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CLIMATE MAYORS

Municipal Fleet Electrification

A Case Study of Binghamton, NY

2020

Electrification Coalition

Sourcewell
Formerly NJPA

City of Binghamton
New York

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Introduction

The **Climate Mayors Electric Vehicle Purchasing Collaborative** (the Collaborative) is a joint effort by **Climate Mayors**, the **Electrification Coalition** and **Sourcewell** working towards accelerating the transition of city fleets to electric vehicles (EVs). By creating a new and innovative cooperative purchasing mechanism, the Collaborative can reduce major barriers to fleet electrification for cities and other public agencies. Climate Mayors is a network of over 400 U.S. mayors who are committed to taking meaningful action on climate change. The Electrification Coalition (EC) is the non-partisan, non-profit organization that leads implementation of the Climate Mayors' transportation electrification initiative, leveraging its broad experience as a municipal partner in accelerating EV adoption on a mass scale. Sourcewell, a public procurement agency, facilitates a competitive solicitation and award process for vehicles and service equipment on behalf of their 50,000+ members across North America.

The Collaborative's partners have come together to offer a one-stop platform which connects cities with a growing selection of EVs and charging stations, transparent pricing, policy guidance, technical resources, assessment tools, and financing options that can monetize the federal EV tax credit (a current challenge for public agencies) to support cities' fleet electrification efforts. The Collaborative also provides cities with training, best practices, educational materials, and analysis to support the successful transition of municipal fleets to electric.

Committed Climate Mayors EV Purchasing Collaborative Cities

This case study examines the factors precipitating the **City of Binghamton, New York's**, purchase of two all-electric fleet vehicles, a first for the municipality. Binghamton was also the first city to complete its EV procurement through the Collaborative, spearheading a growing cohort of municipalities across the United States that are demonstrating their commitment to emissions reductions and advanced transportation by utilizing the Collaborative's convenient procurement solution.

About Binghamton, NY

The City of Binghamton is the principal metropolitan area in New York's Southern Tier, a geographic subregion of Upstate New York near the border with the state of Pennsylvania. Home to nearly 50,000 residents and encompassing an area just over 11 square miles, Binghamton lies at the junction of the Chenango and Susquehanna Rivers, an area once known as the Valley of Opportunity. Binghamton's manufacturing capacity faded after the end of the Cold War, and the city is now re-inventing itself through education and healthcare services. Mayor Richard David (R) also sees clean energy infrastructure as an industry that will support the 21st century jobs of tomorrow. He aspires for Binghamton to become more widely recognized as a hub for clean energy innovation, identifying sustainable development as a viable avenue for New York's Southern Tier to pursue technology-focused growth. Looking to walk the talk as an advocate of clean tech development and advanced technologies, Mayor David saw an opportunity to add zero-emission transportation assets to Binghamton's repertoire in 2018.

Building the Infrastructure for the 21st Century

Clean energy presents an exciting opportunity for Binghamton at the intersection of technology, innovation, and environmental stewardship. In both New York and across the United States, several resources and incentives are currently available to help cities achieve their sustainability goals, including support for city fleet electrification. Keen to punch above its weight on green initiatives, Binghamton recognized the benefit of engaging with state-agencies and partner entities, including the Collaborative, to achieve success beyond what the city could accomplish on its own.

Binghamton's 2015, $4 million project to convert its 7,000 streetlights to LED bulbs laid the groundwork for the city's fleet electrification effort. The lighting upgrade is estimated to save the city up to 50 percent on street lighting electricity costs, and will avoid approximately 3 million pounds of carbon dioxide emissions each year.[1] This project's success earned Binghamton recognition with the New York State Energy Research and Development Authority (NYSERDA), and in 2017, Binghamton became the first city in the Southern Tier to earn NYSERDA's coveted Clean Energy Community designation. With this designation came the award of further resources – namely, a $250,000 grant the following year – to fund sustainability investments.

The bulk of this Clean Energy Communities grant supports Binghamton's Clean Energy Grant Program, which encourages innovative residential and commercial clean energy projects in the city. The remaining $50,000 was reserved for the purchase of two new zero-emission vehicles for the city fleet.

Success = Opportunity + Partners

By the summer of 2018, Binghamton's planning department had found itself in need of two passenger vehicles. The automobiles identified for replacement dated back to model year 2000/2001, and neither had passed their respective fitness inspections. This pressing vehicle need presented a unique opportunity to adopt the city's first zero-emission vehicles.

Binghamton learned of the Climate Mayors EV Purchasing Collaborative through its status as a Climate Mayors member city, and became the first city to take advantage of both the Collaborative's competitive prices on suitable vehicles through Sourcewell and access to a network of policy and

[1] http://www.binghamton-ny.gov/city-releases-annual-environmental-impact-data-led-streetlight-project

technical expertise from which to draw support through the EC.

