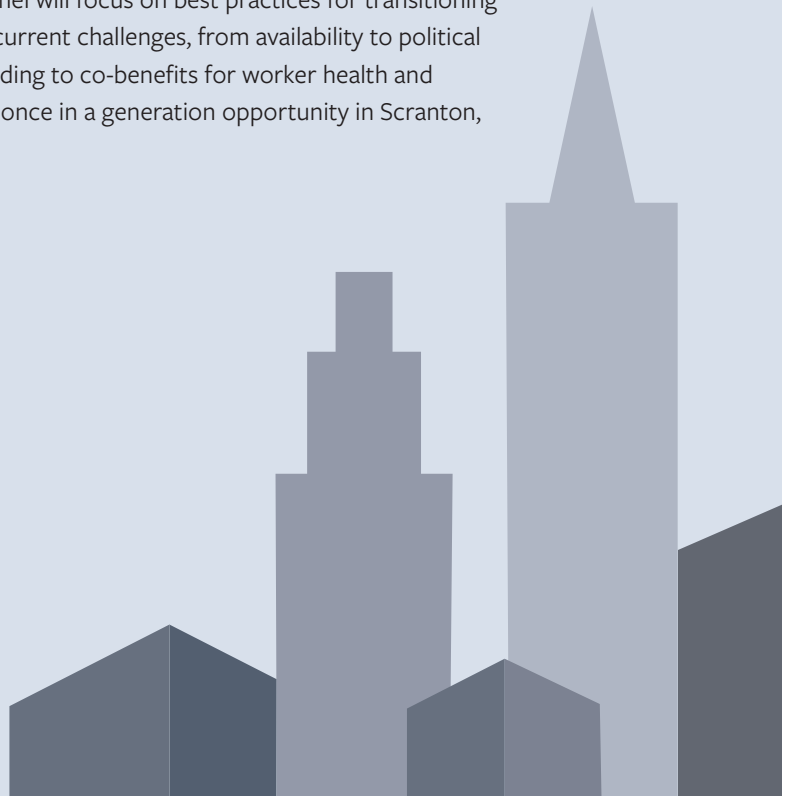




THE ELECTRIC CITY: TRANSITIONING TO AN EV FLEET

SUMMER 2023 MEETING
AUGUST 9-11 · SCRANTON, PA

The United States is on the precipice of an electric vehicle revolution and cities have the opportunity to lead in this emerging sector. This panel will focus on best practices for transitioning your fleet to clean vehicles. We'll dig into both the current challenges, from availability to political feasibility, as well as opportunities, from federal funding to co-benefits for worker health and environmental justice. We're excited to discuss this once in a generation opportunity in Scranton, the Electric City.



RESOURCES

PAGE

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“How Cities and Counties can Electrify Their Fleets,” Aradhana Gahlaut and Ben Shapiro, Rocky Mountain Institute, Jan. 2023.

21

“Electric Vehicles Save Money for Government Fleets,” Environment America Research & Policy Center, Frontier Group and U.S. PIRG Education Fund, Jun. 27, 2023.

37

“Mayor Nicole LaChapelle Partners with MoveEV to Become First Mayor in U.S. to Offer an Employee Benefit for EV Adoption and Transition all City-Owned Vehicles to Electric Vehicles,” City of Easthampton, MA, Mar. 28, 2023.

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“Electric Vehicle Readiness Roadmap,” City of Tucson, AZ, 2022.

47

“Scranton Unveils Fleet of Electric Vehicles,” City of Scranton, PA, Mar. 9, 2023.





TECHNICAL PAPER:

HOW CITIES AND COUNTIES CAN ELECTRIFY THEIR FLEETS

January 2023



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Acknowledgements and disclaimer:

This work was funded by a generous philanthropic grant from Salesforce.

The authors gratefully thank the cities and counties who participated in RMI's Municipal Fleet Electrification workshop series and whose insights contributed to the development of this working paper.

The authors also want to recognize Heather House, Matthew Popkin, and Jingyi Tang from RMI for their collaboration and guidance on the workshop series and their contributions to this working paper.

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Introduction

Local governments have a compelling opportunity to decrease both operating costs and tailpipe emissions by transitioning their fleets to electric vehicles (EVs). This working paper details the benefits of fleet electrification and outlines what elements cities and counties need to consider when launching or advancing electrification efforts.

The Benefits of Fleet Electrification

The confluence of steeply declining battery costs, record-high oil prices and volatility, and growing ambition to address climate change makes it clear that fleet electrification benefits multiple parties, most importantly the public. There's also a clear business case for electrification: cost-conscious fleet operators stand to significantly reduce operating, maintenance, and fuel costs from their current internal combustion engine (ICE) vehicles. Local leaders can further their efforts to support electrification and take advantage of the associated climate and air pollution benefits by using federal and state policies that provide unprecedented levels of financial support, presenting new opportunities to replace aging fleets with new, highly efficient EVs that offer improved performance over their ICE counterparts.

The future of the automobile is looking increasingly electric, and automakers are acting accordingly: General Motors, Stellantis, and Ford have [announced](#) a shared goal of achieving "sales of 40–50% of annual U.S. volumes of electric vehicles (battery electric, fuel cell and plug-in hybrid vehicles) by 2030." In addition to corporate commitments, other factors are accelerating electrification, including a [recent report](#) which found that, since 2014, investment in the electrified transport sector has risen by a compound annual growth rate of around 48%.

Market trends and tangible benefits notwithstanding, the transition to an electric fleet takes careful planning, buy-in from key stakeholders, and new expertise, even for seasoned fleet managers with decades of experience under their belts. Thankfully, as EVs continue to gain market share and leading fleets from both the public and private sectors procure more EVs, successful transition strategies have become clear, as have common pitfalls to avoid.

To share these practices with cities and counties eager to electrify their own fleets, RMI conducted an eight-month workshop series for local governments in Texas. This report summarizes learnings from the series, highlighting the most important considerations in developing and executing electrification plans, which are: (1) **policy and process steps** essential for gaining support, (2) **technical considerations** needed for an effective and strategic transition, and (3) **financial considerations** critical to do so cost-effectively.

Key Steps to Municipal Fleet Electrification

ELEMENT	
ELEMENT 1: Policies and Processes	• Get the right people in the room • Secure commitments from leadership • Understand the playing field
ELEMENT 2: Technical Considerations	• Conduct fleet assessments • Keep things in proportion • Start with low-hanging fruit • Power up • Build lasting relationships
ELEMENT 3: Financial Considerations	• Capitalize on lifetime savings • Realize: • You don't need to hire a financial analyst just yet • Charging infrastructure is a long-term asset • Electricity is a cheaper, more efficient fuel • Anticipate barriers to implementation

The Three Elements of Fleet Electrification

Element 1: Policies and Processes



Get the right people in the room



Secure commitments from leadership



Understand the playing field

Transitioning to an electric municipal fleet requires leadership buy-in, early involvement of diverse stakeholders to align on shared goals, and coordination across different departments. Once stakeholders determine their shared goals, it is critical that they then identify existing policies and processes that influence vehicle procurement and understand whether they need to be amended or updated to support EVs. This section describes some of the most important aspects of aligning local policies and processes to support a fleet transition.

Get the right people in the room.

As with any complex project, getting the right decision makers on board early is essential. For local governments, they generally include the mayor's office and/or city council; leaders of the fleet, facilities, and finance teams; and sustainability departments. Getting the perspective of individual drivers of fleet vehicles from different departments also provides useful context for what matters most to end-users and can help to secure buy-in from leadership and staff members. Contacting the electric utility — whether a city department or a separate entity — early in your planning is also important because developing the infrastructure to support EV charging can involve long lead times. Additionally, external parties such as regional councils of government and community-based organizations should be involved as early as possible to provide perspective and potentially align planning with related local efforts.

Secure commitments from leadership.

Some local governments' fleet transition goals are part of their climate action plans while others' goals may be motivated by the significant operating cost savings opportunities EVs offer. Whatever the motivation for pursuing fleet electrification, a key early step is to secure buy-in from your leadership. Ideally this buy-in results in longer-term commitments to an electric fleet, including adoption of a green fleet policy (see *Green Fleet*

Policies) and establishing specific goals (such as 100% light-duty vehicle electrification by a certain



Green Fleet Policies

Green fleet policies are an effective way to prioritize electric or other alternative fuel vehicles within the procurement process. These policies make EVs the default option and require any requested procurement of ICE vehicles to demonstrate why they are necessary. This seemingly simple change is a powerful lever for electrification and has proven successful in many jurisdictions.

year).

Although there are an increasing number of public tools and guides to support fleet electrification, planning and implementation nonetheless take time, and city or county staff resources should be budgeted accordingly. Leaders who believe in electrification efforts can serve as influential champions and encourage continued engagement with key stakeholders throughout the process.

Understand the playing field.

Effectively planning for fleet electrification requires a thorough understanding of the existing vehicle procurement processes, which can vary in important ways among jurisdictions. Your investigation of current processes should answer the question, “Which parts of this process *don’t* allow for procurement and operation of EVs instead of ICE vehicles?”

When you have identified processes that need to be updated, determine which decision makers need to be engaged and work with them to understand how to improve the process most effectively, while still accommodating their needs. Examples of common process issues that make EV procurement challenging include:

- **Split incentives between parties responsible for capital and operating budgets.** For example, if your fleet department is responsible for purchasing vehicles and the individual departments that use the vehicles are responsible for operating costs, including fuel, the fleet team may consider only the higher EV purchase cost and not the lifetime cost savings opportunity of EVs. Policies that align these different incentives — such as basing purchase decisions on the total cost of ownership (TCO) rather than only the upfront cost — are often critical to enabling EV procurement.ⁱ
- Current approaches to **facility development and/or upgrades**, which often don’t consider what municipal fleet charging needs will likely be in several years. Because buildings are long-term assets, and retrofits to provide EV charging are generally [much more expensive than pre-planned installations](#).

