



MID-OHIO REGIONAL
MORPC
PLANNING COMMISSION

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Energy and Air Quality Working Group Meeting
Mid-Ohio Regional Planning Commission
Scioto Conference Room
Tuesday, January 28th, 2020
2:00pm

AGENDA

- 1. Welcome and Introductions.** *Dale Arnold, Chair (2:00 pm)*
- 2. Introductory Discussion.** *Dale Arnold, Chair (2:05 pm)*
- 3. Featured: Solar and ACCC in Cincinnati.** *Michael Forrester, City of Cincinnati (2:15 pm)*
- 4. Ohio EPA Update,** *Erica Fetty-Davis, Ohio EPA (2:50pm)*
- 5. Policy Update,** *Joe Garrity, MORPC (2:55pm)*
- 6. MORPC Energy and Air Quality Update** *MORPC Staff (3:05pm)*
- 7. AQ Sensor Network and Solar Toolkit subcommittees,** *Matt Stephens-Rich, Vice Chair (3:15pm)*
- 8. Member Updates,** *All, (3:20pm)*
- 9. Adjourn (3:30pm)**

Please Notify Brooke White 614-233-4168 or bwhite@morpc.org to confirm your attendance.

The next Energy and Air Quality Meeting is
March 24th, 2020 2:00pm

PARKING AND TRANSIT: When parking in MORPC's parking lot, please be sure to park in a MORPC visitor space or in a space marked with a yellow "M". Handicapped parking is available at the side of MORPC's building. Three electric vehicle charging stations are available for MORPC guests.

MORPC is accessible by CBUS. The closest bus stop to MORPC is S. Front Street & W. Blenkner St. Buses that accommodate this stop are the Number 61 - Grove City, the Number 5 - West 5th Ave. /Refugee, and the Number 8 - Karl/S. High/Parsons.

MEETING ROOM ACCESS: When you arrive in MORPC's lobby, a video screen will display the day's meetings. Each meeting will list a phone extension. Use the phone in the lobby to call the extension and someone will come escort you to the meeting.

William Murdock, AICP
Executive Director

Rory McGuinness
Chair

Karen J. Angelou
Vice Chair

Erik J. Janas
Secretary

Introductory Discussion

Cincinnati and Columbus are both working towards their own sustainability and climate goals. Because they are public entities, they have access to each others best practices and resources as a matter of public record and can leverage these in their own work.

In your work, what has been your most fruitful partnership and opportunity to leverage others' resources?

What new opportunities for partnership do you see for your organization that could help fill resource gaps within your organization?



Cincinnati's ACCC Update and Deeper dive on Renewable Energy Generation

Where We've Been

- Green Cincinnati Plan
- 26 solar, 1 Hydro, 1 small wind installation
- 1st net-zero police station
- City facilities are 100% green electricity – REC Backed
- 1st large City to offer 100% Green Energy CCA
- Solarize Cincinnati
- Energy efficiency at City facilities

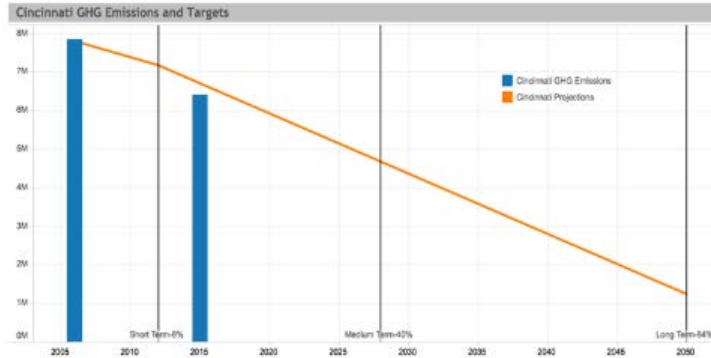


Resident and Leadership Support Energy Initiatives

- Mayors for 100% Clean Energy
- 2018 Green Cincinnati Plan
- Ready for 100



Cincinnati Carbon Emissions

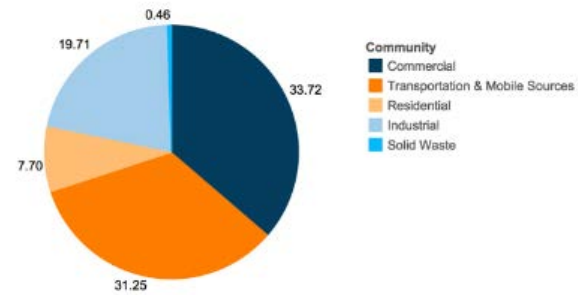


-18.4% **-36.3%**

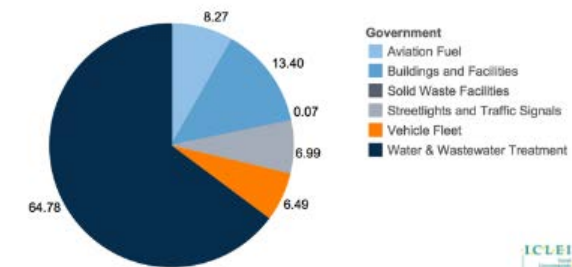
Reduction in Community Carbon Emissions since 2006

