



NOW IS THE TIME TO MODERNIZE PENNSYLVANIA'S RENEWABLE ENERGY STANDARDS + ENABLE COMMUNITY SOLAR

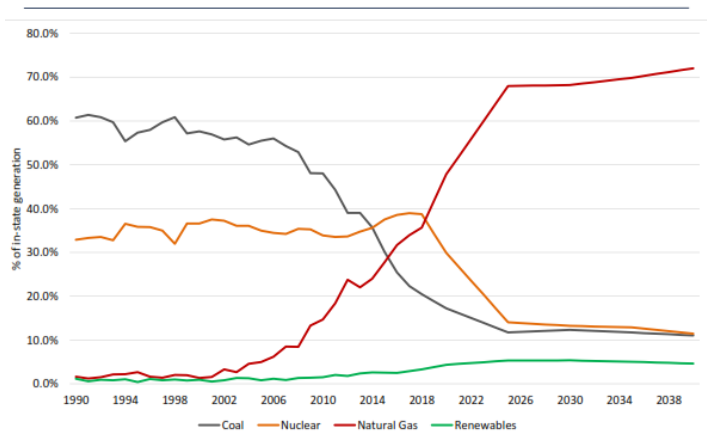
Status of Alternative Energy Portfolio Standard (AEPS)

- o Signed into law November 2004
- o Requires Pennsylvania utilities obtain **18%** retail electricity from: alternative resources by **May 2021; these goals have been met**
 - **Tier I - 7.5%** - Solar photovoltaics and solar thermal, wind, low-impact hydropower, geothermal, biomass, fuel cells; can come from anywhere in PJM territory
 - **Tier I - 0.5% (solar carve-out)** - Utility-scale solar and customer generators (on-site) in-state solar photovoltaics (PV), community solar not permitted
 - **Tier II - 10 %** - Large-scale hydropower, waste coal, energy efficiency, municipal solid waste, byproducts of wood processing, etc. (these are primarily exiting systems; unlikely that new resources or new jobs will be added)

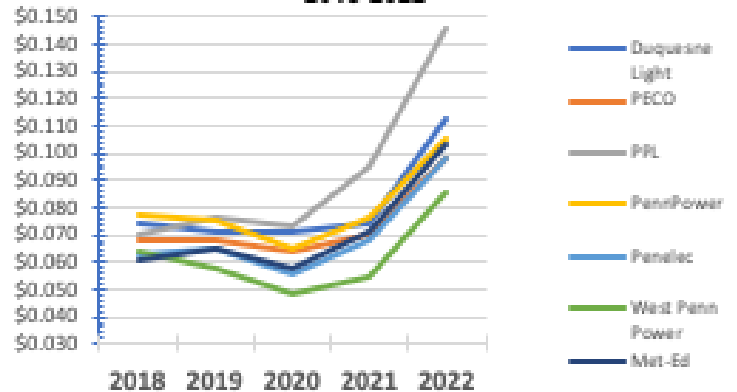


Pennsylvania's electric mix is becoming less diverse, putting ratepayers at risk with volatile price swings.
Increasing renewables will diversify our energy mix, making our grid and energy prices more stable.

Putting forecasted generation into perspective



PA EDC ANNUAL END OF YEAR PTC 2018-2022



The lack of diversity in Pennsylvania's current and projected electricity mix is contributing to rising electricity costs. According to the PA Public Utility Commission, **2022 rate increases ranged from 35% - 56%** across all major electric distribution companies, "fueled in large part by shifts in supply and demand for natural gas."



Seizing the Opportunity

30% Renewables by 2030

House Bill 1467 & Senate Bill 230

- **Comprehensive Bills that Increase Tier 1 Renewables Goals from 8% to 30% by 2030 and Enable Community Solar**
- **Increase In-State Solar Carve-out from 0.5% to 14%**
 - **8% from Utility-Scale solar**
 - **2% from Community Solar**
 - **4% from Customer Generators (on-site solar)**

Why is the AEPS needed?

New federal programs for renewable energy and energy storage, including the Inflation Reduction Act (IRA), have provided a boost to economic activity as well as identified targeted investment zones that much of Pennsylvania qualifies. However, these opportunities will be lost to neighboring states with more competitive state renewable energy goals as investors seek to maximize their return on investment. The credit market established by the AEPS is an important piece that assures investors that Pennsylvania will be open for business.

Is 30% renewables by 2030 achievable?

The PJM Queue has applications for 206 GW of **utility-scale solar** capacity and 56 GW of **wind capacity**. If all constructed, this would be 20X the estimated renewable energy requirement needed to meet 16% renewables in Tier I by 2030 but these projects will likely not be built without a more stable credit market that the AEPS provides.

Penn State estimates there are currently **235 community solar projects** in the planning stage with a capacity of 1,033 MW (~1% of PA's energy) - all just waiting for community solar to be permitted. Establishing a credit market in the AEPS also assures that projects will be built.

Federal incentives and high electricity prices are increasing opportunities for solar **customer generators** such as homeowners, municipalities, schools, businesses, farms, and universities, but they also need a stable credit market from the state.

Studies have shown that moving to just 10% in-state solar will benefit PA with:

- **Job Creation** 65,000+ jobs with 10% solar
- **Economic Development** \$9 billions in private investments and \$5 billion in local PA economic benefit
- **Energy Diversification** Increases grid resiliency and price stability
- **Farm and Land Preservation** \$2+ Billion in land lease payments; keeps land in hands of farmers/landowners rather than selling for development; Agrisolar is a developing new business opportunity
- **\$9.2 Billion:** Private Capital Investment
- **\$5.3 Billion:** Economic Development
- **\$2.3 Billion:** Farmer Lease Payments that keep farms in family ownership and stabilizes ag economy
- **\$228 Million:** Local tax revenue from grid scale solar projects

Monthly & Annual Bill Impact of 10% Pennsylvania Solar

Year	Wholesale Electricity Cost Savings (M)	Utility Scale - LTC (M)	Utility Scale - Merchant (M)	Distributed Generation (DG) (M)	Total Annual Impact (M)
2018	0	0	0	0	0
2019	0	0	0	0	0
2020	0	0	0	0	0
2021	0	0	0	0	0
2022	0	0	0	0	0
2023	0	0	0	0	0
2024	0	0	0	0	0
2025	0	0	0	0	0
2026	0	0	0	0	0
2027	0	0	0	0	0
2028	0	0	0	0	0
2029	0	0	0	0	0
2030	0	0	0	0	600

- **\$619 million:** Annual wholesale electricity price reduction; Tier I wind and solar will increase this amount
- **Electricity Cost Savings for Everyone** Just 5% solar on the grid starts to decrease cost of electricity for everyone