ⁱ TCO is an assessment of a vehicle’s full costs over its lifetime, including both upfront and ongoing expenses.

forward-looking facility upgrade practices that require sufficient electrical capacity, conduits, and wiring for future EV chargers can be an important enabler for cost-effective fleet electrification.

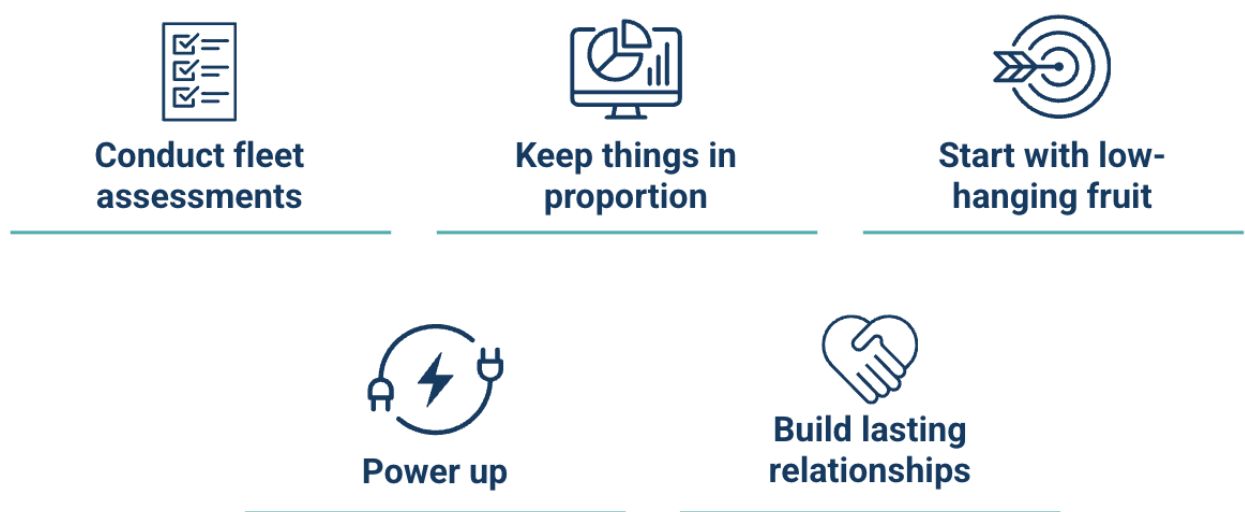
Policy and Process Takeaways

Just as the motivation for fleet electrification varies across jurisdictions, the processes and policies that influence this transition are also inherently local. Securing buy-in from leadership based on their motivating factors is the first step in identifying the processes needed to transition your jurisdiction's procurement to EVs. A good starting point is the implementation of a green fleet policy to prioritize EVs over ICE vehicles as the default.

In most jurisdictions, one of the biggest challenges is figuring out finances, especially when traditional procurement policies focus on upfront costs. Identifying how to amend processes to fully realize lifetime cost savings from EVs is therefore the linchpin of the most successful fleet electrification strategies.

To determine cost savings, your colleagues from the departments involved in the current process will be your best resource; they know existing practices better than anyone. These stakeholders — who, ideally, you've involved from the beginning — can help identify what needs to change to support EV procurement and charging infrastructure development, which often takes longer than many local officials realize. Another important planning consideration to support a fleet transition is dedicating sufficient staff time and resources to the effort. The challenges are surmountable, but they will take time to work through, and securing leadership buy-in to *spend that time* should not be overlooked.

Element 2: Technical Considerations



In addition to the critical policy and process steps highlighted above, technical analyses and associated planning are essential in developing the details of a fleet electrification strategy. In this section we'll describe each component, explain why it's important, and highlight some best practices to keep in mind when addressing these parts of the municipal fleet electrification process.

Conduct fleet assessments.

Comprehensive **fleet assessments** help you understand opportunities and sequencing for fleet electrification. These assessments catalog the current fleet, documenting vehicle make and model, age, mileage, vehicle

identification number, department, parking location, and other details, to provide a baseline from which to consider electrification opportunities. Much of this information may already be easily available; if it isn't, work with your fleet department to develop a comprehensive inventory. This assessment will serve as your starting point for all [other technical analyses](#).

Keep things in proportion.

Before considering specific replacement options, both vehicles *and* fleets should be “**rightsized**” to ensure they’re appropriate for the need. For example, using an SUV for a single employee who doesn’t require any special equipment or vehicle features (e.g., four-wheel drive) wastes both energy and funds. Fleets overall should also be rightsized: are there un- or under-used vehicles that can be consolidated and shared among employees? Focusing on these efficiency improvements will widen the range of possible EV models to be used as replacements; it also saves money by reducing the total number of vehicles needed.

Start with low-hanging fruit.

Armed with your fleet assessment inventory and ideas for where to trim the fat through rightsizing, you’re now ready to consider which vehicles are best suited to be replaced by electric alternatives, and to evaluate specific EV models. The following table provides some helpful criteria for identifying the parts of your fleet that should be electrified first. You’ll want to pair this initial assessment with a TCO analysis, which allows for comparison of different vehicles based on their full lifetime costs. Results from this exercise should directly inform vehicle procurement. Helpful approaches to calculating TCO, including some great public tools, are described in more detail in *Element 3: Financial Considerations*, page 11.

Exhibit 2: Identifying Early Electrification Opportunities

CRITERIA	QUESTIONS TO CONSIDER	RULES OF THUMB
Daily driving needs (range, size)	Are viable electric models available?	Vehicles driving less than ~150 miles per day are easier to electrify given commonly available battery sizes.
Duty cycle/charging windows	Will AC charging suffice? Can vehicles share chargers?	Windows of 8-plus hours help enable lower-power charging feasibility, sharing of chargers, and cost savings.
Parking location and charging access	Is it easy to charge during off hours?	Vehicles parked in a dedicated garage or lot are much easier to provide with charging.
Special requirements	Is the vehicle used for pursuit or medical response?	Operational requirements for these vehicles generally make them a lower priority for electrification.
Replacement schedule	How many years until retirement of existing vehicles?	Vehicles at or near retirement age can be replaced with lower sunk costs and/or limited resale concerns.
Fuel and maintenance	Is there an opportunity to replace the biggest gas guzzlers?	Electrifying the least efficient ICE vehicles provides the largest fuel savings.

Power up.

Given that **installing EV charging** at municipal facilities can have a long lead time due to the many steps and multiple parties involved, every electrification effort requires thinking about how, and where, different vehicles will charge. As noted in the previous section on key policies and processes, working with the electric utility — and starting that conversation early — is critical to success in EV infrastructure projects. Exhibit 3 outlines the primary steps in developing EV supply equipment (EVSE) at municipal facilities, along with key questions and best practices for timely, cost-effective deployment.

Exhibit 3. Developing EV Charging for Municipal Fleets



Planning

Plan for current and future charging needs to unlock cost savings from "future-proofing" sites with the necessary electrical capacity and civil infrastructure.

- How many vehicles will need to charge at each facility initially and over time?
- What will their charging needs be (power level, speed, time of day)?

Consider different EVSE vendors and select specific equipment; get cost estimates.



Design and Permitting

Work with facilities team to conduct detailed site assessments.

- What is the existing electrical capacity? Are service upgrades needed?
- Will EV charging change traffic flows and require any civil upgrades?

Solicit technical assistance from the electric utility, keeping it informed throughout the process.

Obtain design and permitting approvals from necessary entities, including for utility design of any needed service upgrades.

Collect time and cost estimates from all involved parties (facilities team, contractors, electric utility).



Construction and Installation

Complete all necessary civil upgrades (e.g., trenching and boring), including future-proofing for later incremental EVSE installations.

Complete site electrical upgrades, including any necessary utility service upgrades to the site.

Install EVSE and connect to main site service or subpanel.

Build lasting relationships.

Working with your electric utility, whether an external company or a municipal department, extends well beyond the initial engagement required to upgrade facilities and install EVSE. As more of your fleet is electrified, it becomes increasingly important to manage charging loads to reduce both your operating costs and the utility's cost of providing power for the vehicles. Your utility partner can help manage costs for both you and itself through specific electric rates, as well as by providing technical assistance for both the planning and operational phases of EV charging. If your utility doesn't yet offer EV-specific rates, which generally decrease demand charges in exchange for greater reliance on time-of-use pricing,ⁱⁱ work with it to find ways to develop these options. It will be worthwhile for both parties as EV loads increase.

Technical Takeaways

Electrifying fleets involves many technical aspects, some of which can seem like huge barriers. However, following the structured path outlined in this section — from fleet assessment and rightsizing through site evaluations and developing charging infrastructure — enables a methodical approach for early electrification efforts and subsequent procurements as larger portions of your fleet are electrified.

As you move through this process, key aspects to keep in mind relate to lead times and planning ahead. Engaging early and often with the electric utility is one of the best strategies to reduce delays and ensure that projects are developed on schedule, including identifying any site-specific challenges early and finding ways to address them. Additionally, future-proofing your facilities with additional electrical capacity and components such as conduit and wiring will enable you to easily add more EV chargers as your fleet transitions, saving time

ⁱⁱ Demand charges are an electricity pricing component intended to collect some of the costs of providing service by charging customers for the largest amount of power (in kilowatts) required at a single time throughout the billing period. While an effective pricing structure for many electric loads, demand charges can make EVs less cost-effective, especially when only a few vehicles in the fleet are electric.

and money. Getting a start on the infrastructure component of your strategy and envisioning both today *and* tomorrow's charging needs is a winning strategy for any fleet manager serious about electrification.