Reduction in Govt. Carbon Emissions since 2006

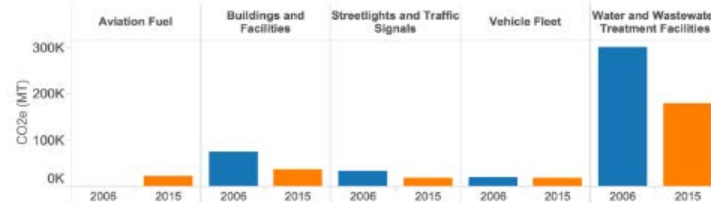
2015 Community Emissions



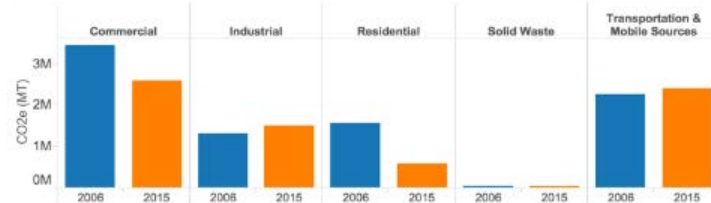
2015 Government Emissions



2015 Government Emissions

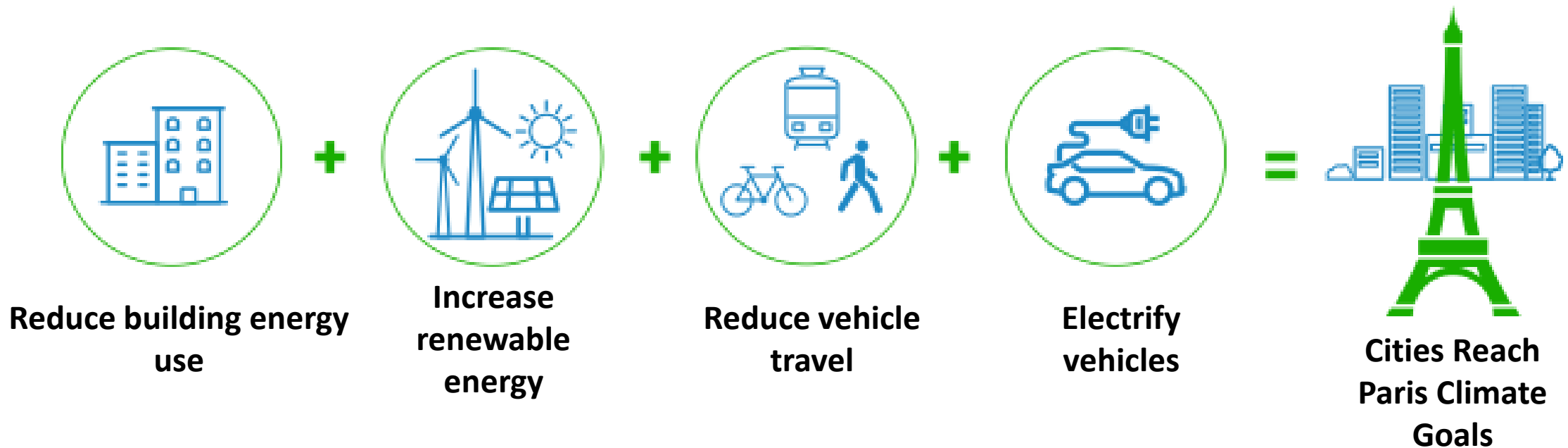


2015 Community Emissions



About the American Cities Climate Challenge

The **American Cities Climate Challenge** is a Bloomberg Philanthropies initiative that aims to accelerate and deepen U.S. cities' efforts to create the **greatest climate impact through 2020** and showcase the benefits – **good jobs, cleaner air, and cost savings** – that climate solutions brings.



8 Areas of Focus to Reduce Carbon Emissions

- Action 1: Meet municipal electricity demand with renewable energy
- Action 2: Secure Local Renewable Energy for Community Aggregation
- Action 3: 2030 Sustainability District
- Action 4: Benchmarking, auditing, and retrofitting commercial buildings
- Action 5: Low-income multi-family EE programs
- Action 6: EV Education and incentives
- Action 7: Electrify city fleets and buses
- Action 8: Low-carbon mobility incentives

DEEPER DIVE: Going Big on Solar in Cincinnati



Cincinnati Solar Influencer:
Mayor John Cranley

City of Cincinnati



"It's good for the
environment and
it's good for your
pocketbook...
this is a win-win."

MAYOR JOHN
CRANLEY



solarizecincy.org

SOLARIZE
CINCY

Terms:

Megawatts (MW) represent the *rate electricity is consumed or generated at a point in time*. 1 MW=1000 Kilowatts (KW)

Example: The City of Cincinnati's total electricity demand at noon in the summer is around 35 MW.

