



CleanCapital

PA Hearing on Solar Energy

June 2023

Introducing CleanCapital

Attracting institutional capital to renewable energy is CleanCapital's founding mission and singular focus.

CleanCapital is a diversified clean energy investment platform. Founded in 2015, CleanCapital's mission is to accelerate the flow of institutional capital into middle market clean energy projects to further the energy transition. Its deep expertise and focused approach has earned the trust of some of the world's largest institutional investors.

CleanCapital actively invests across the full lifecycle of solar and energy storage projects, including during development, construction, and operations. The firm is also able to provide capital to early-stage clean energy developers. In 2022 CleanCapital acquired BQ Energy—a national leader in brownfield and landfill clean energy development—and invested in additional developer partners operating across the U.S.

CleanCapital is currently backed by an up to \$800mm equity commitment from Manulife Investment Management (sourced for the John Hancock Life Insurance Company, U.S.A.) announced in April 2021 and June 2023

¹ All metrics reflect performance since inception

² Wood Mackenzie PV Leaderboard Q3 2022

³ Wood Mackenzie, U.S. Solar Market Insight Report: Q4 2022 & U.S. Energy Storage Monitor: Q4 2022 (some values estimated; includes non-residential & all FTM storage, including transmission-connected storage)

>\$1bn
Cumulative acquisitions

>400
MW capacity acquired

>200¹
Projects acquired



Among the Top Ten commercial solar asset owners in the U.S. with >\$1 billion invested to date²



Unique focus on middle-market solar and energy storage, a \$32bn addressable market through 2026³



Investor-aligned, scalable, and diversified portfolio strategy delivering strong historical returns for blue chip investor base