Element 3: Financial Considerations



Capitalize on lifetime savings



Anticipate barriers to implementation

Realize:



You don't need to hire a financial analyst yet



Charging infrastructure is a long-term asset



Electricity is a cheaper, more efficient fuel

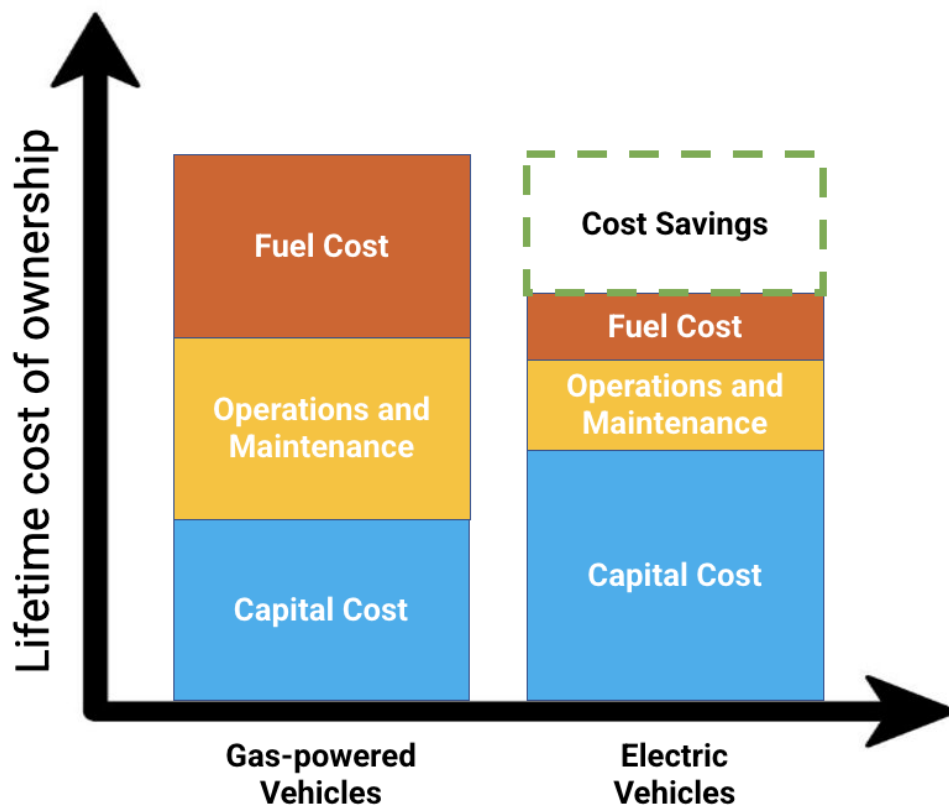
Along with the above technical analyses and planning steps, one of the biggest questions many local governments have regarding fleet electrification is how to pay for the transition. In this section we discuss several key concepts that can help you think about EV costs and charging infrastructure, and useful practices for incorporating EV-related costs and savings into your budget.

Capitalize on lifetime savings.

Although EVs are generally more expensive upfront than conventional vehicles, they are typically much less costly to operate. For example, in 2020 [Consumer Reports](#) estimated that most EVs cost up to 50% less to fuel and maintain over their lifetime than their ICE counterparts. It's worth noting that these operating cost savings have only increased due to the recent and significant rise in global oil prices. However, as noted in *Element 1: Policies and Processes*, page 6, many vehicle procurement policies are based on upfront rather than lifetime costs, tipping the playing field toward ICE vehicles.

For local governments, where budget approvals often make or break decisions, incorporating the TCO as a decision metric can help make the case for EV procurement and realize savings for taxpayers. Using TCO provides a more comprehensive economic perspective and can lead to greater cost savings. Cost stack charts such as the one in Exhibit 4 are useful for conveying the comparative costs and savings in individual vehicle expense categories.

Exhibit 4. Total Cost of Ownership Comparison (Illustrative)



You don't need to hire a financial analyst just yet.

While many fleet operators develop their own TCO models, calculating lifetime vehicle costs does not have to be complicated or require a full-time resource. We recommend exploring some open-source tools to assist you in calculating the economics of electrifying your fleet, such as the [Dashboard for Rapid Vehicle Electrification](#) (DRVE) from Atlas Public Policy and the Electrification Coalition, the Alternative Fuels Data Center's [Vehicle Cost Calculator](#), and DANA's TCO Calculator, to name a few.

DRVE is a Microsoft Excel-based tool that provides a user-friendly platform to analyze fleet electrification by evaluating a variety of vehicle types, procurement ownership structures, and EV charging configurations. Conveniently, by simply uploading basic fleet information (ideally collected through the fleet inventory described in the previous section) and customizing several key inputs, local governments can get a detailed, customized view of their electrification opportunities. Pacific Gas and Electric Company (PG&E) also offers a web application that allows users to compare EVs by price and range; it also provides TCO comparisons between EVs and similar gas vehicles.ⁱⁱⁱ

ⁱⁱⁱ The PG&E calculator is based on PG&E electricity rates and will not be directly applicable for cities or counties in other jurisdictions with different electric utilities and rates.

Like any data-driven model, a TCO calculator is only as accurate as its inputs. Below are several best practices for achieving accurate results:

- Account for inflation and asset depreciation by employing a weighted-average cost of capital (or discount rate) specific to your organization. Work with your finance department to get these figures.
- Use the applicable local electricity rate structure to calculate accurate charging costs. Your facilities team should be able to provide this information.
- Include projected growth or decrease in fuel costs for both gasoline or diesel and electricity over the financial term. Fleet managers may already have projections they're using for budgeting purposes.
- Reflect all taxes and rebates applicable to the vehicles and infrastructure in capital costs.
- Treat the cost of procuring and installing charging infrastructure, as well as facility and electric service upgrades, separately from the vehicle procurement costs. Rather than assuming each EV is associated with a portion of the charging infrastructure costs, treating these investments as a long-term enabling capital expense — which different vehicles procured in different years will likely use — provides a more direct way to compare vehicle-specific costs.

Charging infrastructure is a long-term asset.

The cost of installing a gas station is not added to the lifetime costs of the ICE vehicles fueling there. Rather it is treated as a long-term capital asset that generates revenue and incurs repair and maintenance costs. Similarly, the cost of installing and procuring charging infrastructure should be treated as a one-time enabling infrastructure investment and not be bundled into the lifetime cost of the EVs being considered for procurement. This separation ensures a fair comparison between ICE vehicles and EVs. These chargers should be accounted for as an independent project, with a separate capital requirement for setup and purchase costs and ongoing expenses for anticipated repair and maintenance.

Some TCO calculators do not include the cost of the chargers in their outputs; others, such as the DRVE tool, offer the option to include or exclude this cost in the overall calculation and provide the user with an estimated infrastructure capital requirement. Most public EV grant programs include funds for related charging equipment purchases. Some also support operating expenses where current charger utilization is not sufficient to break even through charging revenue alone. Engaging with two key entities well in advance can ensure that you are prepared for the costs and logistics associated with installing EV charging infrastructure:

- Your electric utility, to assess potential sites and get cost estimates for grid upgrades
- Available EV service providers, to negotiate a purchase and service contract best tailored to your city's or county's needs

Electricity is a cheaper, more efficient fuel.

Operational savings from EVs are driven by lower maintenance and repair costs as well as fuel cost savings. The latter will vary according to the electric utility rates relevant for your fleet department, especially those at vehicle charging locations. To fully realize these savings, it is critical to understand how energy usage and peak demand interact with the tariff structure applicable to your facilities. For example, an electric rate with a high demand charge will lead to disproportionately higher electricity costs if many vehicles are charging simultaneously at a common location. In areas with time-of-use pricing, charging vehicles during peak pricing windows will further increase electric fueling costs. Both challenges can be addressed through managed charging that avoids high kilowatt (kW) peak demand and prioritizes charging during lower-priced, off-peak times.

To highlight these dynamics, the example in Exhibit 5 compares the total monthly costs for charging 20 light-duty vehicles at a facility with 12 Level 2 chargers, using the same electricity tariff under an unmanaged and a managed charging schedule. The same amount of electricity (kWh) is used to charge vehicles in both scenarios,

but the costs vary significantly based on the proportion of on-peak versus off-peak charging, and the maximum demand from simultaneously charging vehicles.

Exhibit 5. Cost Impacts of Unmanaged vs. Managed EV Charging (Illustrative)

	Unit	Unmanaged	Managed
Electricity Use	kWh/month	25,000	25,000
On Peak	kWh/month (%)	11,250 (45%)	5,000 (20%)
Off Peak	kWh/month (%)	13,750 (55%)	20,000 (80%)
Max Demand	kW	91.2	53.2
Customer Charge	\$/month	\$40.00	\$40.00
On-peak Electricity Cost	\$/month	\$1,125.00	\$500.00
Off-peak Electricity Cost	\$/month	\$825.00	\$1,200.00
Demand Charge Cost	\$/month	\$1,003.20	\$585.20
Total Cost	\$/month	\$2,993.20	\$2,325.20
Average Cost/kWh	\$/kWh	\$0.12	\$0.09
Managed Charging Cost Savings	% savings	N/A	22%

To enable effective managed charging and keep fuel costs low, it is critical to engage with your building and facilities departments to plan around the available electricity tariffs, and with the electric utility to ensure that any available EV-specific electricity rates are being leveraged.

Anticipate barriers to implementation.

As described above, TCO is a critical financial metric for decision-making. One common obstacle to using TCO, however, is the common practice of separate budgeting of capital and operating expenses, with vehicle purchase expenses and ongoing fuel and maintenance costs (or savings) incurred by different departments. Cities and counties should anticipate this obstacle by identifying any policy or process that might limit the use of TCO in decision-making — and finding alternative approaches — so that ICE-based practices do not hinder the transition to EVs.