Megawatt-hours (MWh) represent an *amount of energy over time*. 1 MWH = 1000 kilowatt hours(KWH) (what you see on the utility bill)

Example: The City of Cincinnati's annual energy consumption is 294,000 MWh. A 35 MW solar field will generate around 71,000 MWh per year.



20 MW solar field in Bowling Green, Ohio produces approximately 40,000 MWH of electricity on 165 acres

Project Goal:

- Utilize the City of Cincinnati's annual electricity purchase to install renewable energy at no additional cost to the taxpayer.
- Secure a long-term budget hedge to protect the City from energy market price fluctuations.
- Provide local solar energy to residents

Outcome -. Construction of a 35 MW of solar to serve City of Cincinnati's electricity load and another 65 MW to serve the Cincinnati Electric Aggregation load that:

- Reduces the City of Cincinnati's carbon footprint
- Serves as a budget hedge for City Operations
- Improves Cincinnati's air quality
- Creates jobs/economic impact for Greater Cincinnati

Project Approach:

The City allowed the market to determine what the correct approach is.

Assets include:

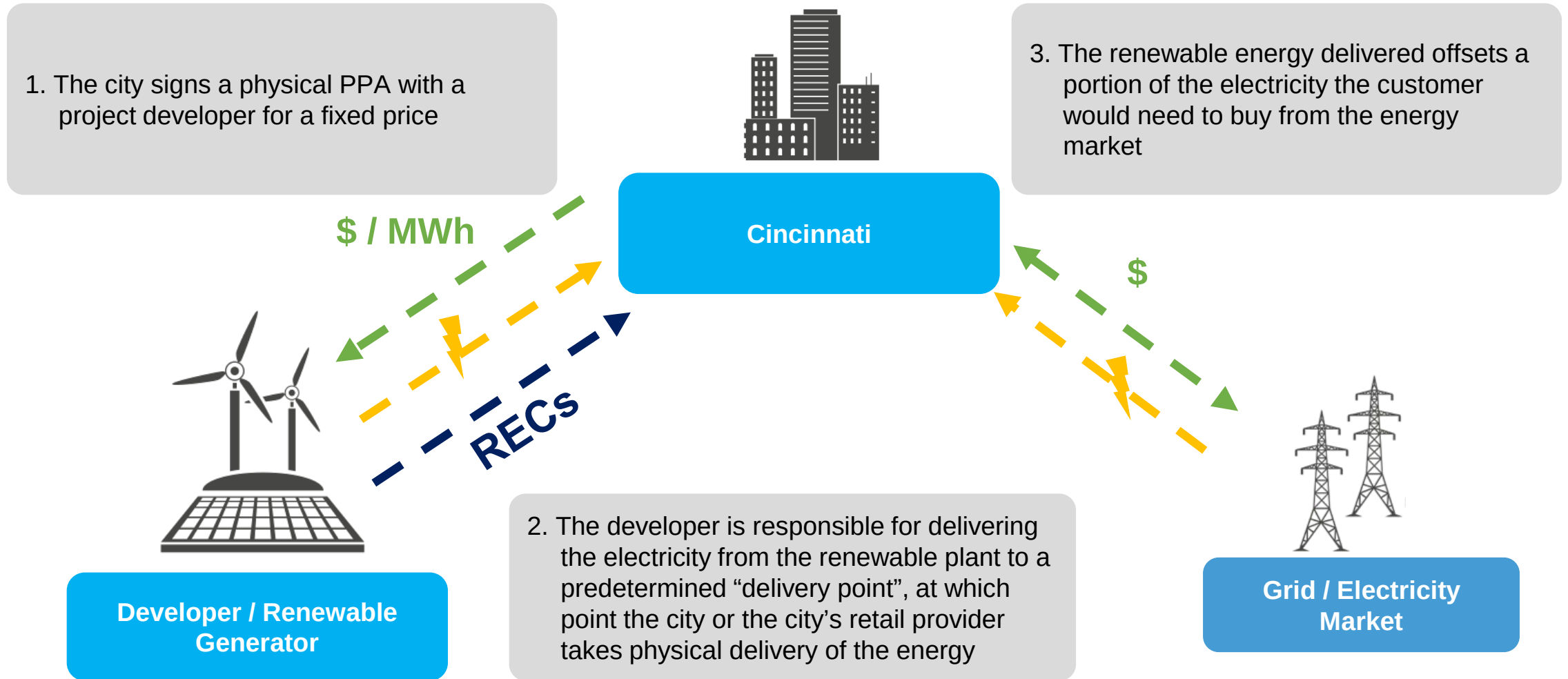
- City Facilities
- City Land
- City Energy Purchase

The City will complete the following:

- Construction of multiple solar arrays both onsite and offsite to serve City load
- A 3rd party ownership model –Power Purchase Agreement that utilizes available incentives with a 20-year term
- Offeror will be responsible for all operation and maintenance
- The City will be able to claim additionality and the environmental benefits from the system

