Local Government Actions Affecting the Grid & Associated Considerations for Order 1920

PJM Transmission Expansion Advisory Committee (TEAC)
September 24, 2024

Disclaimer: The views expressed may not necessarily reflect those of all PJMCCC members

Agenda

- Presentation objectives
- Introduction to the PJM Cities and Communities Coalition (PJMCCC)
- Overview of local governments' energy-related actions and how they can impact the grid
- Presentations from two PJMCCC members:
  - City of Dayton, OH
  - Washington, DC
- Q&A

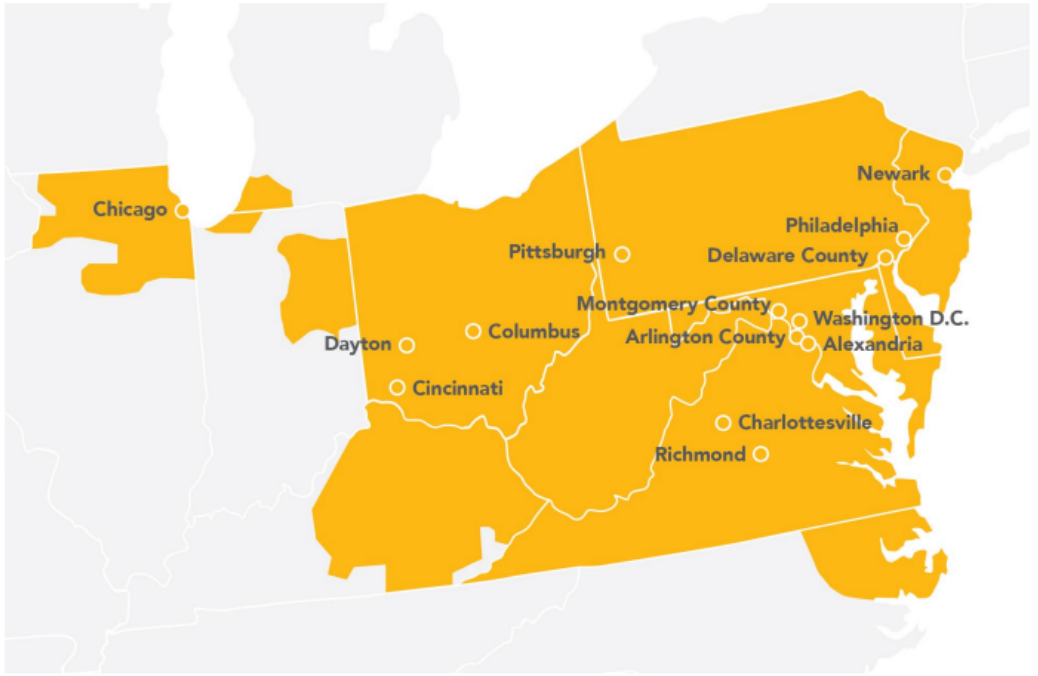
Objectives of Today's Presentation

- Add to the dialogue around three of the seven categories of factors that transmission providers must incorporate in the development of Long-Term Scenarios, specifically:
  - *(1) federal, federally-recognized Tribal, state, and local laws and regulations affecting the resource mix and demand*
  - *(2) federal, federally-recognized Tribal, state, and local laws and regulations on decarbonization and electrification*
  - *(7) utility and corporate commitments and federal, federally-recognized Tribal, state, and local policy goals that affect Long-Term Transmission Needs*
- Help PJM and other stakeholders better understand the local actions that may affect the grid and that fit into these categories.
- Provide several considerations as PJM determines how to ensure effective integration of local actions into its scenario planning.

PJM Cities & Communities Coalition (PJMCCC)

- The Coalition formed in 2018 to coordinate the efforts of cities and communities in the PJM territory that are interested in removing and preventing barriers to decarbonization solutions in PJM.
- The Coalition provides a platform for members to expand their understanding of key grid issues and to increase their capacity to engage in stakeholder processes.
- PJMCCC members recognize that RTO rules and processes affect their ability to achieve local goals.
- Transmission has been a core pillar of PJMCCC's work for several years.

