



Joint Office of
**Energy and
Transportation**

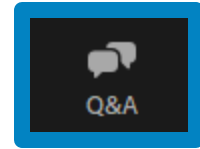
Engaging Utilities: Public Power Utilities Deploying EV Charging

9/17/2024

driveelectric.gov

Zoom Tips and Disclaimer

- Controls are located at the bottom of your screen. If they aren't appearing, move your cursor to the bottom edge.
- Submit questions using the **“Q&A” window**



Notice: This webinar is being recorded and may be posted on the Joint Office website or used internally.

- If you speak during the webinar or use video, you are presumed to consent to recording and use of your voice or image.

Agenda

Introduction from the Joint Office

Welcome Remarks

Presentations

- Patricia Taylor, American Public Power Association
- Brian Chandler, City of Troy, Alabama
- Solomon Brackett, City of Troy, Alabama
- Chris Monacelli, City of Westerville, Ohio
- Joel Zook, City of Ames, IA

Panel Discussion and Audience Q&A





JOINT OFFICE OF
**Energy and
Transportation**



Mission

To accelerate an electrified transportation system that is affordable, convenient, equitable, reliable, and safe.

Vision

A future where everyone can ride and drive electric.

The Joint Office is supporting over \$19 billion in BIL funding for clean transportation



National Electric Vehicle Infrastructure (NEVI) Formula Program (U.S. DOT)

\$5 billion for states to build a national EV charging network along corridors, including **\$148 million** awarded to repair and replace non-operational chargers.



Charging & Fueling Infrastructure Discretionary Grant Program (U.S. DOT)

\$2.5 billion for communities to build EV charging, as well as hydrogen, natural gas, and propane fueling infrastructure



Low-No Emissions Grants Program for Transit (U.S. DOT)

\$5.6 billion for transit agencies to deploy low- and no-emission transit buses



Clean School Bus Program (U.S. EPA)

\$5 billion in support of electric school bus deployments



Clean Heavy Duty Vehicles Program (U.S. EPA)

\$1 billion to replace existing Class 6 and Class 7 non-zero-emission heavy-duty vehicles



Ride & Drive Funding Opportunity (Joint Office)

\$46.5 million to enhance charging resiliency and performance and enhance equitable access



Communities Taking Charge Funding Opportunity (Joint Office)

\$54 million to expand community e-mobility access

U.S. Department of Energy is investing over \$20 billion to modernize the grid



Microgrids:

Installing onsite generation, microgrid controllers and battery systems



Vegetation and Fuel-Load Management:

Rebuild distribution lines and remove trees as part of a vegetation management strategy

Grid Hardening:

Installation of automated and remote-controlled devices that provide greater visibility into, and control of, the electric grid during outage conditions; and physical upgrades to distribution system equipment



Interregional Connection:

Address the need for increased transfer capacity and advanced system regulation management technologies





Innovative Queue Management Solutions (iQMS)

**APPLICATIONS
DUE 10/16/24**



SCAN ME

OBJECTIVE

Provide funding to distribution utilities experiencing large **interconnection queues** or **electric vehicle interconnection and energization queues** or **both** to **test and pilot** new and innovative solutions

Program Sponsors

- Solar Energy Technology Office
- Wind Energy Technology Office
- Joint Office of Energy and Transportation

Total Funding

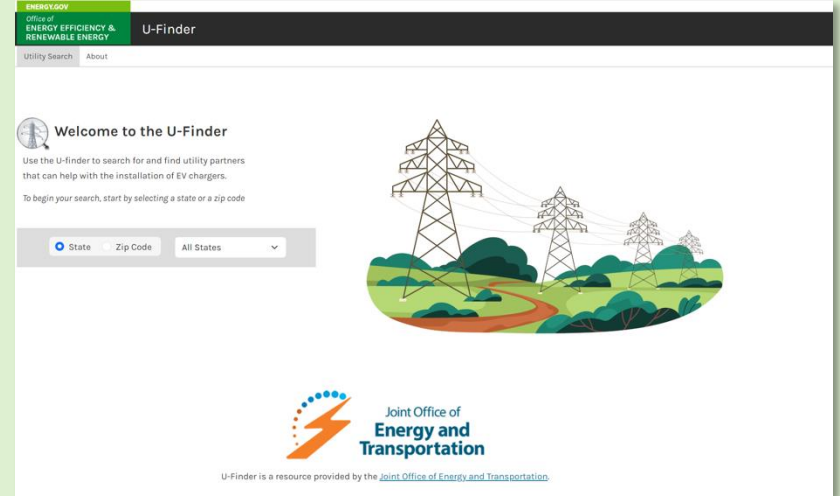
\$11,200,000

The Joint Office can help you work with your utility by:

Finding the right contact with our [U-Finder Tool](#)

Preparing for the conversation with the utility to consider:

- Total charger needs
- Facility capacity
- Grid capacity
- Futureproofing



- Request assistance via online form
- Initial response within 48 hours
- General questions and feedback welcome!