Power Purchase Agreement

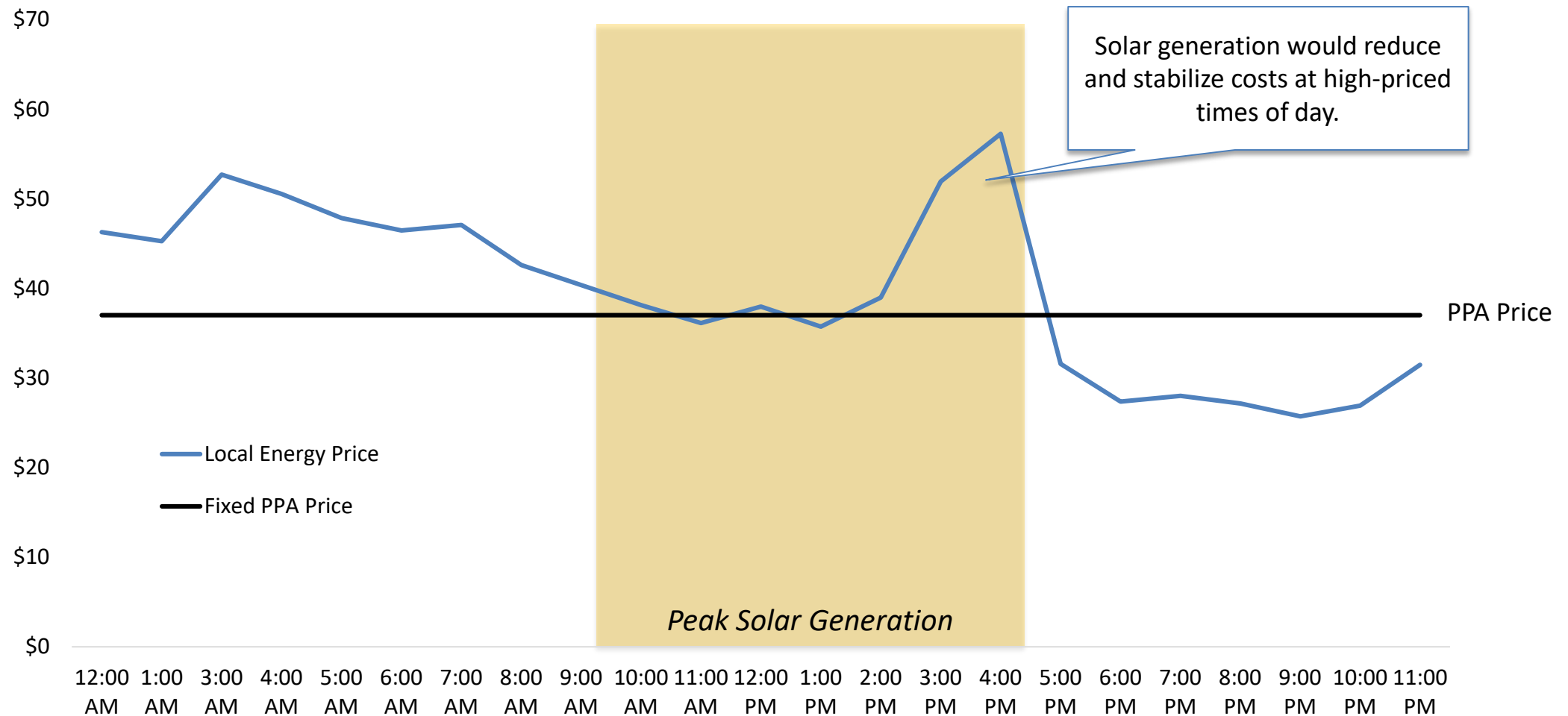
A long-term contract to purchase the generated electricity at a fixed price with no upfront costs to the City

