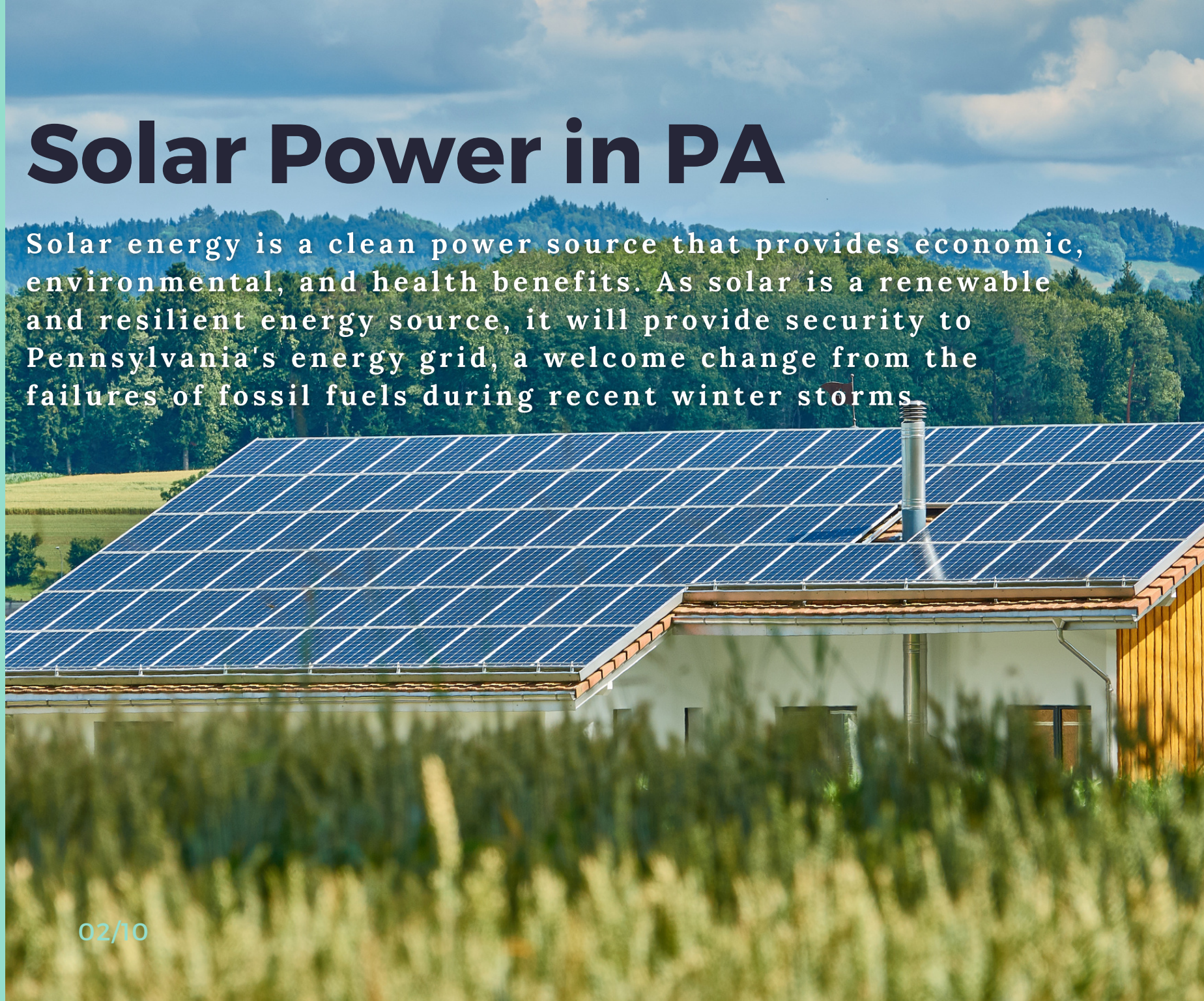
# Solar Energy Policy Brief

PennFuture

# Solar Power in PA

Solar energy is a clean power source that provides economic, environmental, and health benefits. As solar is a renewable and resilient energy source, it will provide security to Pennsylvania's energy grid, a welcome change from the failures of fossil fuels during recent winter storms.