An official website of the United States government: [Here's how you know](#)

energy.gov | transportation.gov

Joint Office of Energy and Transportation

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Contact Us

Use this contact form to submit a media inquiry, ask a general question about Joint Office of Energy and Transportation resources and activities, or request technical assistance for states, tribal nations, or clean school buses or transit buses.

Required fields are marked with an asterisk (*).

Inquiry type *

Name *

Email *

Subject *

Message *

Send

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energy.gov | transportation.gov

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Polling Questions

Presenters



Patricia Taylor,
American Public
Power Association



Chris Monacelli,
City of Westerville,
Ohio



Joel Zook,
City of Ames, IA



Brian Chandler,
City of Troy, Alabama



Solomon Brackett
City of Troy, Alabama



Patricia Taylor

American Public Power Association

AMERICAN
PUBLIC
POWER
ASSOCIATION

Powering Strong Communities

Engaging Utilities: Public Power Utilities Deploying EV Charging

A Public Power 101

- Patricia Taylor, American Public Power Association

Three Types of Electric Utilities



Public Power



Rural Cooperatives

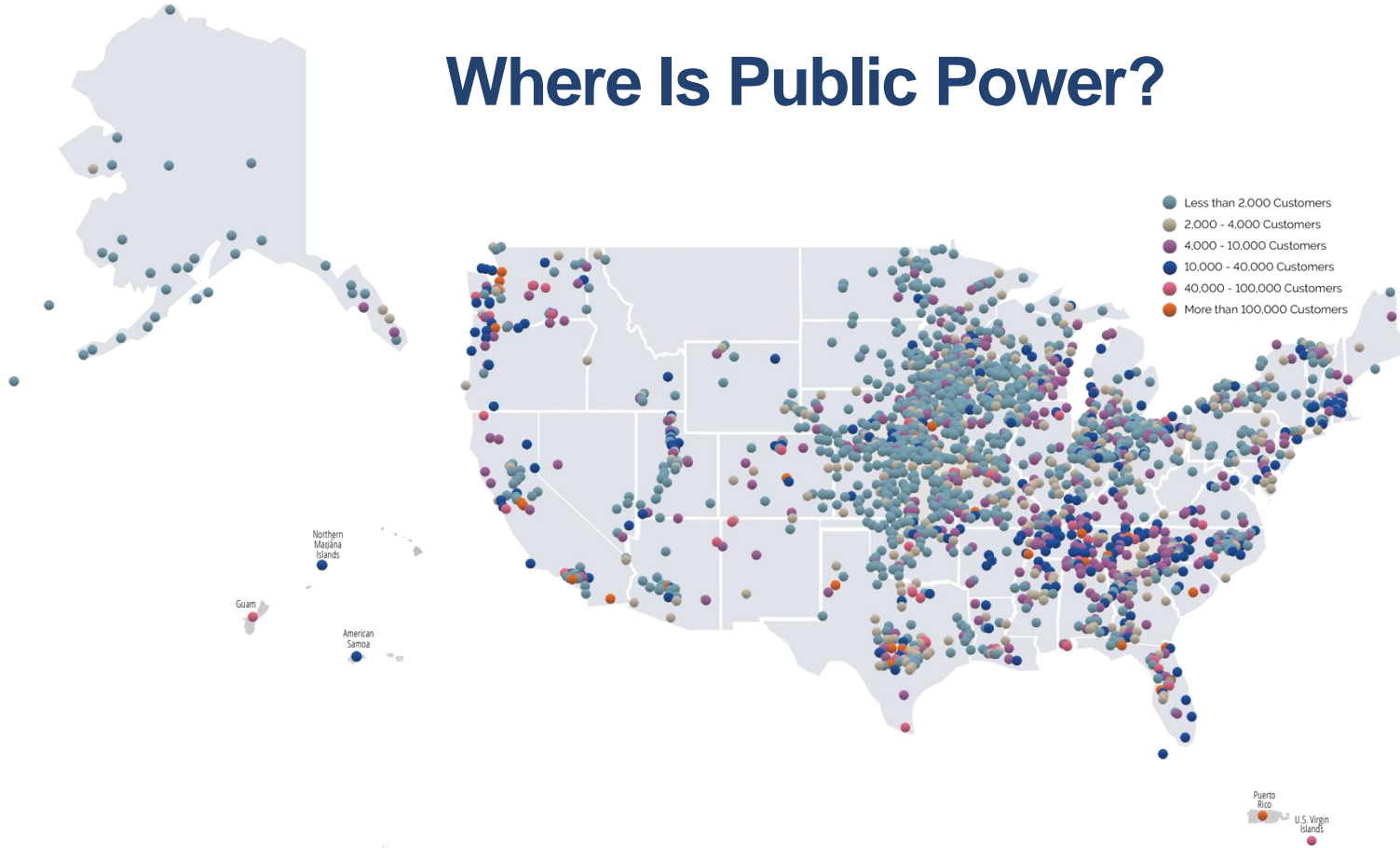


Investor-Owned Utilities

| | Public Power | Rural Cooperatives | Investor-Owned Utilities |
|----------------------------|--------------------------------|---------------------------------|---------------------------------|
| MODEL | Publicly owned, not for profit | Privately owned, not for profit | Privately owned, for profit |
| ACCOUNTABLE TO | Community | Members | Shareholders |
| SHARE OF UTILITIES | 59% | 26% | 5% |
| SHARE OF CUSTOMERS | 15% | 13% | 66% |
| SHARE OF GENERATION | 9% | 4% | 34% |

Numbers do not add up to 100% because this does not show federal power agencies, power marketers, behind the meter, community choice aggregators, and non-utility generators.