PJM Territory and Members of PJM Cities and Communities Coalition (PJMCCC)*



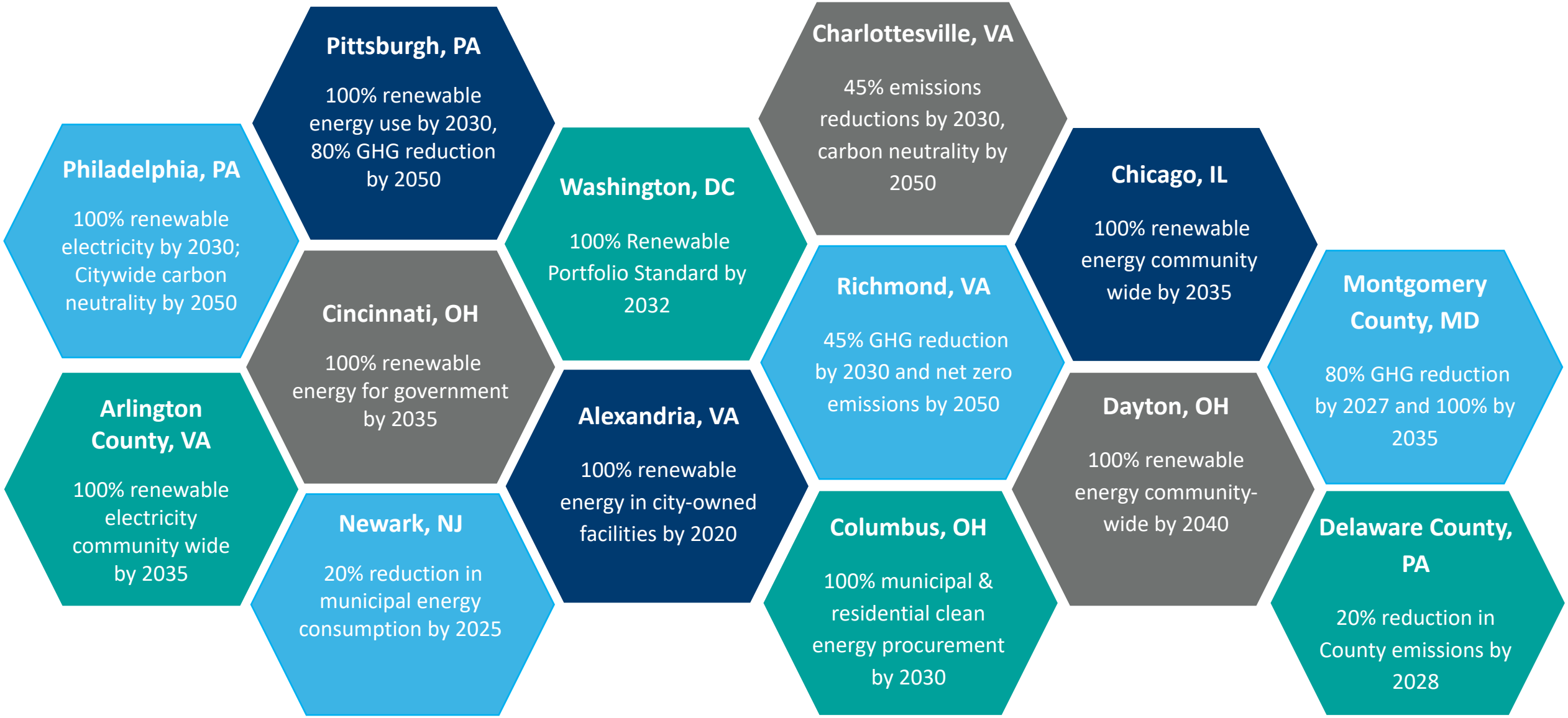
*Not pictured: the Sustainable Ohio Public Energy Council

"As local governments, the constraints of the current system are abundantly clear; the often long and costly interconnection processes across the distribution and transmission systems have created significant barriers to our efforts and have, at times, slowed or stymied projects we have tried to advance. Expanded transmission and associated infrastructure will enable our communities to deploy more clean energy resources and achieve our clean energy, climate, and carbon emissions reduction goals."