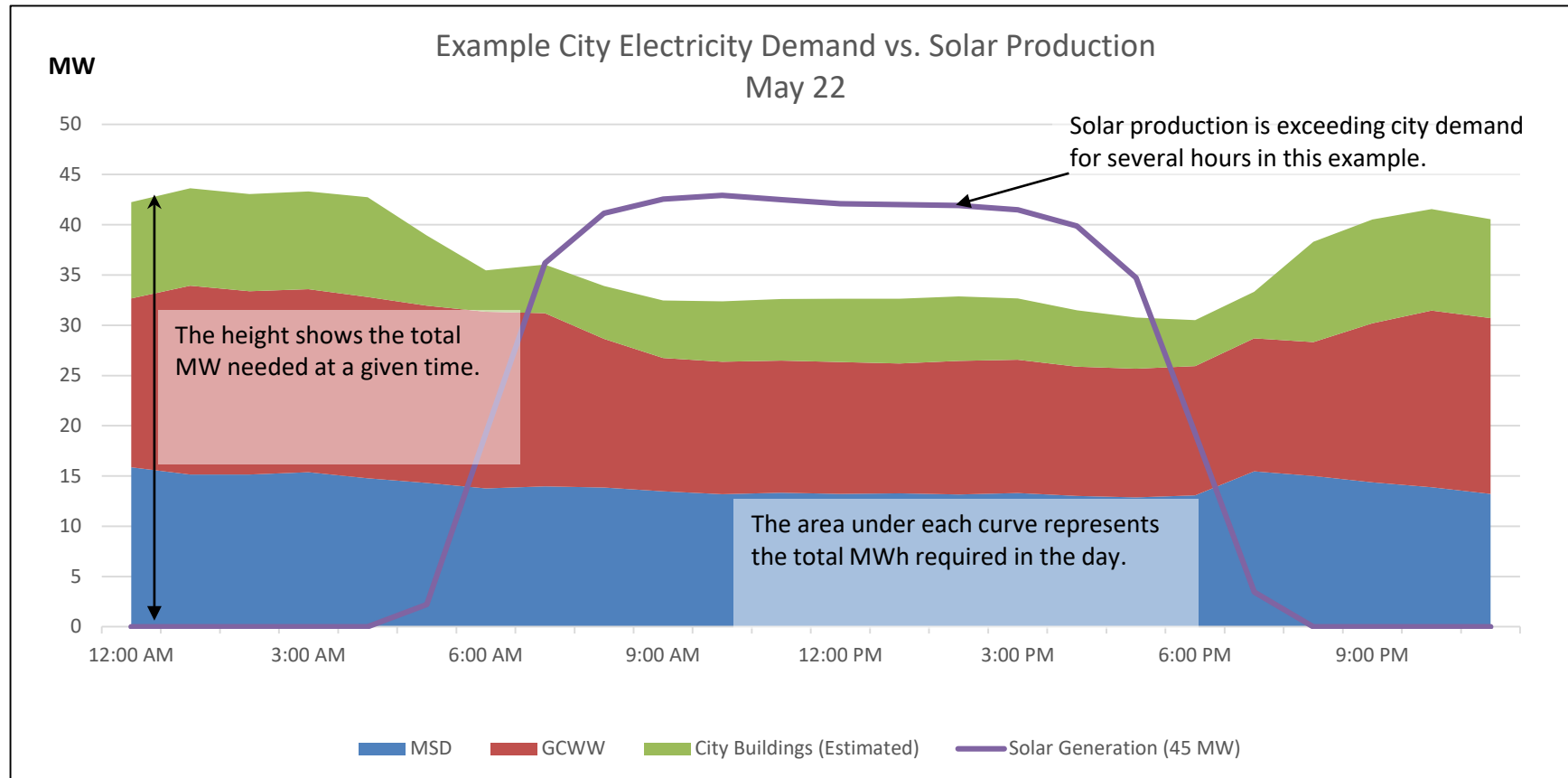


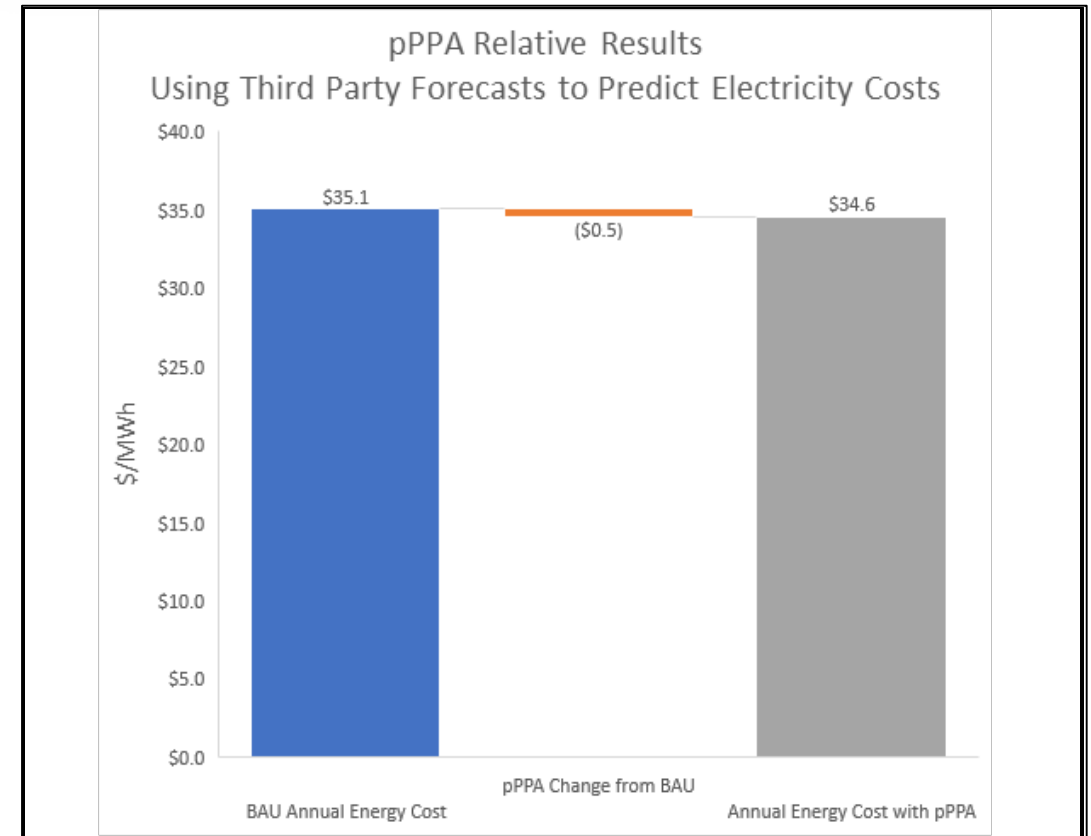
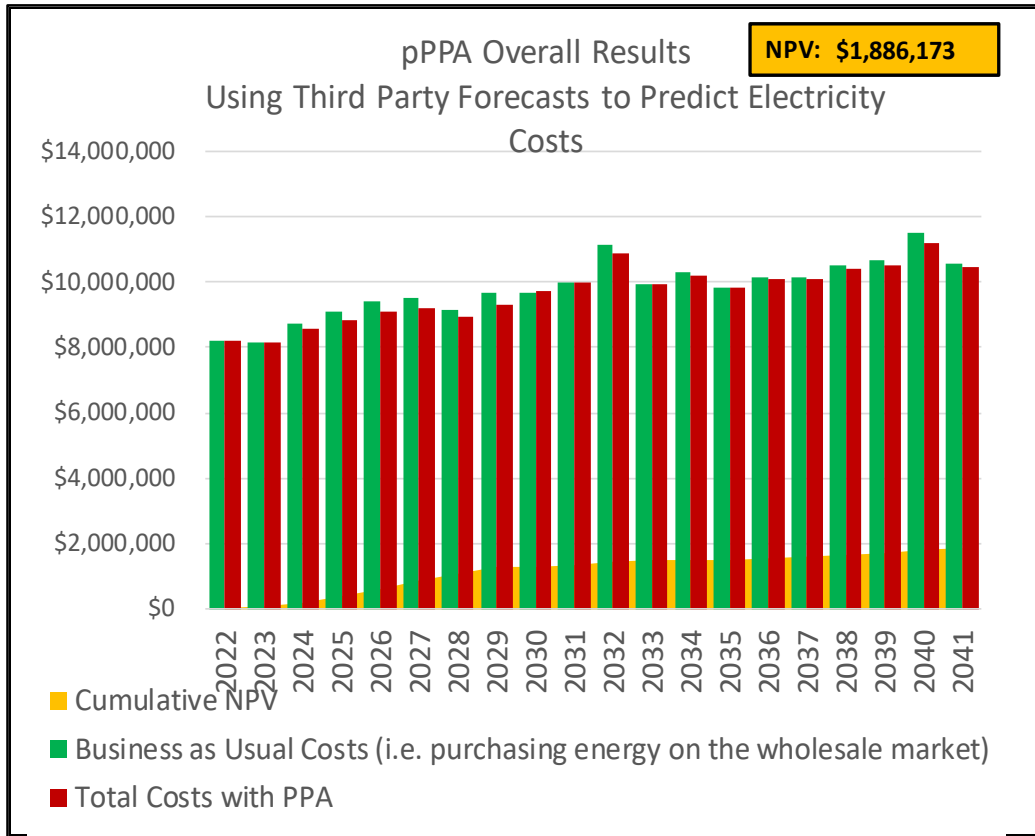
Using a PPA as a budget hedge – offset higher priced energy with low cost solar

Floating Energy Market Prices vs. Fixed PPA Prices

Local Energy Price shows DEOK Zone prices on April 1st, 2018







*Assumptions: 35 MW solar array, \$3 SREC Swap, 40% Capacity Payment,

Current Timeline:

- October 2019 - contract signature
- May 2020 – Rooftop installations completed
- December 2020– 1st 20 MW of solar delivered
- April 2021- 2nd 15 MW of solar delivered
- December 2021 – Additional 100 MW of solar delivered for residents.





Questions?