Where Is Public Power?



Affordable and Reliable



Reliable, low-cost
electricity to
more than
54 million
Americans

Average Monthly Residential Electric Bill



Public Power

\$123.42



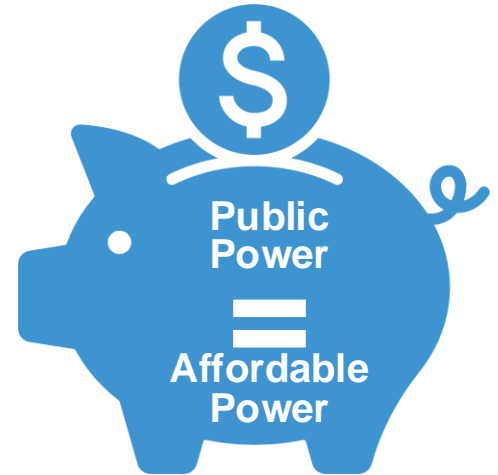
Rural Electric
Cooperatives

\$150.05



Investor-Owned
Utilities

\$131.74



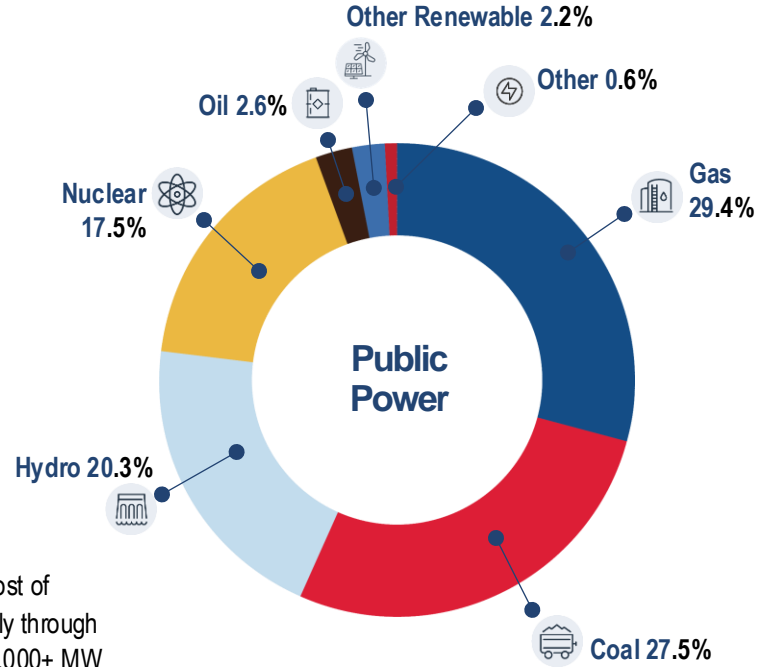
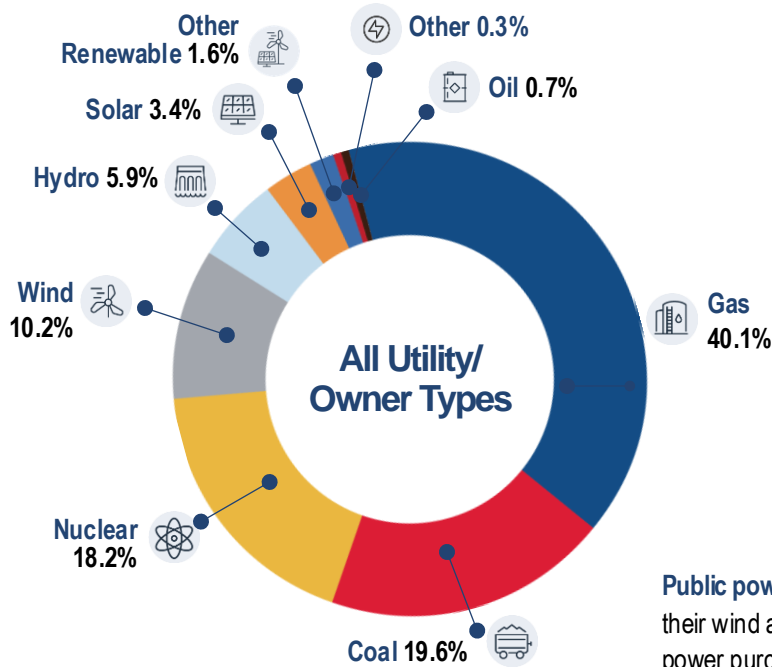
Back to the Community

Public power utilities
employ more than
96,000 people
and earn **\$67 billion**
in revenue
each year.