The Collaborative's selection of light-duty battery electric and plug-in hybrid electric vehicles were perfect to meet Binghamton's needs. Best of all, Sourcewell presented a quick, simple procurement solution that seamlessly integrated with existing municipal operations. Sourcewell's vehicles are primarily offered through their contract with the National Auto Fleet Group – access to which is also offered through the New York State auto fleet contract. Therefore, the City of Binghamton did not have to take any extra steps, nor undertake the heavy lift of developing, evaluating or awarding bids themselves. The Collaborative offers a turnkey mechanism which satisfies all municipal bid requirements and gives smaller entities, like Binghamton, access to specific equipment they may not be able to conveniently find elsewhere.

Advantage: Electric

Binghamton's Deputy Mayor, Jared Kraham, was able to rally support for the EVs by highlighting key benefits to vehicle electrification:

- **Cost:** Electricity is much cheaper than gasoline, domestically produced, and relatively cost-stable. Compared to the fuel and maintenance bills of the two internal combustion engine (ICE) vehicles that were replaced, the per-mile cost to drive the replacement EVs is drastically lower. Lifetime maintenance costs for EVs are also much lower, since EVs have far fewer moving parts than ICEs and do not require oil changes.[2]
- **Range:** The EVs identified for purchase have a driving range of up to 150 miles each on a full charge. While these vehicles may traverse many miles in a given day, their routes are predictable and limited to the city's geographic boundary. Therefore, these routes are well suited for EVs.
- **Duty cycle:** The planning department has no night-time tasks, so the dwell time of vehicles within this department allows for regular, convenient overnight charging.

[2] Congressional report by Bill Canis, vehicle-industry analyst (May 2019); Electric Vehicles 101 by the Natural Resources Defense Council (July 2019); or see the 'Maintenance and Safety' page at the US Department of Energy's AFDC

> "For code-enforcement purposes, we are well-suited to have vehicles that rely solely on electric power – and especially when all of the city's power comes solely from renewable resources, it means the vehicles are truly green."
>
> **Jared Kraham**
> *Deputy Mayor*
> City of Binghamton, NY

Binghamton's new Nissan LEAFs arrived in April 2019. The installation of the city's supporting charging infrastructure was completed just two weeks later, coinciding nicely with Mayor David's Earth Day announcement. The City announced that starting May 1, 2019, all of Binghamton's municipal operations would be offset with the purchase of renewable energy certificates. This move continues to enhance Binghamton's standing among its municipal peers, especially those in the Climate Mayors network.

Looking to the Future

Kraham is proud to be able to demonstrate Binghamton's commitment to sustainability and 21st-century city stewardship with the city's EVs.

"These cars are seen around town all day," Kraham said. "Showcasing these EVs is a marketing opportunity for the city, to demonstrate our principles and normalize EVs for businesses and residents. It signals to the public that the government is confident that these vehicles are feasible, and that [the public] should consider them too."

As for future EV fleet additions, Kraham notes that there is a growing appetite for clean vehicles in the police and transit fleets. He also remains optimistic about the falling costs of EV technology and confirms that EVs are where Binghamton's fleet is headed given the city's adoption of an EV-first policy

regarding all upcoming vehicle replacements.[3] Importantly, the Deputy Mayor encourages his department heads to also look for grants, discounts, and incentives that can support EV acquisition, and to remain active members of networks like the Climate Mayors EV Purchasing Collaborative.

> "It comes down to two fuel bills evaporating completely. When grant money is available, and also incentives at the state and federal level – it only makes the financial case stronger. Even if the scenario just breaks even [with a comparative ICE purchase] or there remains a nominal cost, we still think the investment is worth it. If the city is promoting green practices and reducing carbon emissions in the community, we should put our money where our mouth is and invest in zero-emissions vehicles to serve the city."

Jared Kraham
Deputy Mayor
City of Binghamton, NY

Conclusion

Engagement with the Climate Mayors EV Purchasing Collaborative provided a streamlined solution for Binghamton, NY, to procure its first electric fleet vehicles. With a number of federal- and state-based funding opportunities available, there is no time like the present to add EVs to municipal fleets. In addition to financial support, there is a growing community of municipal professionals with experience in fleet electrification from which to draw technical support, share resources, tap into best practices, and be recognized for the city's commitment to sustainability and clean energy development. The Electrification Coalition works with cities to identify these peers and support them in making data-driven decisions.

For more information about how your agency can partner with the Climate Mayors EV Purchasing Collaborative to take advantage of cooperative purchasing and rich technical assistance, please visit

www.DriveEVfleets.org
Or call
(800) 267-7830

[3] Any city vehicle replacement requests must include, where feasible, an evaluation of low- or zero-emission vehicle options. As per correspondence with Binghamton's Deputy Mayor, Jared Kraham, and Referenced in (30 May 2019): Climate Mayors EV Purchasing Collaborative – Mid-Atlantic Webinar.