- excerpt from a PJMCCC statement on Order 1920

Source: https://files.wri.org/d8/s3fs-public/2024-05/pjmccc-transmission-rulemaking-statement.pdf?_gl=1*t4iihl*_gcl_au*OTc2NDkzMTUyLjE3MTg2MzIwNDk.

PJMCCC Members Represent Over 14% of Customers in the PJM Territory and We Have Ambitious Goals



The Unique Role of Local Governments

As both large energy users and public entities, local governments occupy a unique position when it comes to making and influencing policy, driving local action on energy-related issues, and deploying technologies that will affect the electricity grid.

Key Considerations About Local Government Actions That May Affect the Grid

- Approach clean energy and decarbonization broadly, targeting emissions reduction through renewable energy deployment, electrification, energy efficiency and other solutions.
- Set ambitious targets in plans, mayoral commitments, regulations, and through other mechanisms.
    - Plans and goals are a key repository of relevant local actions, and local governments have been effective in implementing them.
- Address both operational and communitywide energy needs.
- In addition to reacting to mandates, other public institutions, private entities, and residents often change their behavior based on both observations of local government actions and the resources that local governments disseminate.

Select Examples of Local Government Actions

Community Name	Action
Arlington County, VA	Government operations will achieve 50% Renewable Electricity by 2022, and 100% Renewable Electricity by 2025.
Arlington County, VA	The community will achieve 100% Renewable Electricity by 2035.
Arlington County, VA	Reach 160 MW of on-site solar electricity in the community
Richmond, VA	50% municipal fleet conversion to EVs for light-duty by 2030
Columbus, OH	100% municipal & residential clean energy procurement by 2030, 100% commercial clean energy procurement by 2050
Philadelphia, PA	Entire city carbon neutral by 2050
Philadelphia, PA	Reduce the City's built environment energy use 20 percent by 2030

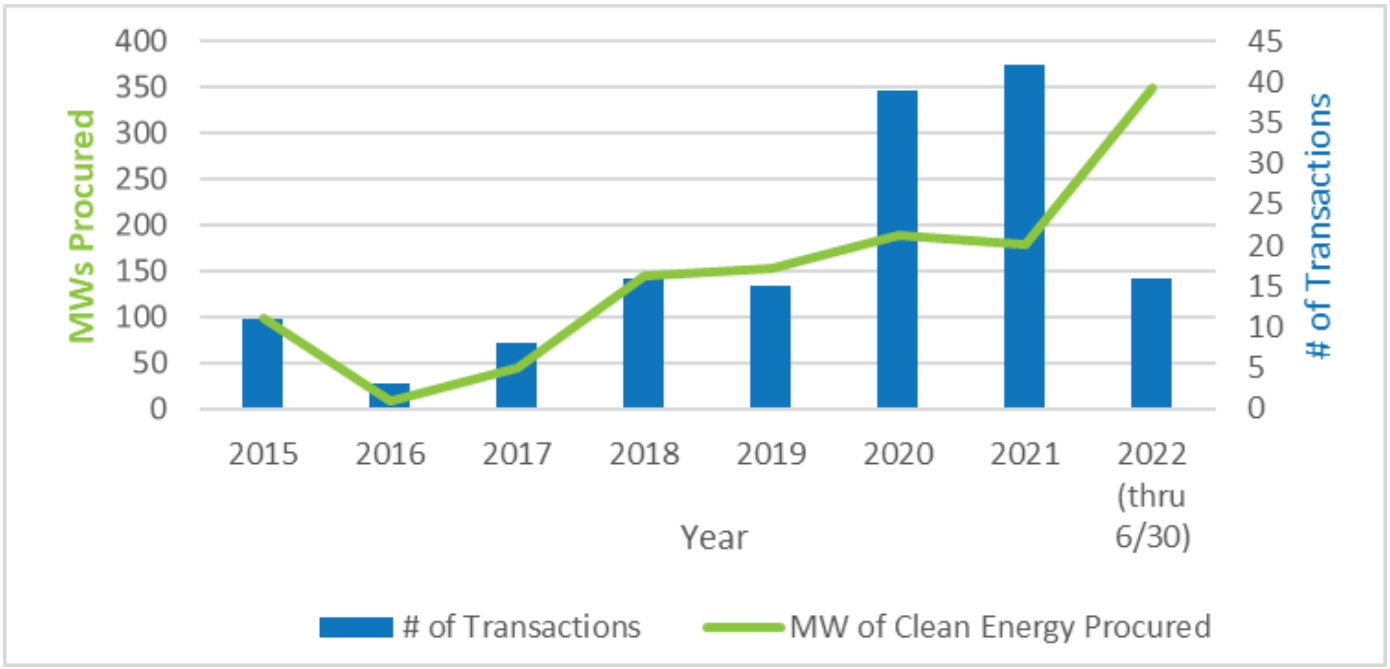
At least 57 local governments in PJM have committed to 100% clean energy, as detailed by the Sierra Club's Ready for 100 Campaign

