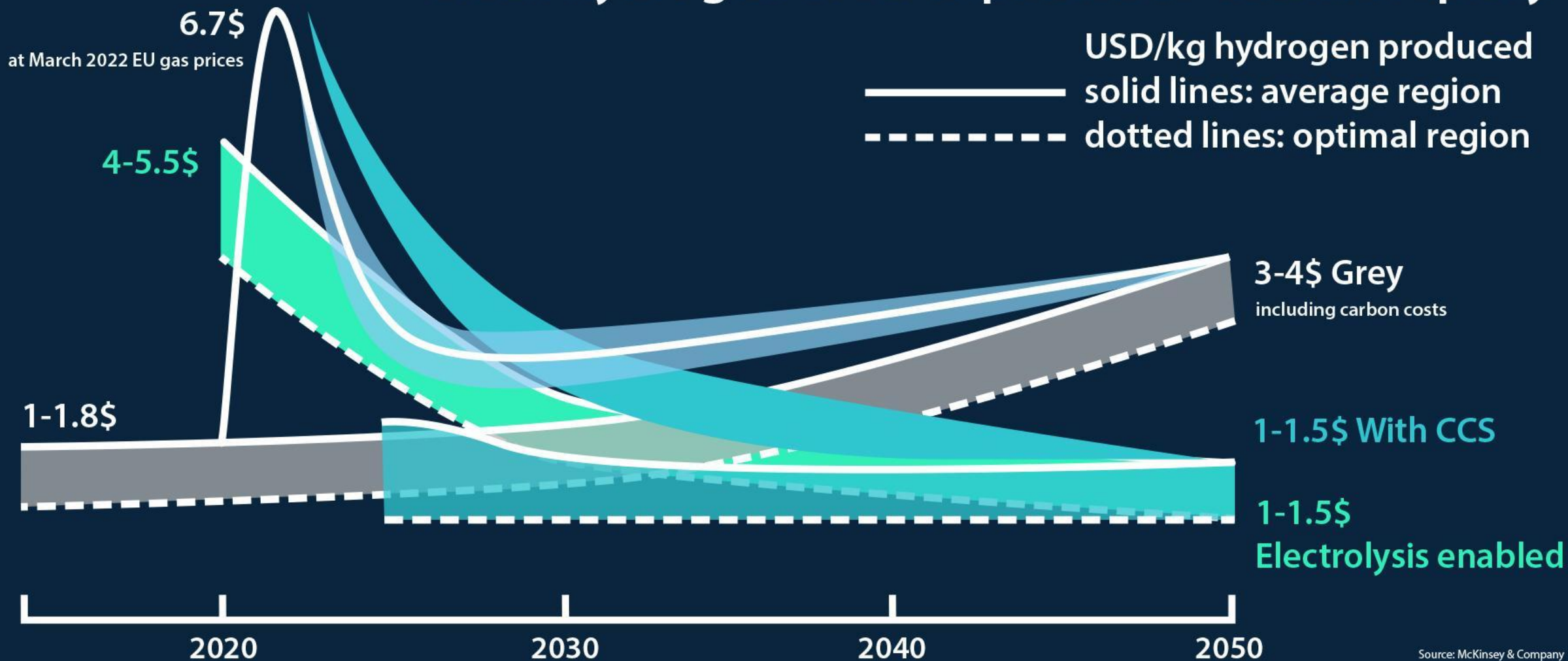






- PA: The only state to receive the awarding of 2 H2 Hubs
- 40 million+ new jobs to be created
- \$2 billion in initial federal investment, with more to come

Clean hydrogen costs expected to decline rapidly



By 2050, >300mt of H2 would be traded, with east Asia and Europe relying on imports from around the world