How to Cover Capital Costs

Now that we've established that EVs can save you money, what steps can your organization take to cover the capital costs? As highlighted above, cost savings from vehicle electrification, which can be considerable, are not realized upfront. Two primary options available to local governments address this issue: (1) federal and state funding programs and (2) innovative approaches to financing and procurement.

Public Funding Opportunities

Unlock external investment.

Significant financial support for transportation electrification is available at the federal and state levels, through both grant opportunities and new or expanded vehicle and charging infrastructure incentives. This is a particularly noteworthy moment for advancements in federal infrastructure investments, with \$1.2 trillion in funds from the Infrastructure Investment and Jobs Act (IIJA), which focuses on transportation and energy as the top two sectors, as well as the significant incentives included in the Inflation Reduction Act (IRA).

Take advantage of grant funding.

Effective applications for either federal or state programs require strategic submissions that employ best practices for securing grant funding. Resources such as RMI's [Federal Funding Opportunities for Local Decarbonization](#) (FFOLD) tool helps local governments identify the most relevant funding sources for their fleet electrification process (and other decarbonization efforts) and provides key guidance on eligibility and effective grant application components. The FFOLD tool is updated quarterly and can help grow your understanding of funding opportunities beyond the usual grant-making agencies, with both existing and new programs. Below are several best practices for both internal and external coordination on funding applications:

- Understand the funding agency's process and solicitation; create an application checklist.
- Continue to secure buy-in from key decision makers and regularly inform them of fleet electrification progress and opportunities.
- Use fleet assessments and TCO analyses to prioritize electrification opportunities and identify potential EVSE deployment locations to inform development of a phased EV procurement plan.
- Build relationships with utility representatives, peer local governments, regional associations, state-level agencies, elected state and federal officials, and other stakeholders to partner on grant applications, receive funding, and identify policy changes to facilitate the accelerated transition to EVs.

Cash in on new and expanded incentives.

The recently enacted IRA includes many incentives for transportation electrification. While mostly structured as tax incentives, tax-exempt entities (including local governments) can take advantage of these new and/or expanded opportunities. Specifically, "direct pay" provisions allow tax-exempt entities to substitute a cash payment for what otherwise would be provided as a tax credit.

Cities exploring fleet electrification should be aware of two specific incentives:

- **Qualified Commercial Clean Vehicles Tax Credit** (Section 45W): This new tax credit provides up to \$7,500 for vehicles with a gross weight up to 14,000 pounds, and up to \$40,000 for heavier vehicles.^{iv} Although final assembly of eligible vehicles must take place in North America, unlike the modified personal vehicle tax credit (Section 30D), the commercial version does not impose battery and critical mineral manufacturing and sourcing requirements, which will make it considerably easier for automakers to accommodate.
- **Alternative Fuel Vehicle Refueling Property Tax Credit** (Section 30C): This tax credit provides an incentive for developing EV chargers, modifying and extending a previous tax credit that had expired at the end of 2021. Specifically, for EV chargers deployed in either low-income communities or outside of

^{iv} The 45W tax credit value is calculated as the lesser of (a) 30% of the vehicle's cost basis (for battery electric vehicles) or (b) the incremental cost of the EV compared with a conventional alternative.

urban areas,^v a credit of 6% of project costs is available, with the potential to increase this credit to 30% for projects using prevailing wages and meeting certain apprenticeship requirements. The maximum credit value is \$100,000 per charger.

Together these two targeted incentives provide a compelling opportunity for local governments to overcome two of the largest barriers to fleet electrification: the upfront cost premium of EVs and the incremental cost of developing charging infrastructure.

Innovative Financing and Procurement Mechanisms

Scale your ambitions.

Procuring vehicles through cooperatives or aggregated purchasing arrangements can help local governments negotiate more cost-effective prices. The [Climate Mayor's Purchasing Collaborative](#) is an EV purchasing platform for local governments that offers both traditional upfront purchasing options and alternative financing. It leverages the collective buying power of cities across the country to provide a one-stop online tool for cities, counties, and other local organizations to procure EVs at competitive prices. Cities and counties may also benefit from joining or [piggybacking](#) onto a larger city's or state's existing contract to leverage volume discounts a larger fleet can obtain.

Pay it off over time.

Leasing is a common alternative financing approach to procure vehicles and alleviate the high capital requirement. In closed-end leasing, the lease term and monthly payments are fixed, and the lessor typically covers repairs and maintenance. Although leasing can incur high interest payments, these costs can be offset through lower operating costs. This method is particularly relevant if your fleet department has budget limitations and will better sustain the transition to EVs through comparatively lower operating expenses. A variety of municipalities have set an example of vehicle leasing as a viable option in the past few years, solidifying our belief that innovative procurement structures can be one answer to capital roadblocks for the electric transition. In 2020, the Electrification Coalition collated findings from its experience assisting cities in leasing electric fleets in a [useful case study](#), which includes indicative monthly payments and cost savings for specific vehicle models. Another example comes from Columbus, Ohio, which in 2018 developed an [innovative procurement contract](#) through its Smart Columbus initiative as a method to overcome barriers to procuring electric vehicles for the city's fleet.

Financial Takeaways

Financing your fleet's electric transition can seem like a daunting challenge, especially for those new to the process. However, recognizing and accounting for operational savings, as well as planning ahead to apply for and use available federal and state funding, will greatly support your team in making a case for the favorable economics of electrification. Although the upfront cost of electric vehicles is often higher than that of ICE vehicles, employing available incentives, scaling procurement, and using innovative financing approaches can significantly reduce this capital burden and bring the cost down to parity with or even less than that of conventional vehicles.

Following the key steps outlined above — including calculating TCO and lifetime cost savings, being aware of funding opportunities, submitting well-crafted applications, and being creative with procurement and financing

^v Low-income communities are defined as census tracts with a poverty rate of at least 20%. Census tracts outside of metropolitan areas are considered low-income if median household income does not exceed 80% of the state median income, whereas census tracts within metropolitan areas are considered low-income if median household income does not exceed 80% of state or metropolitan area median income. Urban areas are defined as such by the US Census.

mechanisms — will support the success of your fleet electrification project. Another best practice is to engage with and learn from peer local governments that have successfully and cost-effectively procured EVs through grants, cooperative purchases, and/or leasing contracts. Keep in mind: procuring the vehicles is often the hard part; the savings will follow.

Conclusion

RMI convened a workshop series for a cohort of local governments in Texas on four resilience-focused topics to address and prepare for the climate and energy impacts brought about by natural disasters of increasing intensity such as Winter Storm Uri. The Municipal Fleet Electrification cohort focused on coaching cities and counties to think critically through their fleet electrification goals and the priority actions required to make them a reality. Our experience with this cohort helped identify the key barriers these governments face with respect to fleet electrification. These barriers center primarily on financing, infrastructure planning and procurement, and coordinating with internal and external stakeholders.

Many cities and counties struggled to identify how upfront capital expenditures could be paid for, including the cost of EV charging infrastructure. Some also found that securing support and buy-in from leadership was difficult and looked for assistance in “making the case” for electrification. Most participants also found that developing charging stations to support their fleets added an entirely new complication, requiring the input and collaboration of fleet, facilities, sustainability, and other departments. With these challenges in mind, the workshop series helped participants to identify paths forward, enabling many to make significant progress on their electrification efforts.

Many participants conducted comprehensive fleet inventories to understand their vehicle baseline and began using the information to have productive conversations with other stakeholders. Participants then used their fleet data and TCO analyses to understand which vehicles to electrify first and the anticipated cost and greenhouse gas (GHG) emissions savings.

Results depended on the composition of a given fleet, as well as how the vehicles are driven. For example, one participant city’s analysis showed that electrifying its light-duty fleet would lead to an average lifetime cost savings of 20% per vehicle, whereas another city found that electrifying its light-duty passenger vehicles could save on average, *nearly one-third* of lifetime costs. Generally speaking, electric SUVs were found to be the most economically beneficial replacement for light-duty vehicles compared to their ICE alternatives, owing in part to their large consumption of gasoline: electrifying these vehicles offered *up to 50% lifetime cost savings*.

Results were more mixed outside of the light-duty class, reflecting the considerable variation in medium-duty vehicle use cases and duty cycles. One participant found that electrifying delivery and work trucks could cost about 30% *more* than ICE options over the vehicle lifetime; another found that electrifying medium-duty vans would save 10% on lifetime costs. These variations are not surprising given that EV model availability is still expanding, with certain vehicle types either unavailable or commanding higher price premiums (e.g., medium-duty, class 3–6 models). However, automakers’ announcements about expanding their EV lines, along with the new tax incentives from the Inflation Reduction Act, suggest this situation will likely change quickly. Larger vehicles notwithstanding, across the board cities’ analyses highlighted that replacing many of their light-duty vehicles with electric alternatives already promises significant cost savings and significant associated reductions in both GHG and local air pollution emissions.

As participating cities and counties found, EVs offer a compelling opportunity today for fleet managers to reduce overall operating costs and transition to more advanced vehicle technologies, and this opportunity will only grow over time. Benefits from vehicle electrification are manifold, including not only potential lifetime cost savings, but also reduced dependence on foreign oil and gas price volatility, reduction in GHG emissions, and improved public health outcomes through decreased local air pollution. Electrifying municipal fleets at scale supports local as well as state and national climate goals, demonstrates the feasibility of EVs for private citizens and private fleets, and helps to drive momentum for broader transportation electrification.