Public power
supports local
commerce and jobs
and invests **back**
into the community.

U.S. Electric Generation by Fuel Type, 2022



Public power utilities procure most of their wind and solar energy supply through power purchase agreements (23,000+ MW of wind, solar) rather than direct ownership.

How Many Customers Do Public Power Utilities Serve?

1,321

PUBLIC POWER
UTILITIES SERVE
UNDER **4K**
CUSTOMERS

333

PUBLIC POWER
UTILITIES SERVE
4-10K
CUSTOMERS

259

PUBLIC POWER
UTILITIES SERVE
10-40K
CUSTOMERS

31

PUBLIC POWER
UTILITIES SERVE
100+K
CUSTOMERS

53

PUBLIC POWER
UTILITIES SERVE
40-100K
CUSTOMERS

Public Power Supports Transportation Electrification

- Education
- Incentives
- Electric rates
- Charging infrastructure
- Fleets
- Grid planning and load management
- Partnerships

Special Considerations for Small and Rural Communities

- Rural areas typically have lower EV adoption than urban areas
- Utilities may have a smaller staff
- Fleet electrification and fast charging hubs can result in significant load growth and potentially require large upgrades – funding support for grid upgrades is key
- Communities may have smaller bulk purchasing power, impacting ability and timelines for obtaining key supplies like transformers

Opportunities

- Public power utilities are invested in their communities and want to be a partner
 - Public power takes pride in affordability and reliability
 - Self-regulation can improve ability to launch new programs faster and easier
- Innovation is seen throughout the public power community – small to big and rural to urban utilities

Tips for Success

- Engage utilities early and often
- Consider working with public power state/regional associations and joint action agencies

Contact

Patricia Taylor

Director, Policy & Research

American Public Power Association

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<https://www.publicpower.org/>



Brian Chandler and Solomon Brackett,
City of Troy, Alabama

City of Troy, Alabama

Electric Vehicle Infrastructure



CITY OF TROY
UTILITIES

About Us

- Located in Southeast Alabama
- Utility is a department of the City of Troy
- Multi-Utility: Power, Water, Sewer, 311
- 10,433 customers
- 65 total employees
- 317 miles of distribution lines
- 7 miles of transmission lines
- 10,000 electric meters
- 8,000 water meters
- 90+MVA Summer Peak/85MVA Winter Peak





