



SOPEC

Sustainable Ohio Public Energy Council



About Sustainable Ohio Public Energy Council

- **Formed in 2014 as alternative to private brokers:** Started as one county, one city & one village.
- **SOPEC is a Regional Council of Governments under Chapter 167 of Ohio Revised Code:** provides public energy services to member communities, political subdivisions, nonprofits & faith based organizations, & other public agencies across Ohio.
- **Governed by the communities it serves:** General Assembly & Board of Directors made up of elected officials & representatives from member communities.
- **Formed to increase efficiency in local government:** Shared administrative, financial, & legal services for high-value public energy programs & projects supporting sustainable communities.
- **Commitment to Renewable Energy:** SOPEC member communities' electric aggregation programs feature **100% renewable energy**.
- **Transparency:** Subject to Public Records and Sunshine Laws. Audited every 2 years.

Governance

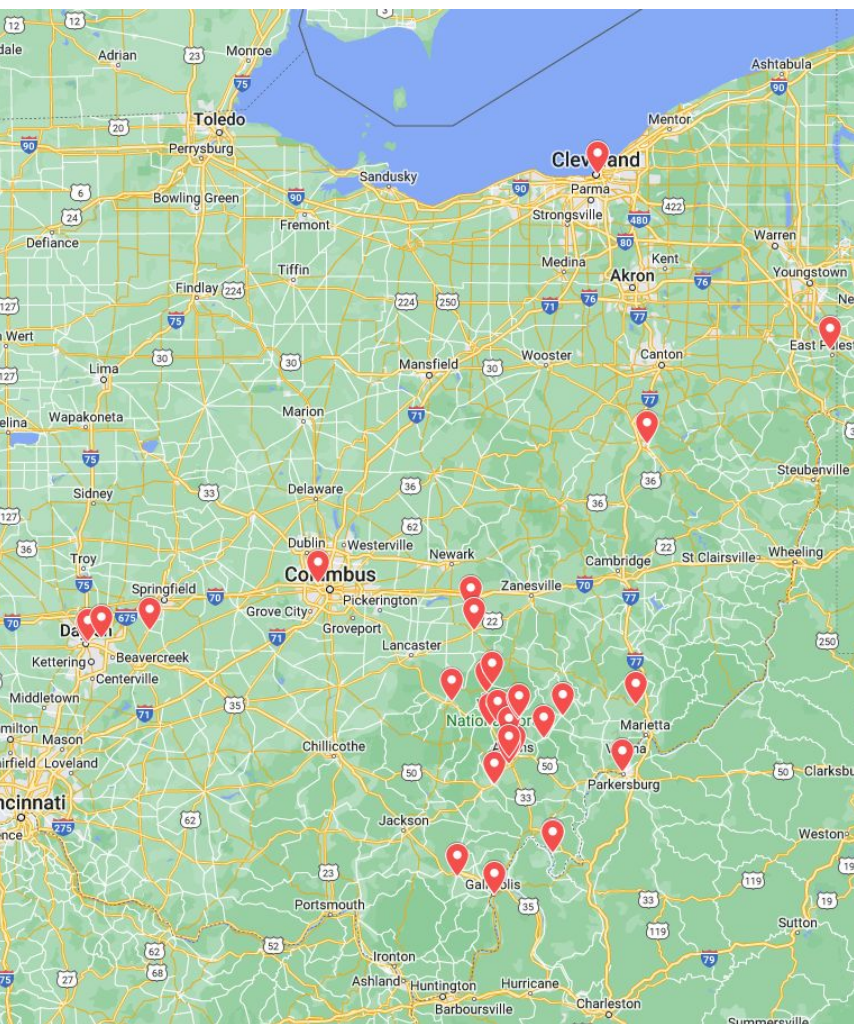


General Assembly

- Every member is a part of the General Assembly, the supreme governing body of SOPEC.
- Meet at least annually.

Board of Directors

- Composed of 5 largest communities, 5 regions, & up to 5 at large representatives.
- Meet quarterly.