Realizing these benefits does require nontrivial investments in the form of vehicle and infrastructure capital costs. Keeping up to date on federal incentives and grant funding opportunities, as well as leveraging innovative procurement and financing mechanisms such as leasing and collaborative purchasing, can help to bring these costs down to parity with those of ICE vehicles. Infrastructure planning and deployment can also be time and

resource intensive. Starting early, planning ahead, understanding timelines, and thinking beyond needs for the current procurement are all ways to avoid infrastructure from becoming the limiting factor for deployment.

Electrifying municipal fleets requires thoughtful planning, staff time and resources, and a commitment to exploring technology that is new to many stakeholders. However, the benefits are well worth the effort, and there has never been a better time to begin this transition. Current funding and incentive opportunities, paired with automaker commitments and growth in the EV market, make this opportunity more compelling than ever. The hardest part may simply be getting started. This guide aims to make that first step easier and serve as a resource for understanding what the end-to-end process can look like. Time to take the first step.



Electric Vehicles Save Money for Government Fleets

**BILLIONS OF DOLLARS IN SAVINGS POSSIBLE
FOR STATE AND LOCAL GOVERNMENTS**

U.S. PIRG
Education Fund



FRONTIER GROUP

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Executive summary

FROM SEDANS TO PICKUP TRUCKS to vans, state and local governments in the United States own more than 4 million vehicles – nearly all of them powered by gasoline or diesel fuel. Buying, fueling and maintaining these vehicles is expensive.

Electric vehicles (EVs) often cost less to own and operate over time than gasoline-powered vehicles, with operating savings on fuel and maintenance more than compensating for any additional purchase costs. By transitioning to electric fleets as fossil fuel vehicles retire, state and local governments can save significant amounts of money for taxpayers.

State and local governments around the country could save a total of nearly \$11 billion in lifetime expenses by purchasing EVs as opposed to gasoline-powered vehicles for their light-duty fleets over the next 10 years.

- State and local governments own approximately 4 million vehicles.² Of those vehicles, roughly 900,000 are light-duty vehicles that are expected to be retired over the next 10 years and for which electric options are currently at production scale (sedans, pickups, SUVs and vans).
- The number of electric vehicle models available on the market is increasing every year and those vehicles are increasingly able to travel greater distances between charges and to perform more of the tasks city and state governments require of fleet vehicles. Major auto manufacturers have

committed to shifting their new vehicle fleets to EVs over the next decade, and proposed new federal vehicle emission standards would result in most new light-duty vehicle sales being EVs by 2032.³

- Replacing retiring fleet vehicles with EVs can provide state and local governments with approximately \$10.8 billion in lifetime cost-of-ownership savings, with the biggest savings coming in fuel costs (68% reduction) and maintenance costs (37%). These savings do not include the upfront cost of additional infrastructure needed to support EVs, which can be significant, but represents a long-term investment supporting multiple fleet vehicles over time and, in many cases, expanding charging access for the public.

TABLE ES-1. LIFETIME SAVINGS FROM REPLACING RETIRING STATE AND LOCAL FLEET VEHICLES WITH EVS VS. GASOLINE-POWERED VEHICLES OVER 10 YEARS

Type of savings	Savings, in billions
Depreciation	-\$3.55
Fuel	\$8.55
Maintenance	\$6.89
Insurance	-\$1.13
Total cost of ownership	\$10.76

- States with the biggest percentage savings from adopting EVs are those in the western U.S., such as Idaho, Utah, Oregon and Washington, where gasoline prices are high and commercial electricity prices are relatively low. (See Figure ES-1.)
- Incentives available for clean vehicle purchases under the 2022 federal Inflation Reduction Act help to make EVs a financial winner for state and local governments. The Commercial Clean Vehicle Credit offers savings of up to \$7,500 per light-duty vehicle or \$40,000 per heavy-duty vehicle for purchases of EVs by government or private fleets.⁴ The credit is available via “direct pay,” meaning that governments and nonprofit entities have access to the full value of

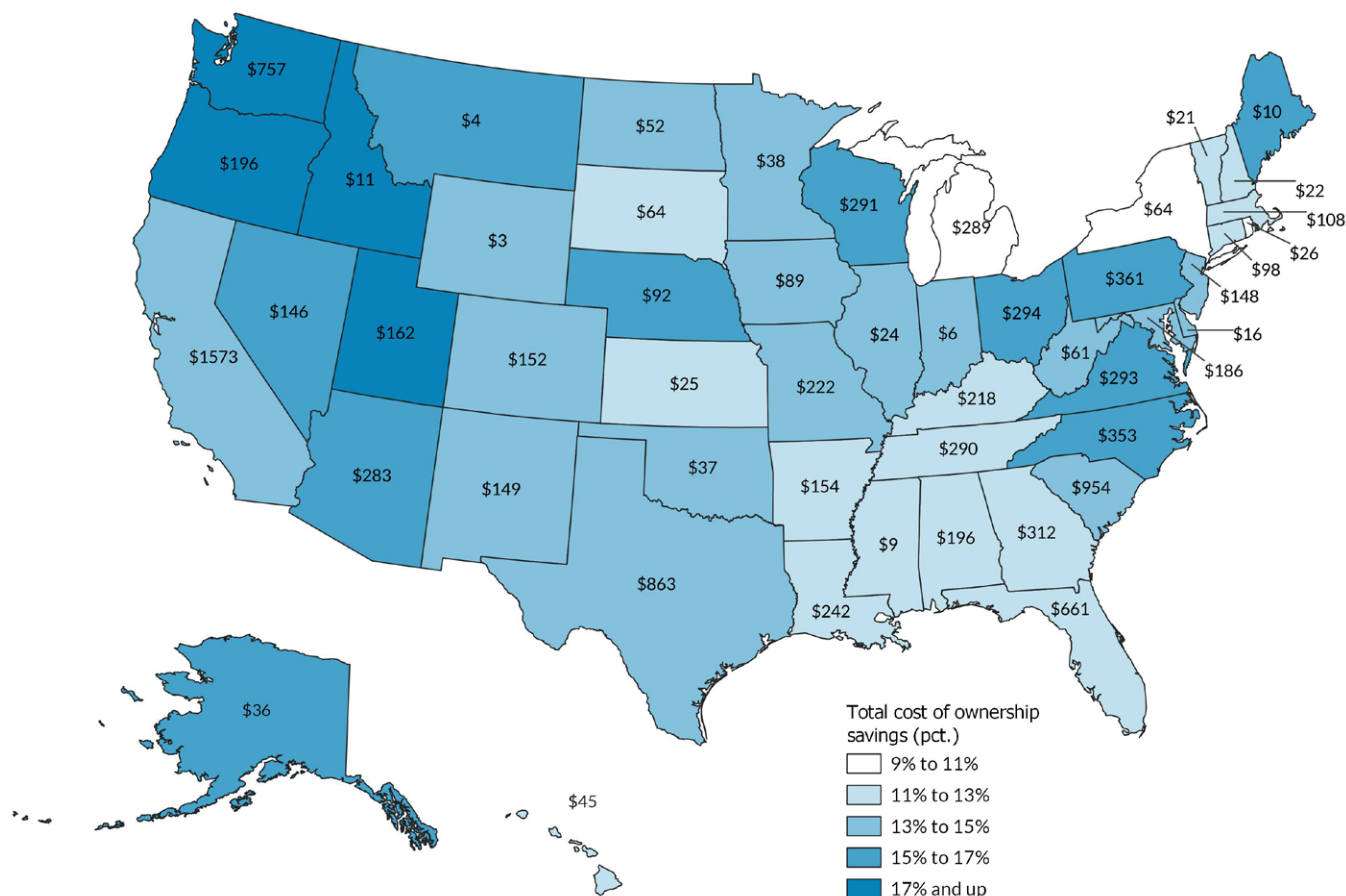
the credit, and the credit is not subject to the sourcing provisions under the federal clean vehicle (Section 30D) tax credit, meaning that municipalities and states can claim the full value of the credit for any EV they purchase or lease.⁵

- Other incentives – from federal investments in public EV charging to utility incentives and technical assistance programs – can help state and local governments to transition their fleets to electric vehicles.

Transitioning state and local fleets to EVs will also cut air pollution and greenhouse gas emissions.

- Many municipal and state governments have committed to reducing greenhouse

FIGURE ES-1. LIFETIME SAVINGS TO STATE AND LOCAL GOVERNMENTS OF REPLACING RETIRING VEHICLES WITH EVS OVER NEXT 10 YEARS (MILLIONS)



gases, such as carbon emissions, from government operations, and many others are in areas where pollution from cars and trucks makes the air unhealthy to breathe.⁶ Electrifying state and local fleets can help to address these problems. By replacing retiring light-duty vehicles with EVs rather than gasoline-powered cars over the next decade, state and local governments nationwide could:

- o Reduce greenhouse gas emissions by nearly 26 million tons (carbon dioxide equivalent), a 63% reduction compared with a scenario in which retiring fleet vehicles are replaced with gasoline-powered vehicles.
- o Reduce emissions of volatile organic compounds (VOCs) and nitrogen oxides (NO_x), which combine to form ground-level ozone, otherwise known as smog, as well as fine particle pollution (PM_{2.5}). Including the emissions produced by power plants that generate the electricity used in EVs, a shift to electric fleet vehicles would result in a 92% reduction in VOC emissions compared with the emissions produced by gasoline-powered vehicles; a 23% reduction in NO_x emissions; and an 11% reduction in PM_{2.5} emissions.
- o Achieve even greater air pollution reductions in future years as the electricity grid transitions away from dirty, polluting forms of energy such as coal and toward cleaner forms of energy such as solar and wind power.