Types of Actions Local Governments May Take

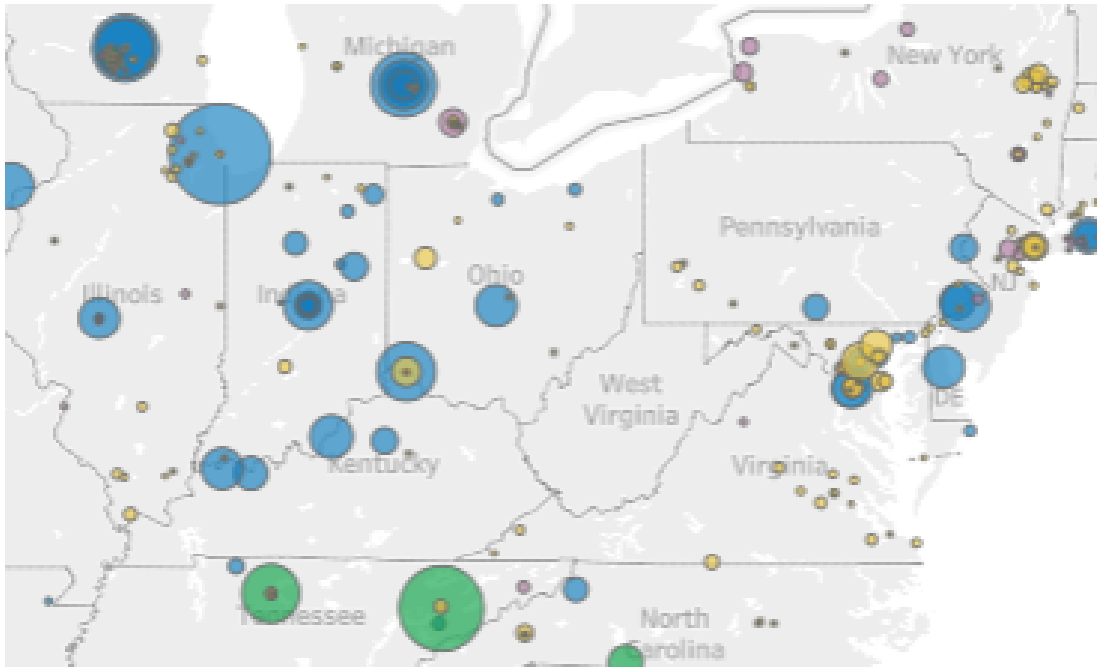
- Supply-side and resource mix:
  - Large-scale procurements to support municipal operations (e.g.,Physical or Virtual Power Purchase Agreements (PPAs))
  - Installation of on-site solar and other distributed resources, including battery energy storage
  - Participation in virtual power plants
- Demand-side and electrification considerations:
  - Building electrification and decarbonization efforts - both for municipal and privately owned buildings (e.g., Building Performance Standards)
  - Participation in demand response programs
  - Municipal fleet electrification and communitywide EVSE deployment
  - Code adoption, including stretch codes
  - Energy efficiency and weatherization programs for residents and businesses

Clean Energy Procurement by Local Governments in PJM's Footprint

Transactions by Local Governments in PJM Territory (2015-2022)



Map of Transactions (2015-2022)



Between 2015 - June 2022, transactions for clean energy executed by local governments in PJM exceeded 1,167 MW (out of over 20,264 MW nationally). This includes about 848 MW from off-site PPAs, with the remainder being on-site or community solar transactions.