City of Troy Recreation
Department Complex



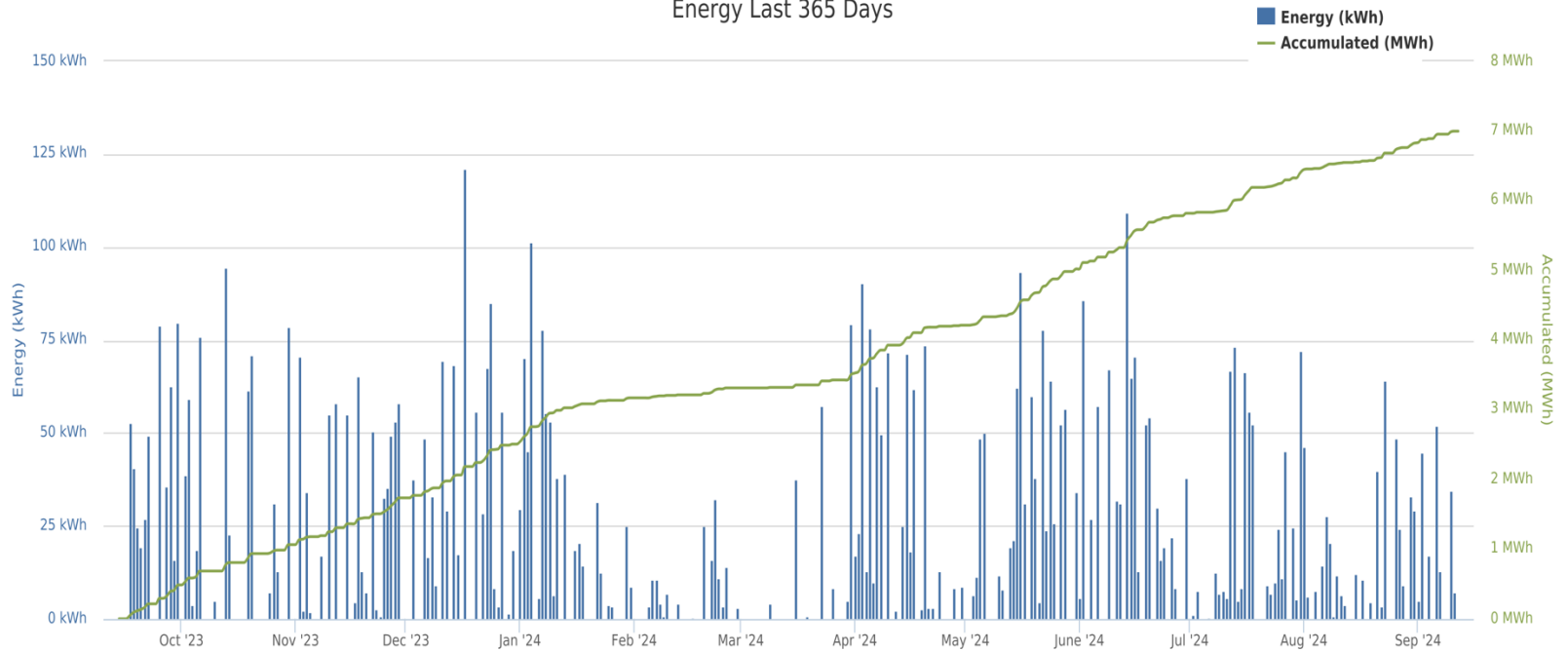
City of Troy Downtown

The City of Troy owns and operates the only public electric vehicle chargers in Pike County.

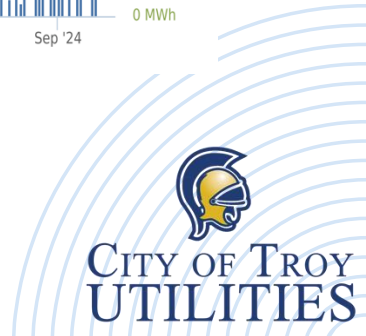
We currently have two Level 2 chargers that we run at no cost for data gathering and economic development purposes.



Energy Last 365 Days



City of Troy Downtown Charger Energy Consumption Past Year





The City of Troy owns one DC fast charger (62.5 kW) located at City Hall.

This charger is used solely for charging the two F-150 Lightning fleet vehicles owned by the City.

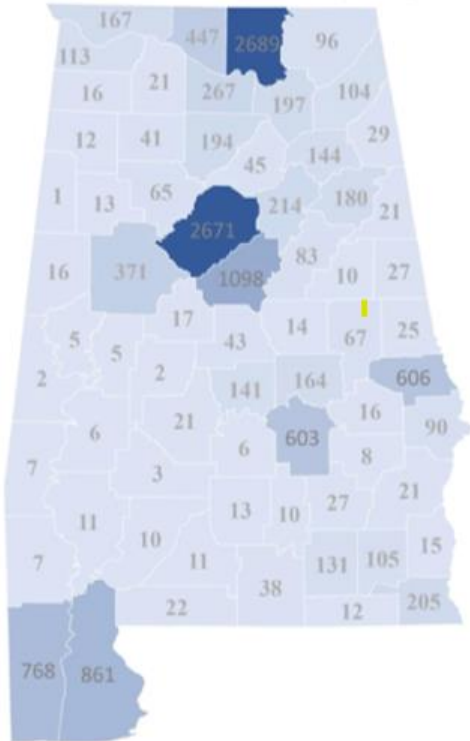


Drive Electric Alabama Electric-Vehicle Owner Chapters

Six grassroots Drive Electric Alabama EV Owner Chapters have been created to serve major markets across Alabama. Chapters have been established with a clear intent for locally based leaders to drive the activity of each chapter into the future. ACFC offers support and guidance to help fledgling chapters succeed. Logos were created to reflect the geographical area covered by each Chapter. The map below depicts the estimated coverage area for attendees at these chapter EV Showcases. The more rural portions of the state, including Pike County, do not fall within the chapters' coverage area.



EV Registrations, By County, July 2023



EV Registrations

Although the City does not have access to EV registrations through the state, some information is publicly available.

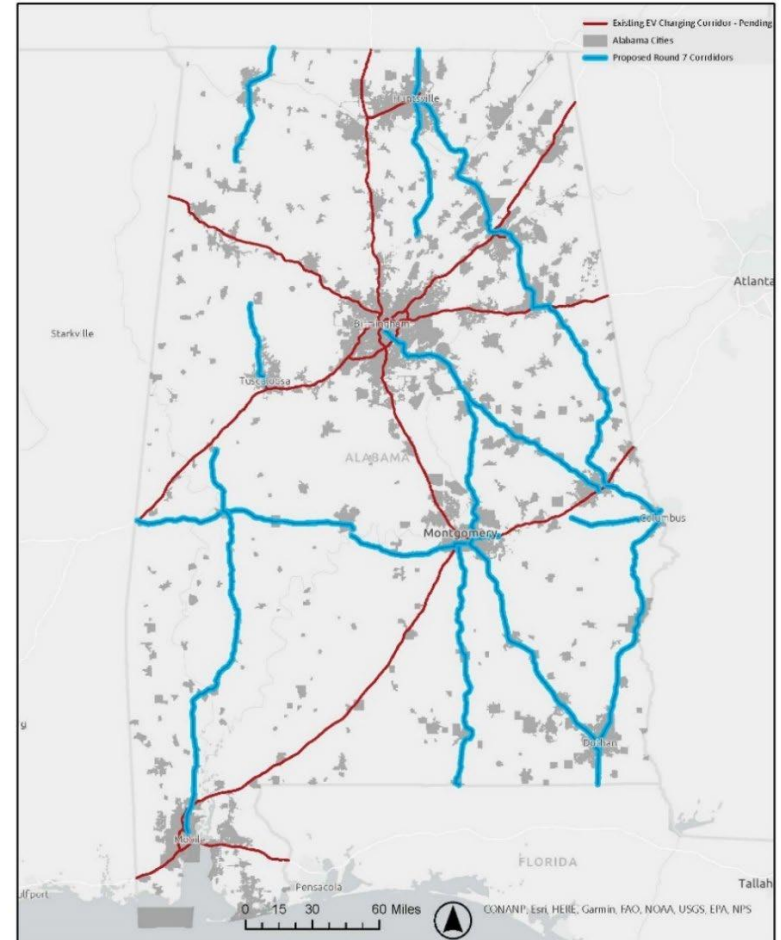
Pike County/Troy is on the lower end of EV adoption and registration.