State and local governments should commit to electrify their vehicle fleets by replacing retiring fleet vehicles with EVs wherever and whenever feasible. To get the greatest benefit from fleet electrification, state and local governments should:

- **Make bold commitments and stick to them**, setting a clear direction for the future and enabling governments to benefit financially from economies of scale in the purchase of vehicles and in the installation and use of EV charging infrastructure.
- **Develop fleet electrification plans** that identify those vehicles that are the best candidates for electrification (including those vehicles that are driven the most, creating the greatest potential for fuel and maintenance cost savings); determine how best to deploy EV infrastructure; and ensure that electric vehicles are fully utilized and able to perform the tasks required of them by government agencies.
- **Cooperate with other state and local governments** that are embarking on electrification of their fleets to share information and resources, and to pool buying power to negotiate discounts on vehicles and infrastructure.
- **Take full advantage of state, federal and utility incentives.** Governments and, in many cases, electric utilities offer incentives – from rebates to EV-specific electric rates to technical assistance – to help governments electrify their fleets.

Electric vehicles are an increasingly viable option for government fleets

AFTER A DECADE of rapid technological improvement and falling prices, electric vehicles are now ready to play a central role in government fleets. Today's electric vehicles travel far greater distances on a charge and cost much less than the EVs of a decade, or even just a few years ago. Every year, new types of EVs come on the market – from sedans to pickups to refuse trucks and even emergency vehicles – enabling EVs to do more of the jobs that state and local governments must perform for the benefit of the public.

Better technology, lower costs

Electric vehicle technology is improving by leaps and bounds. Today's electric vehicles are more capable and cost less than the vehicles on the market just a few years ago, and there are many more models to choose from.

Rapid improvements in batteries have led to EVs that travel farther on a single charge. The median travel range for an EV on a single charge grew to over 250 miles by 2020 – more than triple the range of 2011.⁹

Those improvements have come even as the cost of EVs has declined. A 2020 report by *Consumer Reports* found that the lifetime per vehicle ownership costs of the most popular EV models – including fuel and maintenance costs – are thousands of dollars lower than those of comparable

gasoline-powered vehicles, with typical savings of \$6,000 to \$10,000.¹⁰ Further reductions in battery costs could bring the upfront costs of EVs down to the level of gasoline-powered vehicles by the mid-2020s.¹¹

Declining costs and improving technology – along with growing concerns about the impacts of fossil fuels on air quality and public health – have led several major automakers to commit to shifting their fleets toward electric vehicles. The Chrysler brand will offer a fully electric lineup by 2028; Volvo will sell only electric cars by 2030; and GM aims to sell only zero-emission light-duty vehicles by 2035.¹²

In 2023, the Biden administration made a further commitment to EVs, proposing new tailpipe emission standards that could lead to as many as two-thirds of all new light-duty vehicles sold by 2032, and half of all new vocational vehicles such as buses and refuse trucks, being zero-emission.¹³ These new standards, if implemented, will further increase the number and variety of electric vehicles available to government agencies for their fleets.

New electric vehicle models are being introduced every year

Electric alternatives currently exist for many vehicles in state and local fleets. As of March 2023, there were 40 models of light-duty electric vehicles available in the United

States.¹⁴ Whereas the first electric vehicles to become available in the United States were small cars, the past several years have seen an increasing variety of the kinds of pickup trucks and vans that are mainstays of many state and local fleets.

The Ford F-150 pickup is not only America's top-selling vehicle, but it is also one of the vehicles most often owned and operated by governments.¹⁵ A recent survey of 10 Arizona municipal fleets found that 1 in 5 light-duty vehicles in those fleets was an F-150.¹⁶ The 2022 release of the Ford F-150 Lightning was a watershed moment in the history of electric vehicles, promising not just clean electric travel but also onboard energy storage capacity and the ability to provide remote power to worksites.¹⁷

There are fewer models of large pickups and vans currently available, but that, too, is beginning to change. The first shipment

of the Ford E-Transit, the electric version of the best-selling commercial van in America, took place in February 2022.¹⁸ Three models of the vehicle are available – the cutaway, chassis cab and cargo van – with three roof heights and three body lengths, and with a maximum payload (the total amount of weight the vehicle can carry) of 4,513 pounds depending on model and configuration.¹⁹ The 2023 model year versions of the vehicles boast a projected range of 108 to 126 miles.²⁰

An array of new pickup options is also on the way. In addition to the Ford F-150 Lightning EV, Chevrolet is planning to release an electric version of its Silverado pickup in model year 2024, with a starting price of \$41,595 and a travel range of up to 450 miles.²¹ Towing capacity varies by model, from 8,000 pounds to 10,000 pounds; Chevrolet intends eventually to produce

Photo: Diego Lopez/Northern Colorado Clean Cities, via National Renewable Energy Laboratory/U.S. Department of Energy



The number of electric vehicle models on the market is expanding rapidly – including Ford E-Transit electric vans, which debuted in model year 2022.

a vehicle with a 20,000-pound towing capacity to the lineup.²² GMC also offers an EV version of its Sierra pickup.²³ The Toyota Tacoma EV is scheduled for a 2024 release.²⁴

The market for electric cars is evolving as well. Early market stalwarts such as the Nissan Leaf and the Chevrolet Bolt (scheduled to be phased out by the end of 2023), have been joined by newer options such as the top-selling Tesla Model Y and Model 3, Kia's EV6 and Niro, and the Nissan Ariya.²⁵ Automakers are planning to roll out a wide variety of new electric sedans, hatchbacks, crossovers and small SUVs, including options likely to be affordable to municipal and state governments.²⁶ Chevrolet plans to introduce the Equinox EV in model year 2024, a compact SUV comparable to the Chevy Bolt.²⁷

Electric options also exist for many medium- and heavy-duty vehicles in

municipal fleets, with more on the way. The U.S. Department of Energy lists dozens of battery-electric medium- and heavy-duty vehicles available to buyers.²⁸ In addition to the rapidly increasing array of transit and school buses, there are now electric versions of freight trucks, cargo vans, garbage trucks, tractors, and other heavy-duty vehicles and equipment available to municipalities.

Even first responders, with their demand for reliable, high-performance vehicles, have access to an increasing number of options, from patrol vehicles to fire engines.²⁹

Because the light-duty segment of the fleet marketplace is the most mature and offers the greatest range of options at a reasonable cost, the analysis in this report focuses on that segment of the market. That does not mean, however, that attractive options do not exist to electrify other segments of municipal fleets.

Electrifying government fleets can save taxpayers billions of dollars

GOVERNMENT AGENCIES spend billions of dollars each year to buy, fuel and maintain fleet vehicles. Operation and maintenance costs for state vehicles across the country are estimated at \$2.5 billion per year.³⁰

Electrifying state and local government fleets can dramatically reduce expenditures for vehicle fuel and maintenance, while incentives now available under the Inflation Reduction Act significantly reduce the upfront cost of buying electric vehicles. As a result, electrifying state and local government fleets can result in big savings for taxpayers.

State and local governments own more than 4 million vehicles

State and local governments together own more than 4 million vehicles, ranging from motorcycles to heavy-duty trucks – accounting for about 1 in every 70 motor vehicles in the United States.³¹ Of those vehicles, 54% are trucks (including light-duty trucks such as pickups), 34% are classified as automobiles, nearly 11% are buses, and nearly 1% are motorcycles.³² The states with the largest state and local vehicle fleets (as reported to the Federal Highway Administration) are California, with

more than 560,000 local-, county- or state-owned vehicles, and Texas, with more than 360,000, followed by South Carolina, Florida and Washington.³³

Nearly 900,000 light-duty government vehicles are candidates for electrification in the next decade

Of the more than 4 million state and local fleet vehicles nationwide, at least 878,000 of them are light-duty vehicles that are good candidates for electrification over the next decade, based on our estimated characterization of the nation's state and local vehicle fleet, which was informed by data from fleets in five states and multiple municipalities. (See methodology.)

Vehicles that are identified as potential candidates for electrification in this analysis include:

- Light-duty vehicles in categories for which electric alternatives are currently at production scale (specifically, compact and midsize sedans, and light-duty pickups, SUVs and vans) ...
- ... that will be replaced over the next 10 years (conservatively estimated at half the current fleet), and ...
- ... are not emergency response vehicles.

Table 1 below shows the estimated number of state and local fleet vehicles in each of these categories.

TABLE 1. NUMBER OF VEHICLES DUE FOR REPLACEMENT OVER NEXT 10 YEARS IN CATEGORIES STUDIED

Vehicle type	Number of vehicles
Compact	167,692
Midsize	209,615
Pickup	244,940
SUV	167,004
Van	89,069
All	878,321

Electrifying government fleets over a decade can save nearly \$11 billion in lifetime ownership costs

State and local governments can save billions of dollars in costs over the lifetime of vehicles purchased over the next decade by buying electric as opposed to gasoline-powered vehicles as older vehicles are retired.

To estimate these savings, we used the AFLEET 2020 spreadsheet tool developed by Argonne National Laboratory.³⁴ The AFLEET tool calculates total cost of ownership for vehicles of a variety of fuel types based on inputs of vehicle cost, fuel cost, vehicle efficiency and other factors. (AFLEET 2020 also estimates the differences in air emissions between vehicle types; see “Electrifying state and local government fleets improves air quality,” page 18.)

Specifically, our analysis assumed the following:

- For each vehicle category, we identified a model year 2023 gasoline-powered vehicle and an electric equivalent. For each vehicle, we obtained the current vehicle cost (the manufacturer’s suggested retail price – MSRP – of a base model, unless otherwise noted) and the estimated fuel economy

from the U.S. Environmental Protection Agency (EPA), the vehicle manufacturer, or automotive media sources.

- Gasoline and electricity prices were based on 2021 data from the U.S. Energy Information Administration.
- State and local governments were assumed to be able to take advantage of the Commercial Clean Vehicle Credit created by the Inflation Reduction Act for the entire 10-year period. (See page 15.) No other local, state or federal incentives were included in the analysis.