Source: https://cityrenewables.org/transaction-tracker/

Considerations Related to Order 1920

- Establish both a clear timeline that's consistent year-over-year and a set of reporting requirements to ensure local governments are aware of what they need to provide and have sufficient notice to gather all necessary information.
    - If possible, reduce the burden on local governments and determine if there is a better process for collecting necessary inputs, such as by establishing partnerships with organizations that already collect relevant information (e.g., ACEEE, CDP, etc.).
- Harmonize submission deadlines into one consolidated annual deadline for public policy inputs to inform both load forecasting and transmission planning.
- Enhance communication around needs by engaging with entities that support and convene local governments, such as National League of Cities, National Association of Counties, International City/County Management Association, and others.
- Determine how local governments can best participate on these issues within PJM, such as whether it could be through the ISAC, the creation of a new group, or through another pathway.
- Do not discount Factor 7 as it relates to local policy goals, given that local governments use these plans as the basis for action (and have been delivering on them).
    - If discounting is still used, ensure that it's minimal or enable local governments to either self-report their perceived discount based on progress or challenge the discount assigned.
- Do not separate out public policies into their own scenarios; ensure their full, holistic integration into all 3 scenarios.

City of Dayton Summary of Local Laws and Regulations

DAYTON

Objective

- Explain local regulations relevant to FERC Order 1920
- Detail the impacts they are having on municipal operations and policy-making