- **SOPEC is growing:** Now 31 communities & political subdivisions across Ohio.
 - Combined population of SOPEC members would make it the 2nd largest city in Ohio.
- **Collective buying power:** SOPEC is AEP Energy's 2nd largest customer in Ohio.
 - Approximately 1 TWh (1,000,000,000 kWh) per year of annual load.
- **Mission:** Provide simple, valuable, and reliable public energy programs that help our communities achieve their local energy and sustainability goals.



SOPEC is now AEP Energy's exclusive selected governmental electric aggregator in Ohio for new communities seeking aggregation.

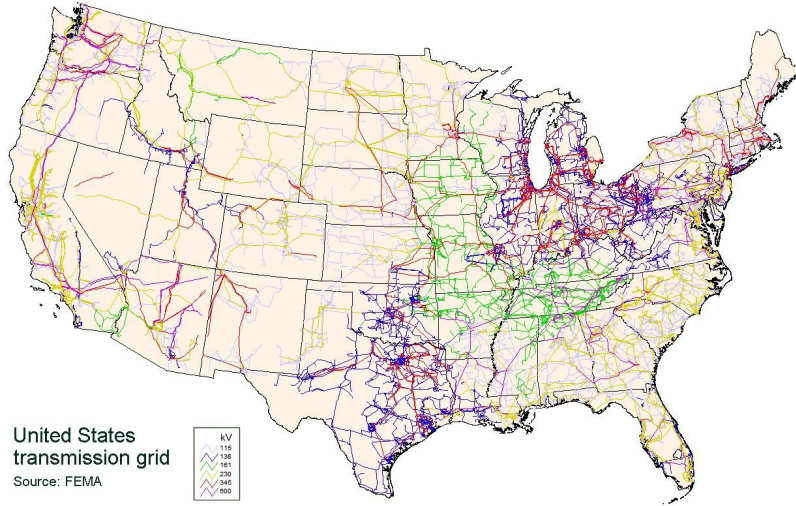
This is powerful because we can be nimble in purchasing energy in a fast moving market.



Organizational Memberships & Partnerships



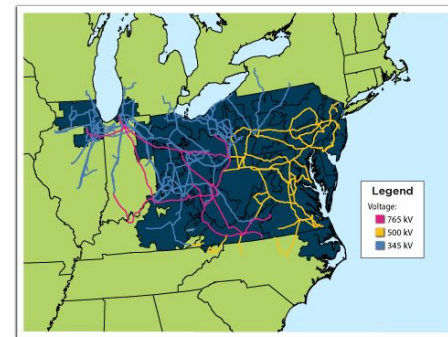
What is the Electricity Grid & How Does it Work?



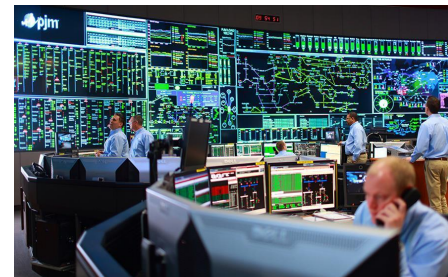
- The U.S. electric system, or power “grid”, is a complex interconnected network that brings power to millions of homes and businesses via transmission and distribution lines.
- Most Americans receive electricity from centralized power plants that use a wide variety of energy sources to produce electricity (coal, natural gas, nuclear energy, or renewable sources, such as water, wind, or solar).
- Electricity travels along high voltage transmission lines that span long distances across the country & then via local distribution lines that bring the power from the street to your house.

Our Region of the Grid - PJM Interconnection

- **PJM Interconnection** is a company that operates the electricity grid for our region, stretching from New Jersey to North Carolina, and from Illinois to Washington D.C..
- **“Wall Street meets Air Traffic Control”**: PJM coordinates the flow of electricity from generators to local utilities across a web of high-voltage transmission lines.
 - Operators of a Stock Exchange for Energy
 - Air Traffic Controllers for the Transmission Grid
- PJM's control room is the nerve center of the high-voltage electric grid.
- Local utilities distribute the power directly to consumers.