# What are the benefits of solar power?

Residential solar power refers to solar panels that homeowners or businesses have installed on their own rooftops. Individuals use the power they produce in their own homes as well as receive credit for adding energy to the grid. Benefits include:

- A payback period of 11 years on average, expected to decrease in coming years
- Net metering: PA homeowners can receive credit for excess energy produced, effectively removing their electric bills
- Environmentally sustainable & financially wise investment

Utility scale solar projects are larger arrays, defined by the National Renewable Energy Laboratory as generating over 5 MW of energy. These projects sell power directly into the electric grid. Benefits include:

- Provides stable, reliable, and local power with predictable prices
- Cost effective and environmentally friendly
- Growing employment opportunities

# LATEST NEWS

### IN 2022

PA had 1,002 MW of power (enough to power 121,000 houses) and is expect to expand to 3,092 MW by 2027.

### FOR 10% SOLAR BY 2030

Land use needs would require between 89-124 square miles: less than 0.3% of PA's total land area.

### PA SOLAR JOBS BY 2030

The National Renewable Energy Laboratory expects forecasts that solar jobs could range from 8,287 to 12,335 by 2030.

# SCOPE OF THE PROBLEM

### BARRIERS

- A few different bills awaiting action in the legislature could further dampen the opportunities of solar power in Pennsylvania.
- Pennsylvania is unfortunately behind many of its neighboring states in passing community solar and solar access legislation.
- High upfront costs and lack of financing options make residential solar prohibitive for some.

### SUPPORTING INFO: INTRODUCED ANTI-SOLAR LEGISLATION

- SB 211: burdensome solar bonding and decommissioning requirements
- SB 792: proposes restrictions on solar components assembled abroad
- SB 275: prevents local governments' ability to restrict fossil fuel use

Pro-solar bills have stalled in committee, and strong advocacy is needed.

# What's At Stake

Fossil fuels are proving unreliable, as natural gas plants were responsible for 70% of the outages during Winter Storm Elliott.

Fossil fuels are increasingly expensive and must be purchased constantly, whereas solar power is free once the cost of the system is covered.

Solar and other forms of renewable energy yield negligible risks, such as pollution and health impacts, in comparison to fossil fuels.

RECOMMENDATIONS FOR SOLAR IN PA

# Recommendations

- The Alternative Energy Portfolio Standards (AEPS), is a law establishing alternative energy goals for Pennsylvania. Senate Bill 230 & House Bill 1467 would increase the renewable energy goal to 30% by 2030 (7.5% from large-scale solar projects and 2.5% from distributed solar) and permit community solar projects.
- PA should deploy tax incentives or other financial motivators for the siting of large solar arrays on brownfields and on farms through agrivoltaics (the co-location of solar panels on farmland)
- PA officials must focus on expanding the ability of residents and utilities to capitalize on solar energy potential by overriding homeowners' associations restrictions and providing more support for solar.

# Support

- PA residents can help by telling their legislators to increase the AEPS solar requirement, allow community solar, and protect against HOA restrictions.
- Keep up to date with PennFuture's newsletter and/or become a member.



# Setting the Record Straight on Solar

- PA receives ample sunshine to make solar generation effective.
  - Modern solar systems are still effective even on cloudy days. While efficiency is slightly reduced, solar radiation still penetrates clouds and panels can generate electricity even on less-than-ideal days.
- Solar arrays are not displacing working farms.
  - Between 2001 and 2016, 70% of the 347,000 acres of lost farmland in Pennsylvania was developed for residential housing. Solar development on just a fraction of the farm offers farmers a consistent income stream that need not be permanent.
- There is no risk of materials from solar operations contaminating groundwater.
  - The most common type of solar panels, comprising 95% of the market, are made using non-toxic crystalline silicon. Additionally, all of the materials within solar panels are enclosed using a weatherproof seal and cannot vaporize into the air nor combine with water.
- Solar panels can be recycled and responsibly decommissioned.
  - According to the US Department of Energy, 90% of a solar panel's components are recyclable at the end of its lifetime. The majority of the panel is made from glass and aluminum, materials for which there exist large and established recycling markets.

# Why Support PA Solar Development

Solar energy is an up-and-coming industry that increasingly offers affordable, clean, and secure electricity. A much cleaner alternative than current reliance on fossil fuels, solar energy offers vast opportunities in the form of agrivoltaics, ample new jobs, economic savings for homeowners, reduced greenhouse gas emissions, and quickly improving storage and recycling programs.

Pennsylvania citizens must urge their elected officials to pave the way for solar development, officials must act now to incentivize solar, and local governments must include solar regulations in their zoning ordinances. Without policy and attitude change, Pennsylvania will find itself falling even further behind the renewable energy transition and its associated economic, health, and environmental benefits.

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