DAYTON

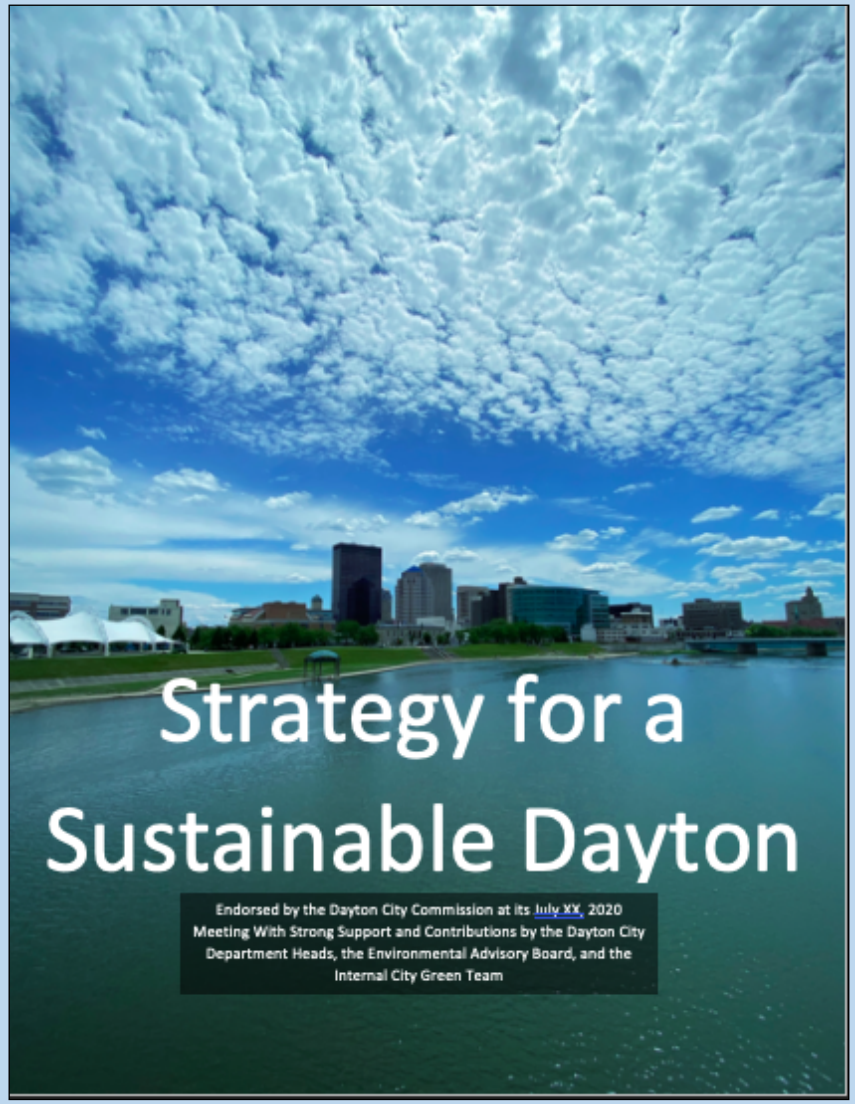
City of Dayton Local Regulations

- City Commission endorsed "Strategy for a Sustainable Dayton" in 2020
- City Commission passed a resolution in 2021 declaring a "Climate Emergency"
- **These actions by the city's elected officials prompted concrete and ongoing efforts at the municipal level relevant to Order 1920 Factors (1) and (2)**
  - Resource mix
  - Demand
  - Decarbonization
  - Electrification

DAYTON

Strategy for a Sustainable Dayton

- Comprehensive sustainability plan impacting municipal operations and Dayton community
- Directed the city to procure renewable energy and make it easier to install solar
- Addressed concerns around climate adaptation, water use, and other sustainability-related subjects