Michael Forrester

Michael.Forrester@cincinnati-oh.gov 513-352-6911



MORPC BENCHMARKING PROGRAM

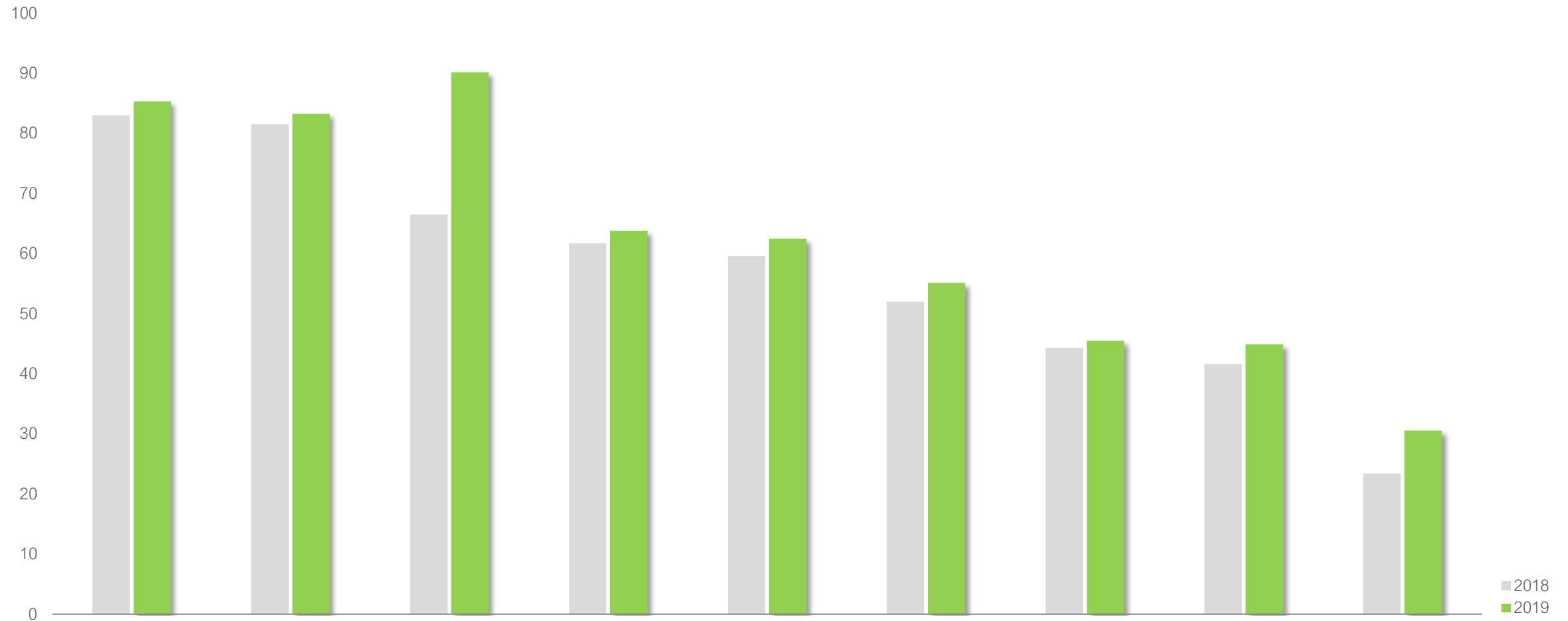
PY 2019 Review and Updates



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ENERGY STAR® Scores 2018 and 2019

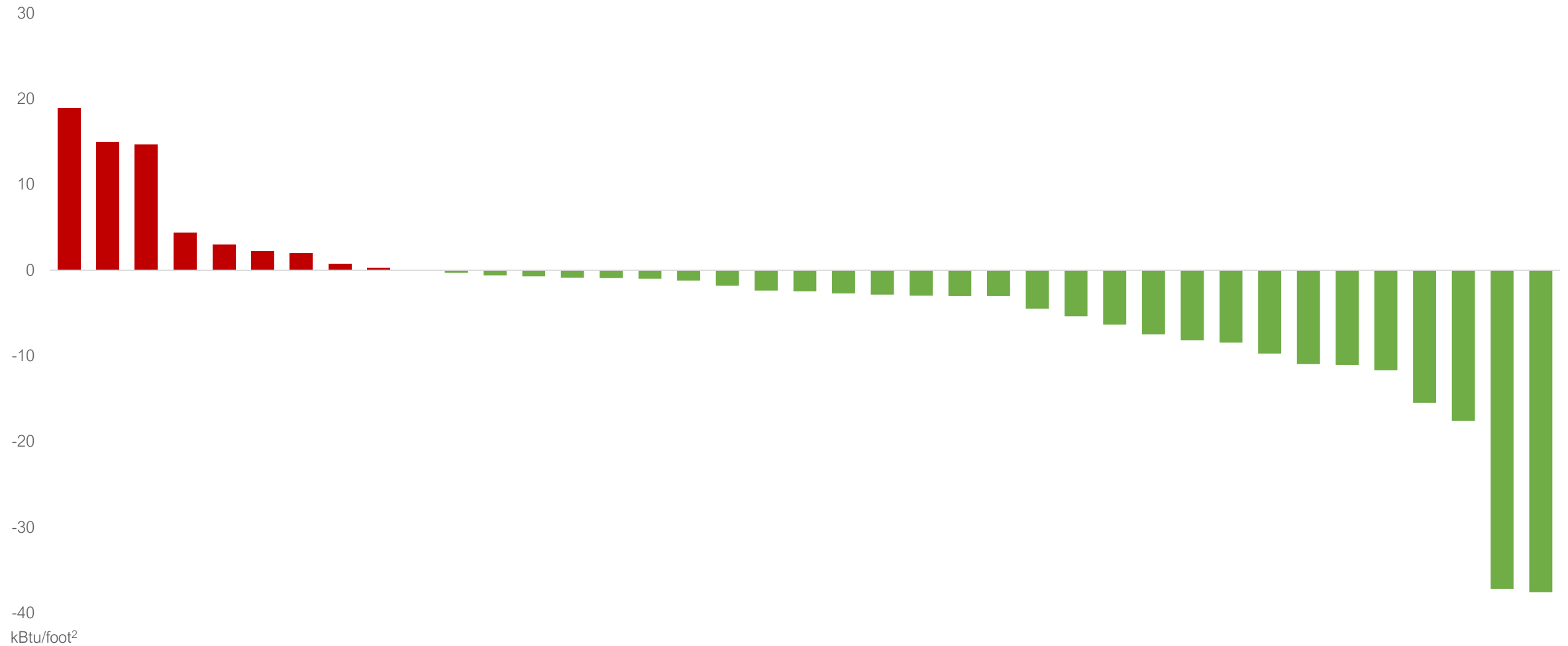
MORPC Benchmarking Program Participants
Accounts Eligible for Score in 2018 and 2019