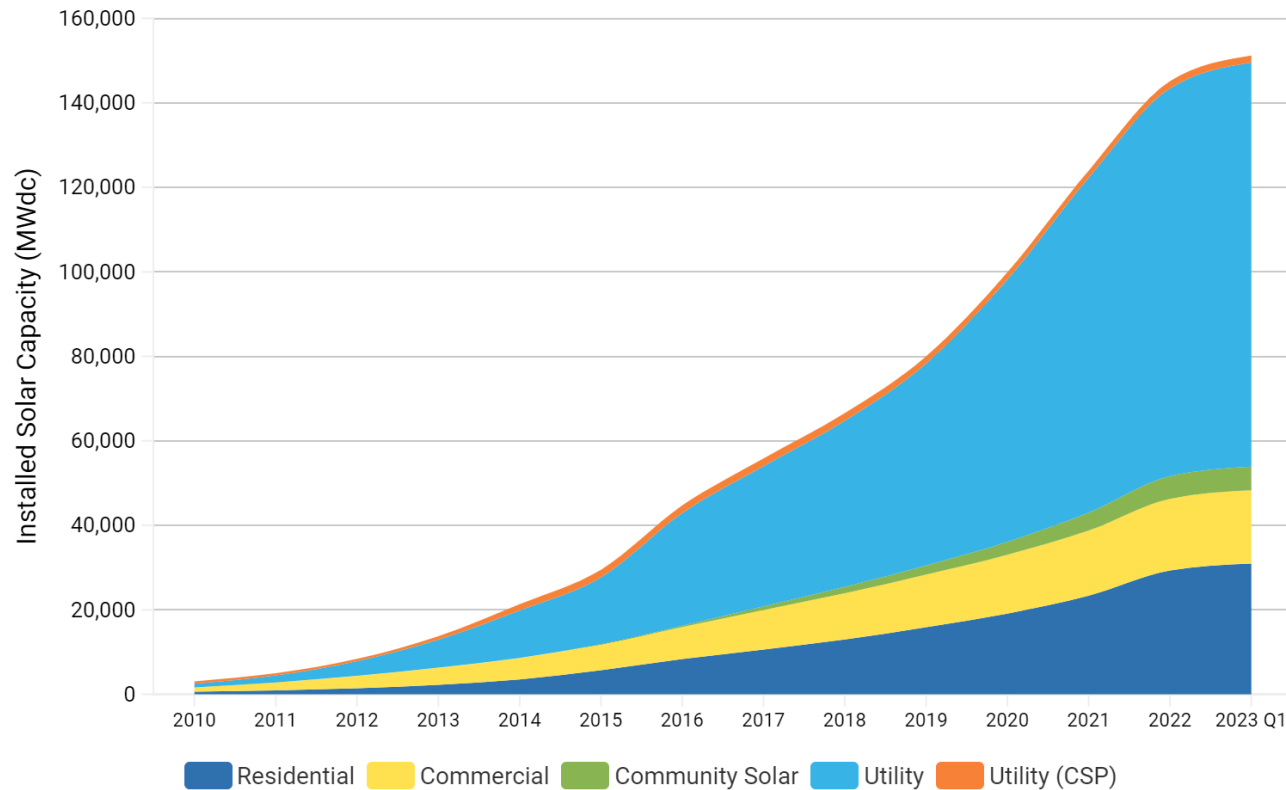


Robust opportunity pipeline resulting from strong track record, relationship-based origination, and secured developer pipeline