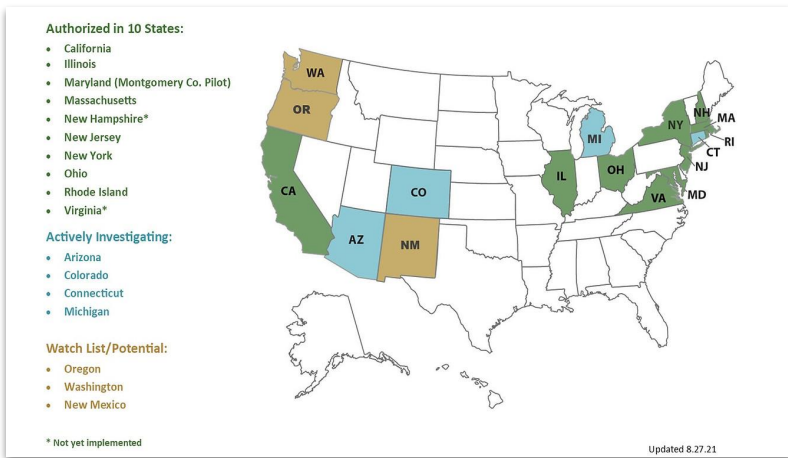


**Source: PJM - Map depicts the "spine" of the grid in the PJM region.*



**Source: PJM*

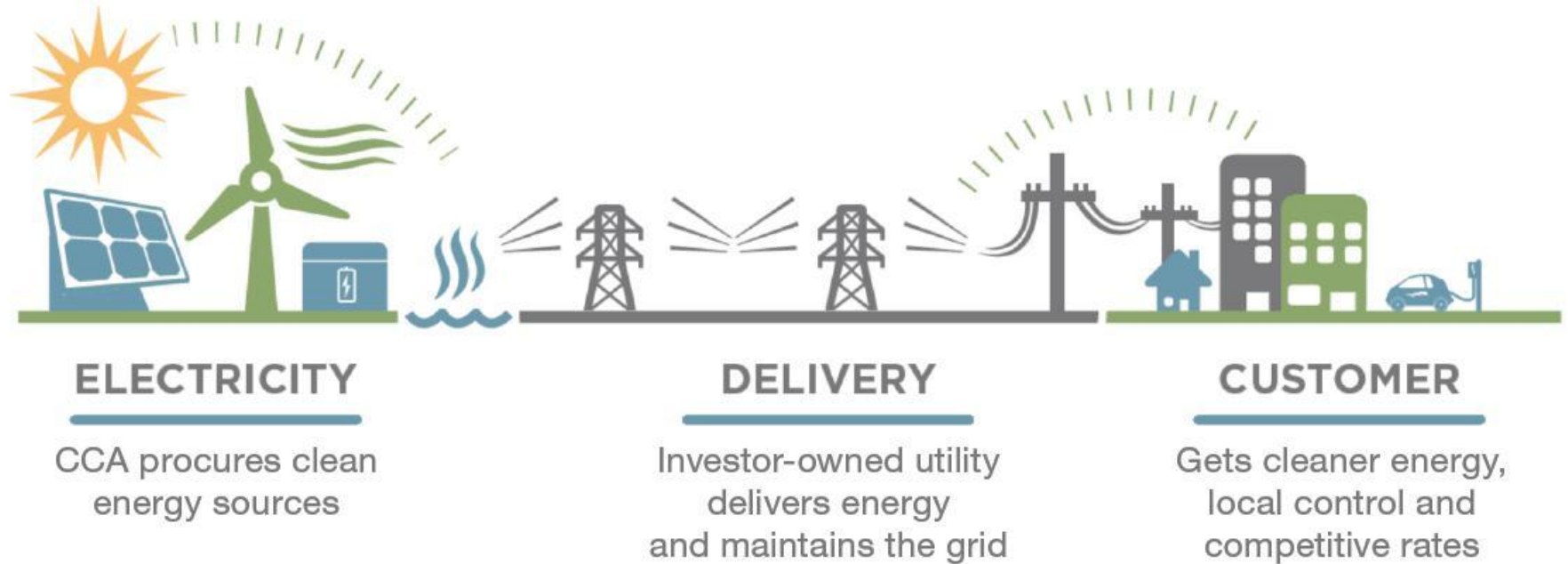
Community Choice Aggregation



**Source: Local Energy Aggregation Network*

- CCA authorized in Ohio in 1999 (SB3) to allow shopping for electric generation.
 - Permitted the creation of local programs, including opt-out governmental energy aggregation.
- CCA programs are permitted in 10 states currently.
- CCA programs bundle all eligible residential & small commercial electric utility accounts in a community together to receive a competitive supply rate from an Ohio-registered Competitive Retail Electric Service (CRES) provider.
- Communities select their default electricity supplier.
 - Individual customers still have the option to select a different retail supplier by opting out.

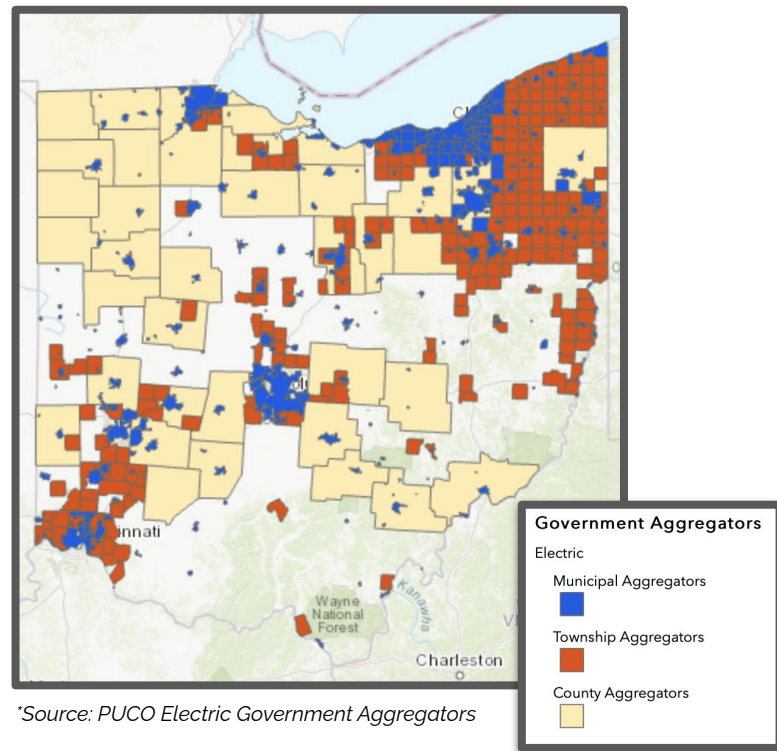
How Community Choice Aggregation Works



**Source: California Community Choice Association*

More Info About Community Choice Aggregation (CCA)

- Electric Aggregation allows a community to select a retail product to replace the standard service offer rate as the default rate for the community. Hundreds of communities have active programs.
- Collective bargaining power: CCA bundles together thousands of electric accounts.
- Hundreds of communities utilize CCA programs throughout Ohio.
- Gives communities greater negotiating power with retail suppliers.
- Consumer choice, consumer protection, and local control.



Who Can Participate?

- Residential & small commercial (under 700,000 kWh/yr.) electricity accounts.
- Opt-out electric aggregation ***excludes*** the following categories of customers:
 - PIPP customers;
 - Anyone who has shopped for power (without rejoining program);
 - Large industrial customers (over 700,000 kWh/yr.); and
 - Anyone who opts-out during the program.

Bring SOPEC CCA to Your Community

- **Join SOPEC:**
 - Hold two public hearings for Plan of Governance
 - Pass establishment agreement ordinance to join (legislation).
 - Approve Plan of Governance (legislation).
 - Sign SOPEC charter agreement.
- **SOPEC CCA program:** default 100% green supply option for eligible customers with choice to opt-out and additional SOPEC supply product options.