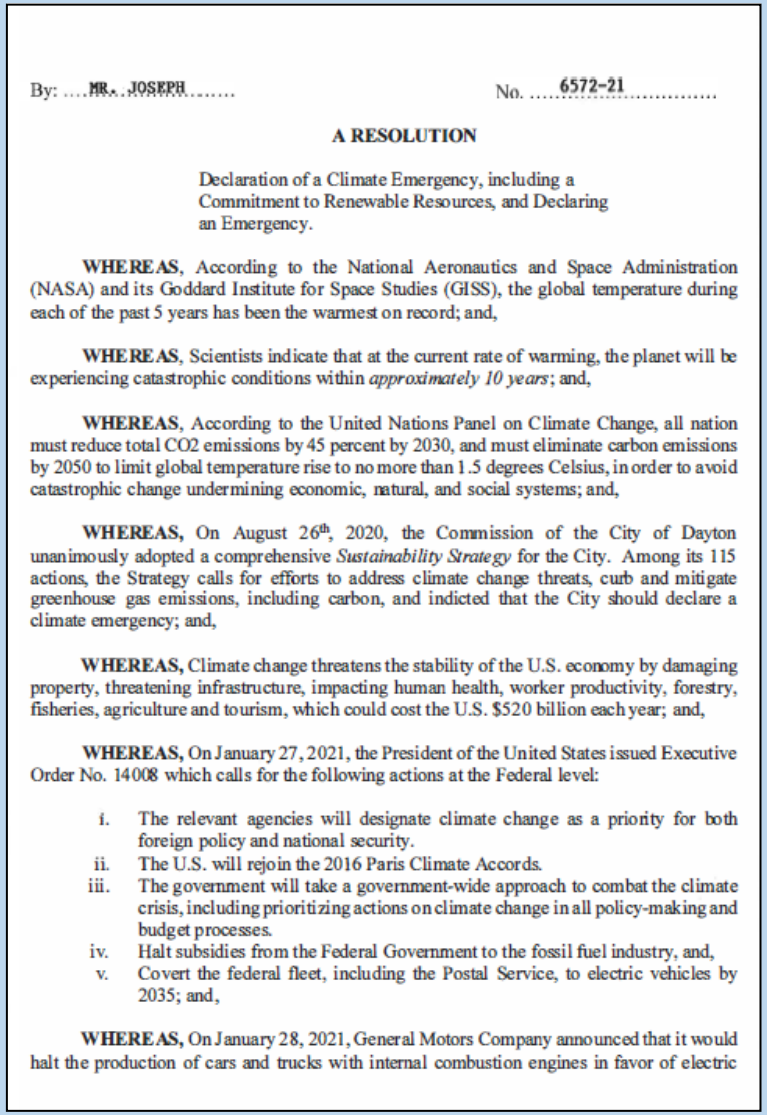


DAYTON

Climate Emergency Resolution No. 6572-21

- Achieve 100% clean, renewable electric energy by 2050
  - By 2035: 100% renewable energy for municipal facilities
  - By 2040: 100% renewable energy for community
  - By 2050: 100% renewable energy for all sectors including transportation
- 100% electric municipal vehicle fleet (or other alternative fuel)
- Expressed preference for direct investment in renewable resources

- Impacts from these City Commission decisions are detailed in the following slides



By: MR. JOSEPH No. 6572-21

A RESOLUTION

Declaration of a Climate Emergency, including a Commitment to Renewable Resources, and Declaring an Emergency.

WHEREAS, According to the National Aeronautics and Space Administration (NASA) and its Goddard Institute for Space Studies (GISS), the global temperature during each of the past 5 years has been the warmest on record; and,

WHEREAS, Scientists indicate that at the current rate of warming, the planet will be experiencing catastrophic conditions within *approximately 10 years*; and,

WHEREAS, According to the United Nations Panel on Climate Change, all nation must reduce total CO2 emissions by 45 percent by 2030, and must eliminate carbon emissions by 2050 to limit global temperature rise to no more than 1.5 degrees Celsius, in order to avoid catastrophic change undermining economic, natural, and social systems; and,

WHEREAS, On August 26th, 2020, the Commission of the City of Dayton unanimously adopted a comprehensive *Sustainability Strategy* for the City. Among its 115 actions, the Strategy calls for efforts to address climate change threats, curb and mitigate greenhouse gas emissions, including carbon, and indicted that the City should declare a climate emergency; and,

WHEREAS, Climate change threatens the stability of the U.S. economy by damaging property, threatening infrastructure, impacting human health, worker productivity, forestry, fisheries, agriculture and tourism, which could cost the U.S. $520 billion each year; and,

WHEREAS, On January 27, 2021, the President of the United States issued Executive Order No. 14008 which calls for the following actions at the Federal level:

i. The relevant agencies will designate climate change as a priority for both foreign policy and national security.
ii. The U.S. will rejoin the 2016 Paris Climate Accords.
iii. The government will take a government-wide approach to combat the climate crisis, including prioritizing actions on climate change in all policy-making and budget processes.
iv. Halt subsidies from the Federal Government to the fossil fuel industry, and,
v. Covert the federal fleet, including the Postal Service, to electric vehicles by 2035; and,

WHEREAS, On January 28, 2021, General Motors Company announced that it would halt the production of cars and trucks with internal combustion engines in favor of electric

DAYTON

Resource mix

- Adding generation to municipal facilities:
  - Finalizing negotiations to add 5 MW solar array to a water treatment facility
  - Feasibility study for adding solar to the airport
- City is supporting local large-scale solar projects and making it easier to install solar within city limits
- Focused attention on redeveloping urban brownfields for solar and identifying potential offtakers
- Dayton is a recipient on two winning Solar For All grants to expand solar energy deployment in low income households
- City of Dayton electric aggregation program provides 100% renewable electric supply at competitive prices

DAYTON

Demand

- Municipal operations adopted an aggressive PLC management program
  - We have a desire to participate in DER programs like demand response, strategic reserve markets, etc.
- Secured funding for expanding EV charging infrastructure in low-income communities (CFI Grant)
- Growing suite of EV infrastructure – we would like for this to be able to provide other services to the grid

DAYTON

Decarbonization

- Engaged in regional planning exercises through the CPRG program
- Anticipating a range of recommendations around building, industrial, and transportation related decarbonization metrics
- Exploring options for incentivizing energy efficiency investments in commercial buildings within city limits

DAYTON

Electrification

- Rapidly expanding municipal EV fleet through new vehicle purchasing policy
- Securing funding for efficiency and electrification in low-income households
- Considering electrification in new construction and renovation of city facilities