Solar Energy Has Experienced Massive Growth Since 2000

Cumulative U.S. Solar Installations

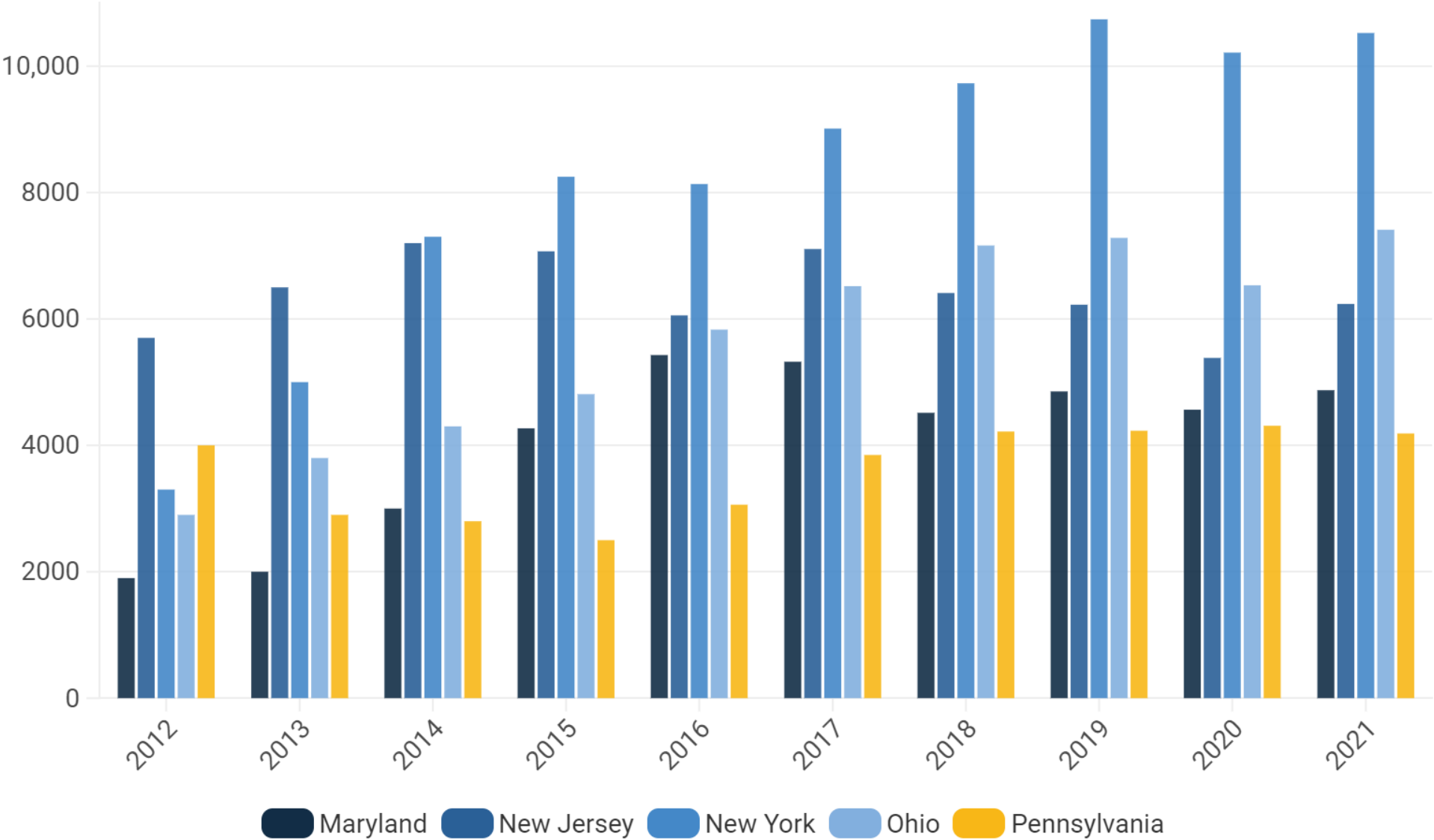


- In the last decade, solar has experienced an average annual growth rate of 24%
- Solar has added the most generating capacity to the grid each of the last four years and did so again in Q1 of 2023
- 54% of all new electric capacity added to the grid this quarter came from solar.
- Solar's increasing competitiveness against other technologies has allowed it to quickly increase its share of total U.S. electrical generation - from just 0.1% in 2010 to nearly 5% today.
- The cost to install solar has dropped by more than 54% over the last decade.

Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight Q2 2023



Solar Jobs by State

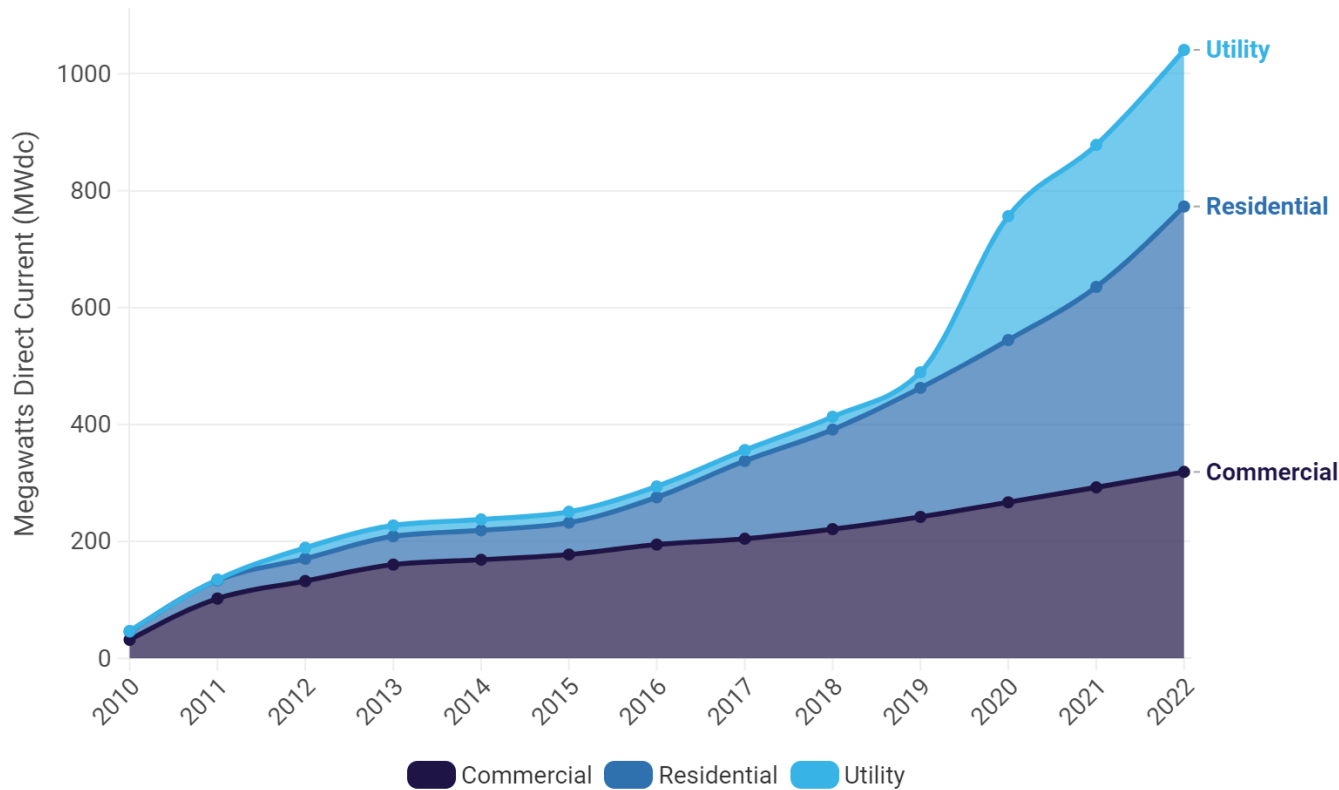


Source: National Solar Jobs Census 2021



Overview of Pennsylvania's Solar Market

Pennsylvania Cumulative Solar Deployment



- Solar Installed: 1,125 MW
- National Ranking: 24th for total installed capacity
- Solar Jobs: 4,188 (ranked 18th in 2021)
- Solar Companies in State: 467 (111 manufacturers, 231 installers/developers, 125 other)
- Value of the state solar market: \$3.1 billion
- Number of Installations: 57,189

Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight Q2 2023



Distributed Generation or Customer-Generators

Customer-Generators in Pennsylvania:

- Residential systems not greater than 50 Kilowatts
- Commercial Systems up to 3,000 Kilowatts
- Located on rooftops or ground-mounted
- Distribution-Connected

Benefits of Distributed Generation:

- Avoided energy and capacity costs
- Avoided transmission and distribution costs
- Avoided fuel costs
- Avoided transmission and distribution line losses
- Demand reduction induced price effects
- Transmission and distribution plant extensions or upgrades funded by solar customers



The 365kW system at the Felician Sisters of North America Headquarters in Beaver County, Pennsylvania.

Grid-Scale or Utility-Scale Solar

Non-Customer Generators in Pennsylvania:

- Projects range in size, but are generally larger (i.e., 10+ MWs)
- Generally, ground-mounted
- Connected to the transmission system (i.e., participate in wholesale markets, PJM)

Benefits of Grid-Scale Solar:

- Avoided energy and capacity costs
- Avoided transmission costs
- Avoided fuel costs
- Avoided transmission line losses
- Price Suppression
- Ancillary Services