Benefits of Joining SOPEC

- **Fixed-term, competitive rates for 100% green supply of electricity.**
- **Access to extended “team” and energy planning services:** SOPEC energy experts, energy lawyers, & grant support.
 - SOPEC acts as a regional energy manager for sharing resources.
- **Community grants:** can be part of the program design.
- SOPEC invests back into its communities.
- **Group solar RFPs:** May participate in both on-site solar & off-site renewables PPA.
- Model do not knock legislation.

Recent Examples of Community Grants

- ~\$25,000 - **Solar system** - Athens County EMS station
- Up to \$60,000 - **Sustainability Fellowship** - City of Dayton
- ~\$40,000 - Helped fund **all-electric transit shuttle bus** - Athens County/Appalachia Ohio.
- Thousands of **LED lighting upgrades**
- **Public EV Chargers and installations**



Athens County EMS Station



Electric Shuttle Bus in City of Athens

Recent Examples of Community Grants (Cont.)



Tesla charging station for Logan PD

- ~\$6,000 - Logan Police Department **Tesla charging station** & installation
- ~\$35,000 - AEP Ohio **microgrid demonstration** - Athens Water Treatment Plant
- ~\$15,000 - Big Bailey Mining Heritage History Project for **heritage tourism** adjacent to a mountain bike trail system.

******Millions of grant dollars have been leveraged through SOPEC grants in recent years******

What is Renewable Energy?

- Renewable energy is energy that is generated from natural processes that are continuously replenished.
 - Includes solar, wind, hydro, geothermal heat, tides & various forms of biomass.
 - This energy cannot be exhausted & is constantly renewed.
- Advantages of renewable energy impact economy, environment, national security & human health.
- **Benefits include:**
 - Enhanced reliability, security, & resilience of power grid;
 - Job creation throughout renewable energy industries;
 - Reduce carbon emissions & air pollution from energy production; &
 - Increased U.S. energy independence.



What are Renewable Energy Certificates (RECs)?

- **Renewable energy certificates (or credit) (REC):** market-based instrument representing property rights to environmental & social attributes of generated renewable electricity.
- A REC legally conveys environmental & social attributes of 1 megawatt-hour (MWh) of electricity generated from renewable energy source (e.g., solar, wind, hydro).
- One purchaser owns exclusive rights to claim all renewable generation attributes of that REC.
- Electricity from many different sources mixes together in power grid, so no way to distinguish exactly where physical electricity came from or how it was generated.
- RECs allow for accounting, tracking & assigning ownership to renewable electricity generation & use.
 - Each REC uniquely identified & includes data about where, when & how it was generated.
- All SOPEC communities utilize RECs to obtain electric aggregation programs featuring 100% renewable energy
 - SOPEC views RECs as a bridge to local renewable generation.