Part of this is because Troy is located in an EV "Charging Desert," with the nearest public DC fast charger either 60 miles north or the same distance south of Troy/Pike County.



EV Corridors In Alabama

- Interstates initially designated
- Other major four-lane highways are now being designated
- State has had multiple round of funding for EV charging
- Only one round has been for non-interstate highways



Grant Activities

Troy applied for a state grant through ADECA for (2) DC fast chargers to be placed at a local business but did not get awarded.

Just applied for the Charging and Fueling Infrastructure Grant for DC chargers at (3) new sites and upgrades for the existing Level 2 sites.

The City partnered with Troy University and other local partners during the application process.



EV Utility rates

Applicable for service in which charging the batteries of electric vehicles is necessary for non-residential customer use. The load will be separately metered from all other electrical load and used for the exclusive purpose of charging electric vehicle batteries.

Monthly rate

- (1) Base charge: \$100.00 plus
- (2) Charge for energy: 12.1798 cents per kWh for all kWh

Time-of-Use (TOU) rates not applicable for Troy – AMI metering system is capable, but our billing/CIS system cannot handle this rate structure.

No option for off-peak or TOU charging rates.

Thank you!



Brian Chandler, PE
General Manager of Utilities
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Solomon Brackett
Asst. General Manager of Utilities
solomon.brackett@troyal.gov



Chris Monacelli,
City of Westerville, Ohio

Westerville, Ohio

GEOGRAPHICALLY IDEAL

The City of Westerville is conveniently located within 500 miles of more than half the US and Canadian population. 20 minute drive to the Ohio State University and Nationwide Children's Hospital.

HIGHWAYS

3 interchanges (I-71, I-270, SR-3), proximity to I-70, I-670, SR-161, SR-315.

AIRPORTS

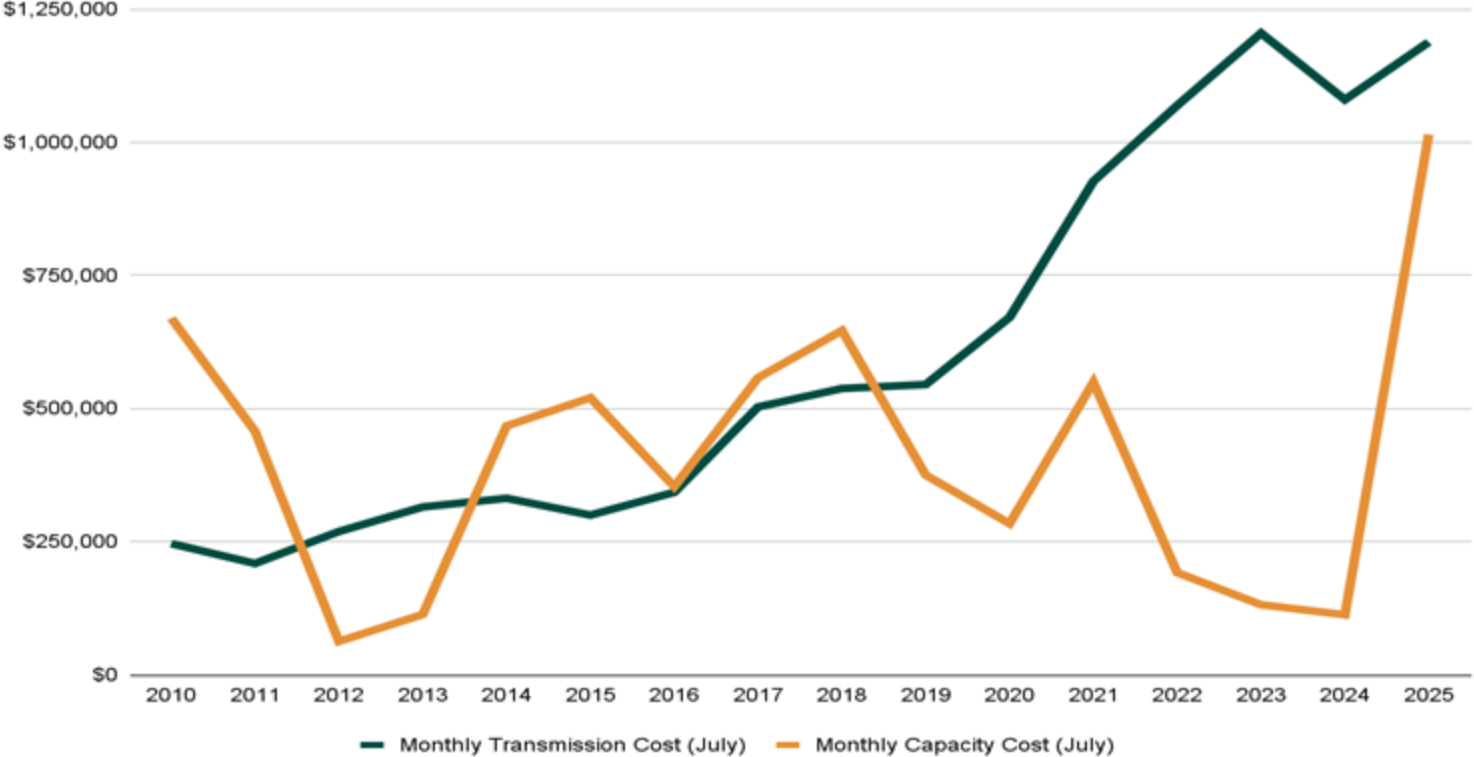
John Glenn International Airport (CMH) is 10 miles from Westerville. Rickenbacker International Airport is a designated foreign trade zone, located within a 30-minute drive.