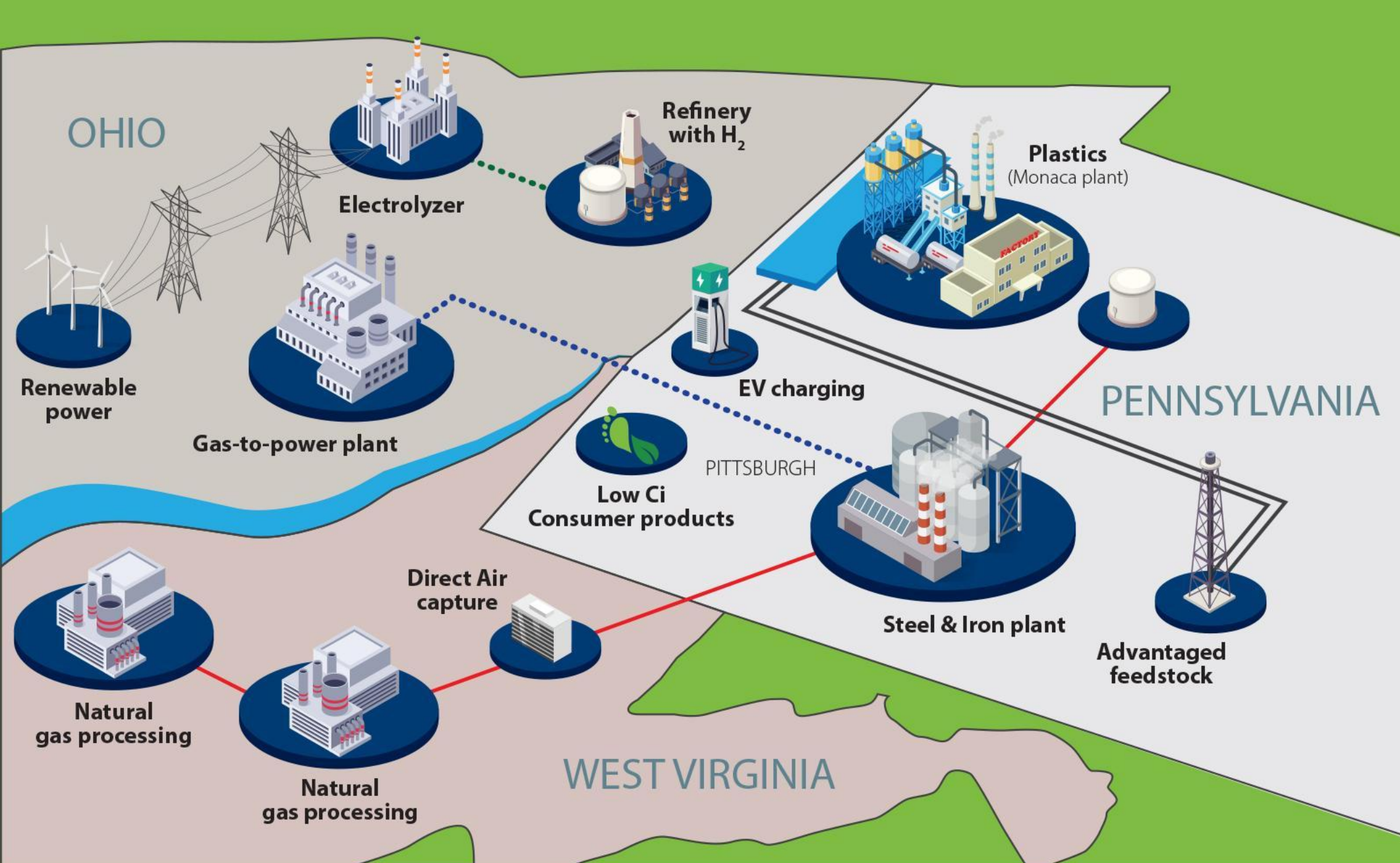
Region consumes more than it produces (Red) Neutral (Yellow, Green, Blue) Region produces more than it consumes (Blue)



Trade Flows

- ← > 25
- ← 10-25
- ← 5-10
- ← 1-5
- ← Mostly Shipped
- ← Mostly Piped

Source: McKinsey & Company



Placement of solutions illustrative only

..... Blue H₂ Green H₂ — CO₂ == Natural Gas

Any Questions?