EPA Green Power Partnership Communities



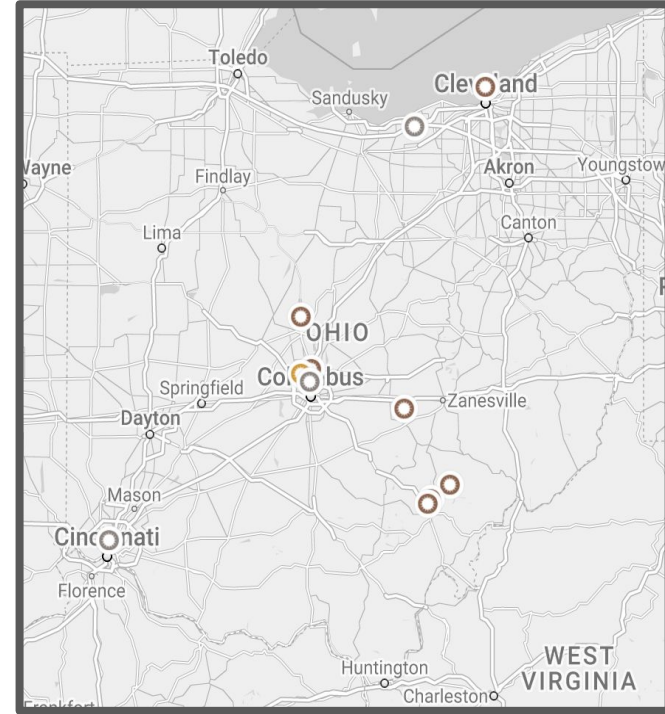
*Source: U.S. EPA

- U.S. EPA established Green Power Partnership (GPP) in 2001 to encourage organizations to use green power voluntarily to protect human health & environment.
- SOPEC communities make up **all 20** Green Power Communities within Ohio.
- Utilizing Green-e® RECs = gold standard RECs



SolSmart Communities

- SolSmart is a U.S. Department of Energy funded program that recognizes cities, counties, & regional organizations for making it faster, easier, & more affordable to go solar.
- 6 SOPEC communities are among the Ohio SolSmart communities:
 - Amesville
 - Athens
 - Athens County
 - Cleveland
 - Somerset
 - Upper Arlington
- SOPEC assists its communities that wish to achieve SolSmart designation



*Source: SolSmart.org

Solar

- One of first aggregators in Ohio to allow net metering, and arguably the best compensation structure.
- SOPEC Executive Director - extensive experience in solar.
- Consulting with Athens on 2.1 MW project on sewer plant.
- Worked with Athens on first Carbon Fee in U.S. (approved with 76% of vote).
 - Athens Carbon Fee creates Public Solar Fund generating over \$100K per year for solar on public buildings.
- Manage only USDA REDA solar program in Ohio - recruiting farms & small businesses for solar assessments in preparation for REAP grants.



Track Record of Savings

2022 Supply Year

- **Dayton (Custom RECs - hydropower) (AES Ohio territory):** was approximately 30% cheaper than standard service offer ("SSO").
 - Estimated over \$10 million in total combined savings to residents & small business owners.
- **Southeast Ohio bundle (Green-e® RECs) (AEP Ohio territory):** was approximately 16% cheaper than SSO.
 - Approximately \$3 million in total combined savings to residents & small business owners.

2023 Supply Year

- **Cleveland (Green-e® RECs) (First Energy territory):** approximately 34.4% cheaper than SSO.
- **Marble Cliff (Green-e® RECs) (AEP Ohio territory):** approximately 40% cheaper than SSO.
- **Riverside (Green-e® RECs) (AES Ohio territory):** approximately 32% cheaper than SSO.
- **Dayton (Custom RECs - wind & hydropower) (AES Ohio territory):** approximately 10% cheaper than SSO.
- **Southeast bundle (Green-e® RECs) (AEP Ohio territory):** approximately 12% cheaper than SSO.
 - City of Athens with Carbon Fee: approximately 10% cheaper than SSO.
- **Unity Township (Green-e® RECs) (Ohio Edison territory):** (starting in January 2024) approximately 31% cheaper than current SSO.
- **Upper Arlington (Green-e® RECs) (AEP Ohio territory):** (starting in January 2024) approximately 34% cheaper than current SSO.

***All SOPEC member communities' electric aggregation programs currently feature 100% renewable energy while saving money compared to the SSO.

Program Pricing Process

1. Data list from AEP Ohio for AEP Energy takes about a week.
2. Indicative pricing. Prepare contract Amendment to SOPEC & AEP Energy Government Aggregation Master Retail Electric Supply Agreement
3. Executable pricing and Amendment signed.
4. Legal filings need to be ready 2 months before desired start date of program.
5. Residents get Opt-Out letters for program term.**

*SOPEC files all certificate documents and manages on an ongoing basis.

****SOPEC charges no early termination fees.**

SOPEC is proud to continue bringing governmental electric aggregation featuring 100% renewable energy to communities across Ohio to help them achieve their local energy & sustainability goals, while also saving money during this supply year.

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