DAYTON

Summary

- **A variety of policy vehicles enacted by local elected officials drive concrete action on energy issues**
  - Strategies, resolutions, plans, etc.
- City of Dayton's efforts are both **internal facing** (affecting municipal operations) and **external facing** (impacting residents and businesses in city limits)
- Decisions/efforts City of Dayton is making **will influence both supply and demand**

Relevant District of Columbia Programs Summary for PJM FERC Order 1920 Consideration

Presentation for PJM by Thomas Bartholomew - Associate Director

DEPARTMENT OF ENERGY & ENVIRONMENT

GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

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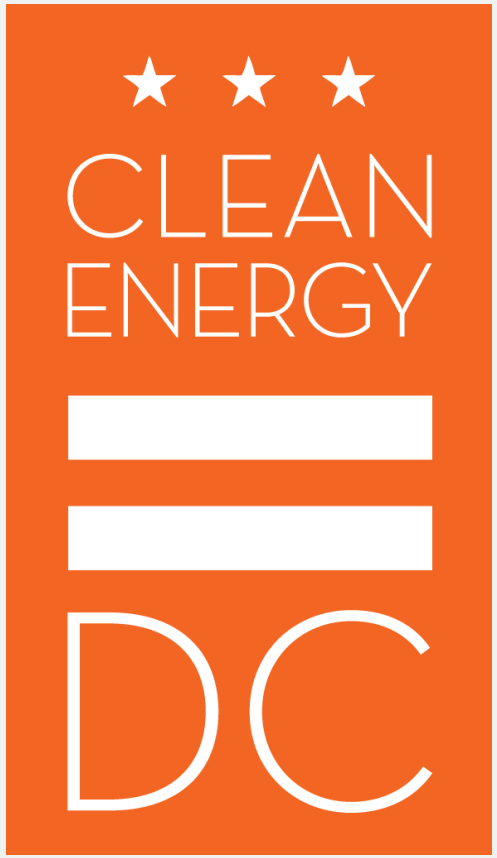
Overview of District Energy Policy

Policy Summary

- 100% Renewable Energy Portfolio Standard by 2032 (Law)
- By 2032 Reduce Energy Use by 50% per capita from 2012 baseline (Plan)
- By 2032 Reduce Peak Electricity Demand by 20% (Plan)
- Phase out installation of gas equipment by 2035 (Regulation)
- By 2035 100% of New Light Duty Vehicle Sales Are Zero Emission (Regulation)
- 15% Local Solar Electricity Carveout by 2041 (Law)
- Carbon Neutral by 2045 (Law)
- By 2045 Convert Public Buses and Commercial Fleets to Electric Vehicles (Regulation)

Accomplishments

- 214.5 MW of Installed Solar Capacity
- Implemented Building Energy Performance Standards for all buildings larger than 25,000 sq ft. Next year threshold lowers to all buildings larger than 10,000 sq. ft.



Future Considerations

- The District of Columbia will be interconnecting at least 3 new microgrid projects in the next 2 years, bringing the total to 5 installed in the District. These projects, which include a university campus and a new hospital facility, will be able to be off-grid a significant portion of the time. How PJM plans to account for microgrid installations over the next decade is an important consideration for the District.
- PJM's current infrastructure management budget is overly focused on maintaining coal plant viability and not enough on interconnecting renewable resources necessary to support the District of Columbia's RPS goals.
- At 6% solar and wind fuel mix share in the first 7 months of 2024, PJM is well below the 43% share Germany achieved over a similar time frame with a similar climate pattern to the PJM territory.
- Solar and wind are already some of the cheapest resources in the PJM capacity market, but PJM has pushed back inclusion of aggregated resources to 2028, even though they likely offer some of the cheapest power generation and service potential. These choices will push up costs for District rate-payers unnecessarily and are cutting against both the incentives for renewable resources and aggregated load management that are increasingly being implemented in the District.

Q&A

THANK YOU

- info@pjmccc.org
- Matthew.Worsham@daytonohio.gov
- thomas.bartholomew@dc.gov

- pjmccc.org
- daytonohio.gov
- dc.gov