Excluding one-time costs for installing electric vehicle charging infrastructure (see page 17), total lifetime cost-of-ownership savings for state and local governments resulting from vehicle electrification over the next 10 years could amount to approximately \$10.8 billion. The savings amount to a 14% reduction in the total cost of ownership over the lifetime of the vehicles.

A commitment to shifting to purchases of new electric vehicles would cost state and local governments an additional \$3.6 billion in vehicle costs (in the form of depreciation) over the lifetime of those vehicles – a result of the higher upfront cost of EVs; however, those costs would be more than offset by reduced fuel expenditures (a savings of \$8.6 billion) and vehicle maintenance costs (a savings of \$6.9 billion). (See Table 2.)

TABLE 2. TOTAL-COST-OF-OWNERSHIP SAVINGS FOR GOVERNMENTS FROM ELECTRIFYING LIGHT-DUTY VEHICLES OVER 10 YEARS

Type of savings	Savings, in billions
Depreciation	-\$3.55
Fuel	\$8.55
Maintenance	\$6.89
Insurance	-\$1.13
Total cost of ownership	\$10.76

All 50 states could save significantly by electrifying their light-duty fleets. (See Figure 1 below.) The greatest total savings are in California, where purchases of electric vehicles as opposed to gasoline-powered vehicles over the next 10 years would result in nearly \$1.6 billion in lifetime cost savings, followed by South Carolina (\$954 million) and Texas (\$863 million).

In percentage terms, the greatest savings are in western states with high gasoline prices and relatively low electricity prices, led by Idaho with more than 18% savings, followed by Utah, Oregon and Washington.

The greatest source of savings results from electrifying pickup trucks, due to the large numbers of those vehicles that can be found in government fleets. On a percentage basis, the potential savings in the three light-truck classes – pickups, SUVs and vans – is roughly similar, while savings for the compact car category (20%) are significantly higher due to the presence of a relatively low-cost vehicle (the Nissan Leaf) in the category. Lifetime total-cost-of-ownership savings are very sensitive to the upfront cost of the vehicles, underscoring the importance of effective procurement of EVs and of state and

FIGURE 1. LIFETIME SAVINGS TO STATE AND LOCAL GOVERNMENTS OF REPLACING RETIRING VEHICLES WITH EVS OVER NEXT 10 YEARS (MILLIONS)

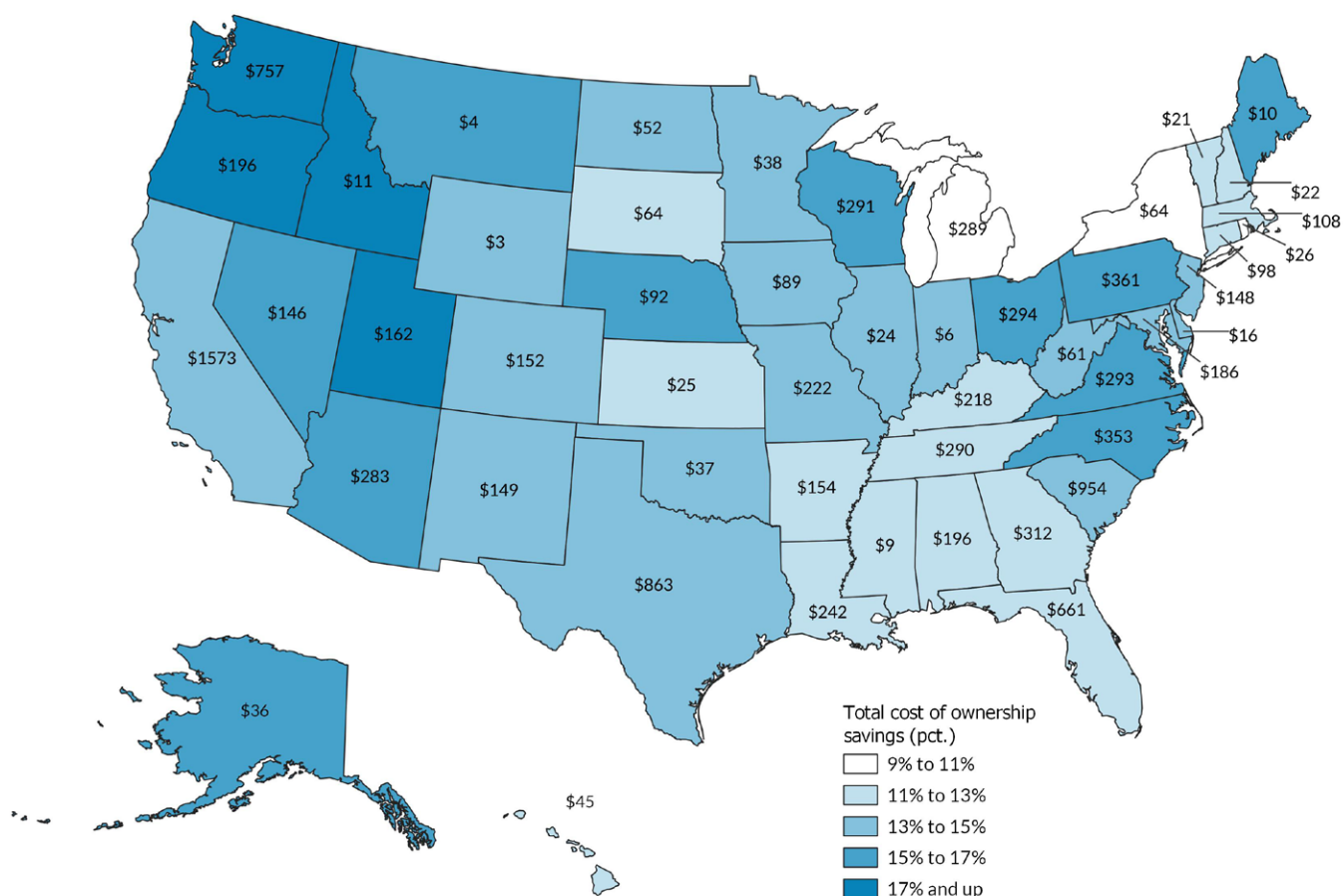


TABLE 3. TOTAL-COST-OF-OWNERSHIP SAVINGS BY VEHICLE CLASS

Vehicle type	Number of vehicles	Total-cost-of-ownership savings (billions)	Total-cost-of-ownership savings (pct.)
Compact	167,692	\$2.29	20%
Midsized	209,615	\$1.93	12%
Pickup	244,940	\$3.42	13%
SUV	167,004	\$2.04	13%
Van	89,069	\$1.08	13%
All	878,321	\$10.76	14%

federal incentives that reduce the cost differential between EVs and conventional vehicles. (See Table 3.)

Inflation Reduction Act incentives make electrification even more attractive

The savings available to states and municipalities through vehicle

electrification are largely due to incentives available under the Inflation Reduction Act (IRA), adopted in 2022 – specifically, the Commercial Clean Vehicle Credit.

The Commercial Clean Vehicle Credit is available to businesses, governments or nonprofits purchasing light-duty or heavy-duty electric vehicles and equipment. For vehicles under 14,000 pounds Gross

State fees on EVs can discourage public sector adoption

As of March 2023, at least 32 states required owners of EVs to pay an additional annual fee. EV fees have become a common tool for states to recoup lost revenue from gasoline taxes, which are, in many states, a major source of funding for transportation.³⁵ In at least some cases, these EV fees are assessed not just to members of the general public, but also to state agencies and local governments, making electric vehicles a less appealing investment for some fleets.

States are split on whether state and local government agencies are subject to EV fees. The state of Georgia, which charges one of the nation’s highest EV fees, of more than \$210/year, explicitly states that the fee is applied to government vehicles.³⁶ Other states, such as Virginia, explicitly exclude government vehicles from the EV fee.³⁷ In several other states, the authors’ efforts to reach out to state officials for clarity on the matter were met with uncertain responses.

State EV fees are excluded from our total-cost-of-ownership calculations, which estimate the aggregate potential savings of electrification to state and local governments. Including those fees – which represent transfers within or across state and local government agencies – in that total cost figure is not appropriate. But, in the states where they are assessed to government vehicles, state EV fees *do* affect agency budgets and can make EV adoption significantly less financially attractive.

Vehicle Weight Rating (GVWR) – that is, light-duty and some medium-duty cars and trucks – the incentive is:

- 30% of the purchase price of the vehicle,
- \$7,500, or
- the difference between the cost of an electric vehicle and a comparable gas or diesel vehicle, whichever is less.