Columbus Region

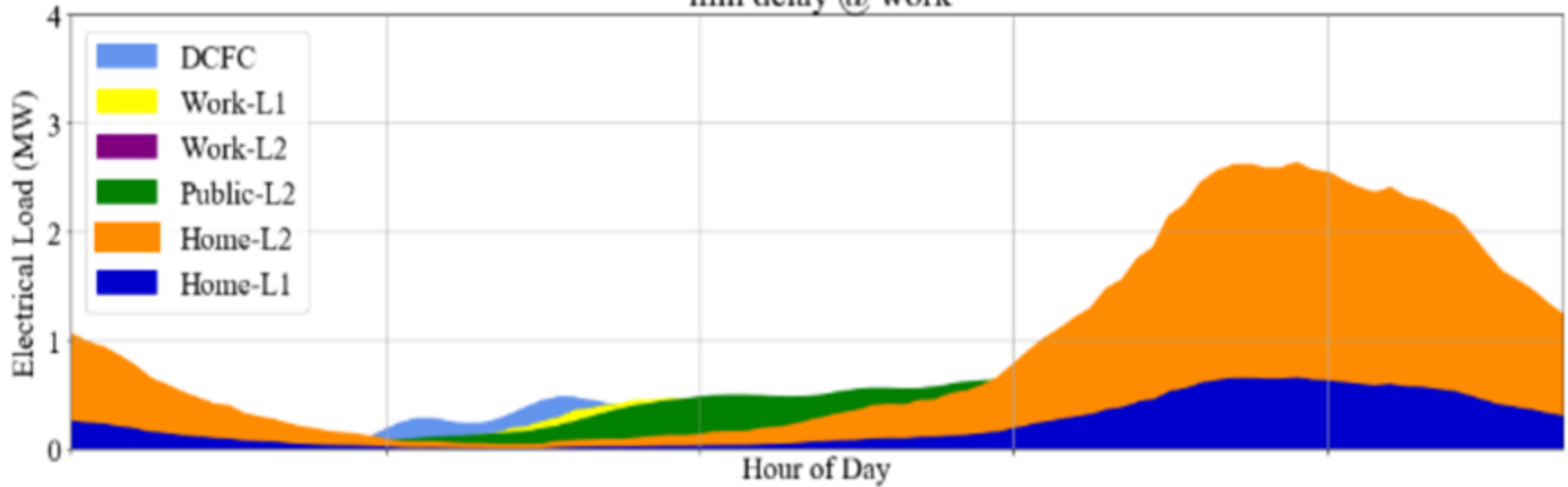


Transmission and Capacity Costs



EV Charging

"Business as Usual" Charging Behavior
min delay @ work



EV Charging - Impact

Revenue

\$35

0

Expense

(\$1,000)

Net

(\$650)



EV Charging - Impact (with incentive)

Revenue

\$200

Expense

\$170

Net

\$370



PowerUp

Residential Off-Peak EV Charging Program

- Effort to reduce peak consumption.
- Launched in 2021.
- 82 applications, 46 active.