Energy Use Intensity 2018-2019

MORPC Benchmarking Program Participants

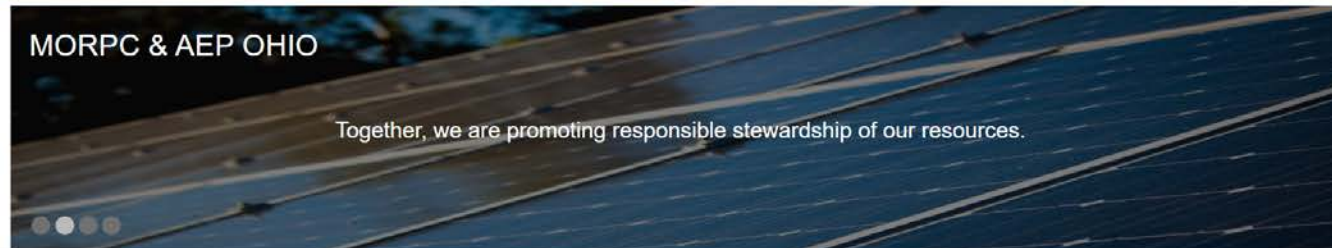
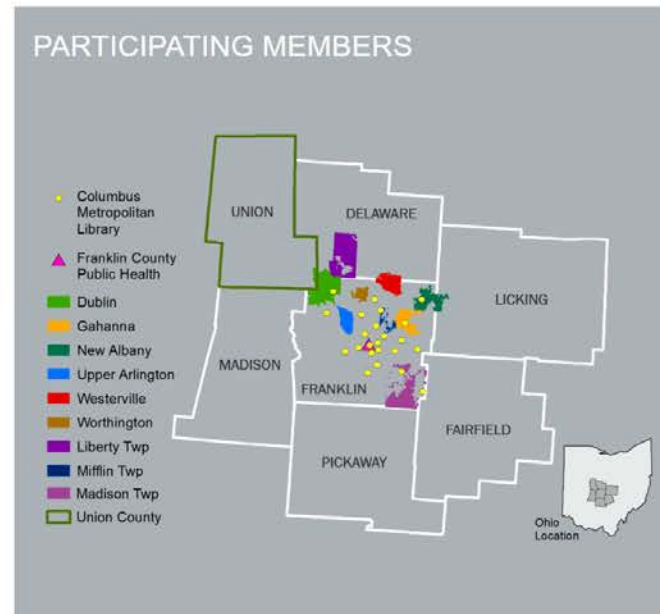
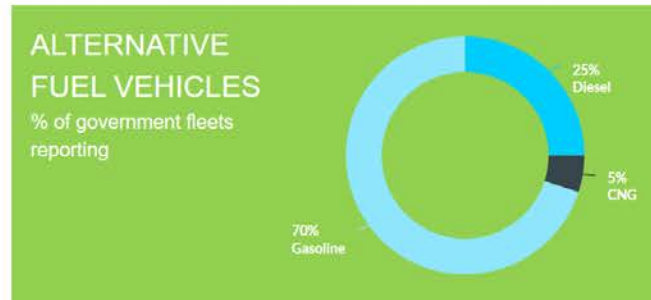
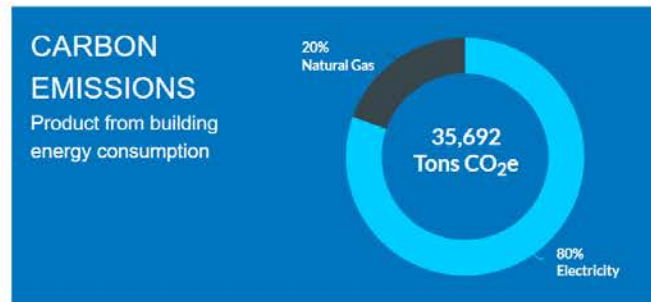
Accounts with annual monthly average EUI 0-400 kBtu/foot² in 2018



Regional Energy Dashboard is Live

MORPC BENCHMARKING PROGRAM

Empowering local governments to be their communities' trusted energy advocate



- ### ADDITIONAL RESOURCES
- Local Government Energy Partnership
 - AEP Ohio Energy Efficiency Programs
 - Columbia Gas of Ohio Energy Efficiency Programs
 - Home Weatherization Assistance Program
 - Property Assessed Clean Energy (PACE) Financing
 - Sustainable 2050
 - Air Quality

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