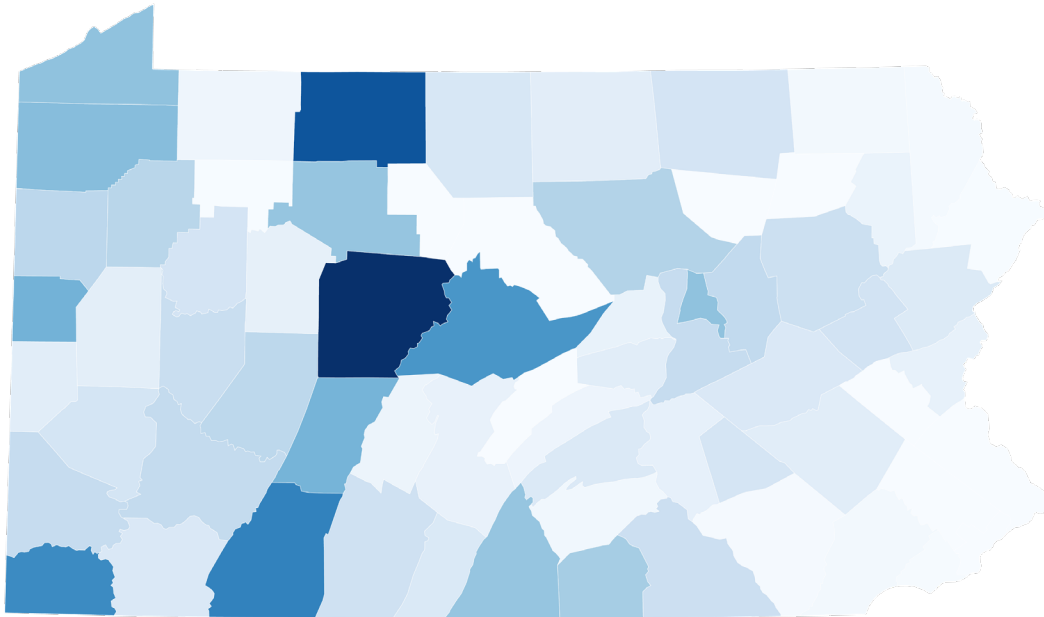


As part of a joint venture with Allentown-based Talen Energy, we are developing two 20-megawatt solar projects on closed ash basins adjacent to the decommissioned Sunbury power plant in Snyder County and the decommissioned Holtwood coal fired power plant in Lancaster County.

Growth of Grid-Scale Solar

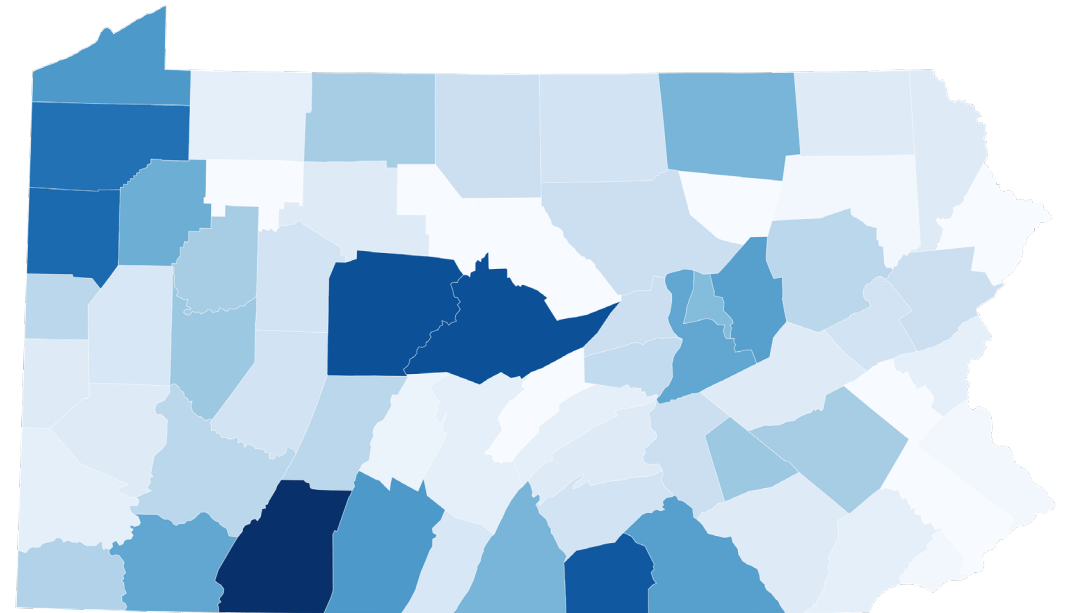
Solar Projects Planned for Pennsylvania (637 projects totaling over 12.3 GW)

Pennsylvania Solar Capacity by County (MWac)