EV Supply Equipment Program

- To encourage commercial installation of EV charging stations.
- Launched in 2020.
- Funded 21 charging ports.



westerville.org/powerup



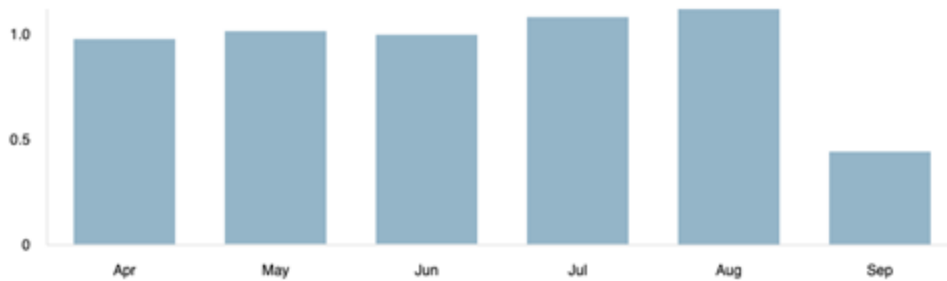
PowerUp

Unique Drivers



Sessions

in thousands





Joel Zook,
City of Ames, IA

CITY OF AMES

Electric Vehicle Support and Implementation

Joint Office Webinar, September 17, 2024



AMES, IOWA

- 66,000 population
 - Includes 28,000 students at Iowa State University



AMES ELECTRIC SERVICES

- Founded 1896
- 28,000 customers. Largest municipal electric utility in Iowa (by customer count)
- 600,000 MWh annual sales
- 135 MW peak load (summer)



CITY CLIMATE ACTION PLAN (2023)

The 6 BIG MOVES

1. 

Renewable Energy
Generation

2. 

Building Retrofits
Program

3. 

Net-Zero
New Construction

4. 

Reduce
Vehicle Emissions

5. 

Increase Active
Transportation
and Transit Use

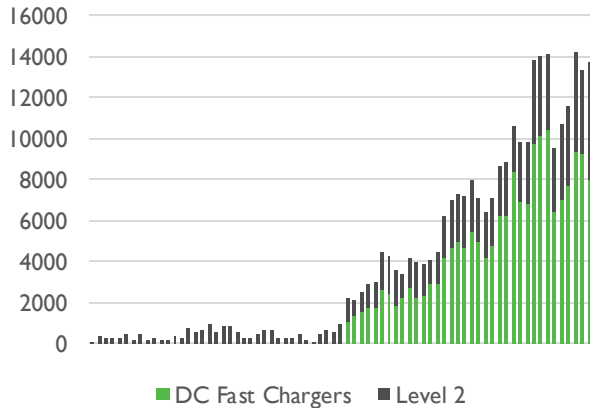
6. 

Reduce
Waste Emissions

PUBLIC EV CHARGERS

- 10 locations, first in 2018
 - DC Fast Chargers
 - 9 Level-2 Locations

EV Charging, kWh per Month



FLEET VEHICLES

- 2 Nissan Leaf, 2015-2020
- 2 Chevy Bolt, 2020-
- 4 Ford Lightning, 2024-
- 2 Subaru Solterra, 2024-
- City Council goal to purchase zero emission vehicles when possible



CYRIDE

- 2 all-electric buses since April 2023
- 5 more ordered
- Plans for up to 17 total



GROUNDWORK

- Conduit in the ground for future charging needs
 - New city hall parking lot has conduit run to over a dozen parking spots
 - Each of the public charging locations have conduit for additional chargers
- Working future needs into any building renovations

CUSTOMER REBATES

- Rebate for residential EV chargers, up to \$500
- Rebate for commercial (fleet or public use), up to \$2,500 per plug



SUPPORTING PRIVATELY OWNED EV CHARGERS

- Make it easy for existing and new customers to install charging infrastructure



FUTURE PLANS – TIME OF USE RATES

- Huge opportunity to unlock low-cost, off-peak energy for customers of all types
- Aligning customer cost signals with wholesale energy and delivery costs
- Will offer opt-in rates
- Reliant on advanced metering infrastructure to implement

Joel Zook

Energy Services Coordinator

City of Ames, Electric Services

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www.cityofames.org/smartenergy





Questions and Answers



National Drive Electric Week

Sep 27-Oct 6, 2024

Find an event near you:

<https://driveelectricweek.org/attend>



Recent Resources & Upcoming Webinars

Resources

[U-Finder \(energy.gov\)](https://www.energy.gov)

[Funding Notice: i2X Innovative Queue Management Solutions \(iQMS\) for Clean Energy Interconnection and Energization | Department of Energy](#)

[Grid-Constrained Electric Vehicle Fast Charging Sites: Battery-Buffered Options \(driveelectric.gov\)](https://driveelectric.gov)

[Battery Energy Storage for Electric Vehicle Charging Stations \(driveelectric.gov\)](https://driveelectric.gov)

Webinars

Oct. 1, 2024 | 2:00 p.m. – 3:30 p.m. ET

[Electric School Bus Familiarization: High Voltage Safety Considerations](#)

driveelectric.gov/webinars

** Some dates may be subject to change*

Thank you!

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