1 MW  920 MW

Pennsylvania Solar Project Count by County

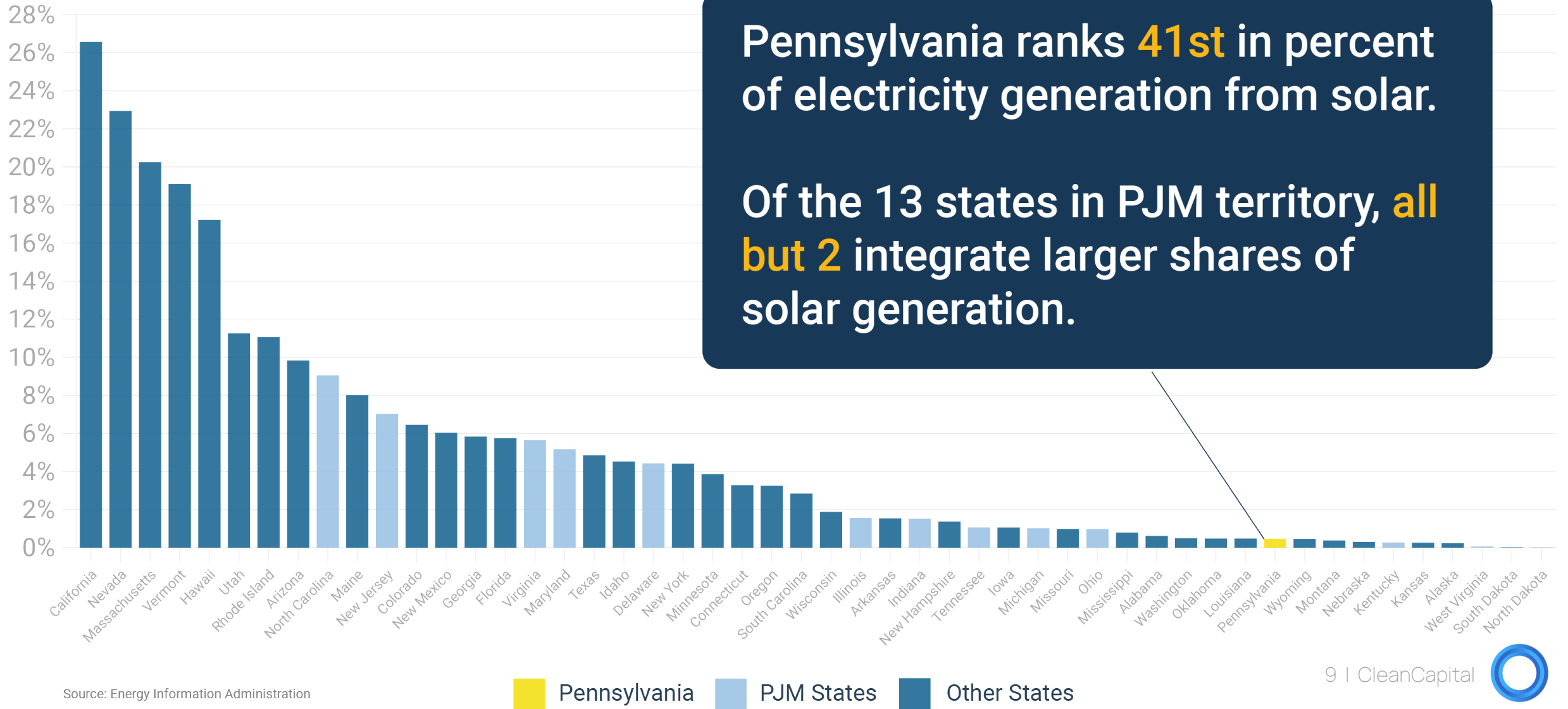


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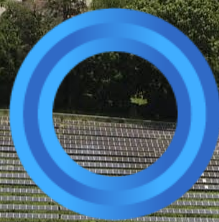
Solar Share of In-State Generation

Pennsylvania ranks **41st** in percent of electricity generation from solar.

Of the 13 states in PJM territory, **all but 2** integrate larger shares of solar generation.



Source: Energy Information Administration



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