For heavier-duty trucks and equipment, the same incentives apply, except that the cap on the incentive is raised to \$40,000.³⁸

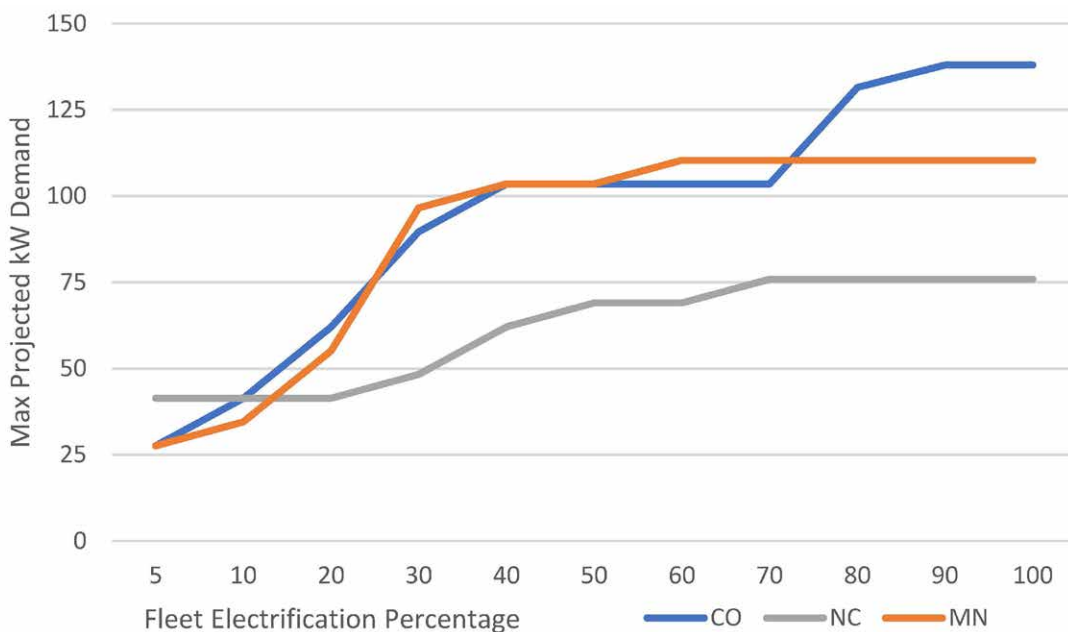
The Commercial Clean Vehicle Credit is not subject to the sourcing provisions that pertain to the individual EV incentives in the IRA (Section 30D). More importantly for state and local governments, the credit will be available via “direct pay,” meaning that entities that do not pay federal taxes (such as state and local governments) will be able to receive the full value of the credit. These two provisions will make it much easier for governments to take full advantage of the

tax credits. The Internal Revenue Service is designing the process for claiming this credit as this report goes to press.³⁹

This analysis assumes that the Commercial Clean Vehicle Credit – scheduled to expire in December 2032 – is available for the full 10-year period studied here. The analysis does *not* include the value of other state, local or utility incentives for public-sector fleet electrification. These incentives can include direct state grants to local governments; allowing local governments to participate in state vehicle purchasing contracts; and other forms of assistance. As a result, savings from fleet electrification may be greater than estimated here. (See “Recommendations,” below.)

The Inflation Reduction Act also included other grant programs that can be used to support state and local government purchases of EVs.⁴⁰ The availability of funding through these programs is not included in our estimates of the cost savings of electrification.

FIGURE 2. CHARGING DEMAND AT DIFFERENT LEVELS OF EV PENETRATION⁴²



Upfront transition costs are significant, but resources exist to help

Transitioning a fleet from fossil fuels to electricity is more complicated than simply switching out one fuel for another. Charging equipment must be installed, electrical service to charging sites improved, maintenance facilities reconfigured, and fleet scheduling and monitoring systems updated to ensure that electric vehicles are well-integrated into fleets.

The good news is that effective planning and smart infrastructure investments can help to achieve economies of scale that spread the initial costs of electrification across multiple vehicles, and even multiple generations of vehicles.

The potential savings from these economies of scale are significant. A 2022 study published by the National Renewable Energy Laboratory looked at the potential for electrification of several state fleets, and specifically the resulting increase in demand for charging at various levels of EV penetration.⁴¹ As can be seen in Figure 2, page 16, the amount of charging demand in two of the three studied fleets increases sharply until 30% to 50% EV penetration, at which point it plateaus (with one state experiencing another bump in demand at 70% penetration). In other words, the majority of the investments that public fleets will need to make in charging infrastructure and electricity supply will need to be made when electrifying the first half of their fleets. Additional EVs beyond that point may largely be able to share existing infrastructure and capacity – enabling governments to spread the upfront cost of those initial investments across a greater number of vehicles.

In addition, there are numerous sources of funding that may be available to local or state governments to support the installation of EV charging infrastructure.

- **Federal:** Incentives for EV charging infrastructure under the 2021 Infrastructure Investment and Jobs Act (also known as the

Bipartisan Infrastructure Law) will help build out the nation's network of publicly available charging facilities. In many circumstances, this public charging infrastructure can also be used by fleet vehicles. The IIJA provided \$5 billion in funding over five years to build out a network of fast chargers along designated alternative fuel corridors and \$2.5 billion to provide grant funding for additional community- and corridor-based expansion of charging networks.⁴³

In addition, the Alternative Fuel Vehicle Refueling Property Credit (Section 30C) provides a credit of up to 30% of the cost of installation of EV charging equipment. The credit is only available for equipment located in low-income or rural census tracts and varies in size depending on whether certain labor conditions are met. Installers of EV charging equipment for governments and nonprofit entities are able to claim the credit and pass along the savings.⁴⁴

Many additional federal funding opportunities to support EV infrastructure are also available; details can be found using the Electrification Coalition's "EV Funding Finder," available at <https://electrificationcoalition.org/ev-funding-finder>.

- **State:** States may offer grants or incentives to support installation of charging infrastructure by local governments. Massachusetts, for example, provides grants covering up to 60% of the eligible costs of installing Level 1 or Level 2 EV charging equipment for government fleets.⁴⁵
- **Utilities:** Some electric utilities also provide incentives for governments seeking to electrify their fleets. In Arizona, for example, the public utility Salt River Project (SRP) offers rebates of \$4,000 per Level 2 charging port for governments, municipalities, schools and nonprofits to help with the installation of networked EV charging infrastructure. SRP also offers up to \$20,000 for fleets to conduct electrification studies.⁴⁶

Recommendations:

A roadmap for electrifying government fleets

ELECTRIFYING STATE AND LOCAL vehicle fleets can deliver significant cost savings for taxpayers while reducing emissions of health-threatening air pollutants. Government adoption of electric vehicles can also help make EVs more familiar to consumers, reducing a key hurdle to broader adoption of EVs among the public.⁵⁶

But electrifying a state or municipal fleet is not as easy as simply swapping out one type of vehicle for another – states and local governments also need to plan for how and where the vehicles will charge, as well as ensure that EVs are well-integrated into fleets and are able to perform all the tasks that government agencies require them to perform on behalf of the public.

To start, state and local governments should take the following steps:

Make bold commitments and stick with them

Governments will be more likely to gain the full benefits of electrification by setting bold goals and sticking with them. Adopting a bold goal – such as committing to purchasing electric vehicles whenever they are available – enables governments to maximize the benefits of investments in EV charging infrastructure (see page 17), and allows for an orderly, predictable,

phased-in approach to transitioning the fleet to electricity. Moreover, the adoption of such a goal sends a message to fleet managers, agency leaders, and others in municipal or state government that there is commitment behind electrification, allowing employees to focus on the task of how best to integrate EVs into fleets.

Develop a detailed fleet electrification plan

To ensure that electrification proceeds rapidly and without disruption, state and local governments should engage in detailed planning for the fleet transition that includes all relevant government offices and agencies. At minimum, this should include agencies responsible for vehicle procurement and maintenance, fleet operations management, facilities management, utility purchases and government operations. A fleet electrification plan should include a detailed evaluation of the existing fleet, identifying the best near-term candidates for replacement with electric vehicles (including those vehicles that are driven the most miles and could deliver the greatest savings in fuel and maintenance costs), and a detailed assessment of vehicle use and likely charging patterns to guide decisions regarding EV infrastructure investment. To the extent that local or state budget cycles

or existing regulations create barriers to electrification, the plan should also include recommendations for adapting to or working around those constraints.

Publicly available tools exist to help state and local government agencies assess the benefits of fleet electrification and target those vehicles that are the best candidates for replacement with EVs. The Dashboard for Rapid Vehicle Electrification (DRVE) tool, produced by the Electrification Coalition and Atlas Public Policy, is a desktop Excel-based tool that allows fleet managers to evaluate the potential costs and savings of electrification at scales ranging from an entire fleet to an individual vehicle. The tool can be found at <https://electrificationcoalition.org/resource/drve>.

Developing a fleet electrification plan can also enable government agencies to take a fresh look at their fleet operations to identify opportunities for greater efficiency. Governments may use the planning process to reevaluate, for example, whether the vehicles currently deployed in their fleets are the best vehicles for the purpose, whether those vehicles are being fully utilized, and whether there may be opportunities to share vehicles and facilities across employees or departments, which can result in additional savings for taxpayers.

Cooperate across fleets and government agencies

There are considerable benefits to cooperation for governments and agencies that are electrifying their fleets. Governments can learn from one another's experiences with electrification, share resources and information, achieve cost savings by pooling purchases of vehicles and equipment, and advocate for policies that eliminate barriers.

In some states, municipal governments may be eligible to purchase vehicles made available under state procurement contracts, potentially enabling significant cost savings.⁵⁷ Municipalities can also take advantage of existing networks of cities and towns, such as the nationwide Climate Mayors Electric Vehicle Purchasing Collaborative, which can help provide planning guidance and support, models for electrification, and discounts or other tools to reduce costs and streamline the process of procuring charging infrastructure.⁵⁸

Take full advantage of utility, state and federal incentives

There are a number of incentives available for government agencies seeking to “go electric.” As noted earlier, the Commercial Clean Vehicle Credit available under the Inflation Reduction Act provides a powerful financial incentive for the purchase of light-duty and heavy-duty electric vehicles, while federal funding to expand the nation's EV charging network could benefit fleet operators that depend on the ability to charge their vehicles in the field or that rely on public charging networks. States and utilities may offer both financial incentives and technical assistance to governments seeking to electrify their fleets. In Arizona, for example, the state's largest public utilities offer technical assistance to public and private entities seeking to electrify their fleets, while in Massachusetts, the state offers similar technical support to private fleets.⁵⁹

State and local governments should work to identify available incentives and take full advantage of them, while also exploring opportunities to offer generous incentives and support to public and private fleets, and to individual residents seeking to electrify their vehicles.



CITY OF EASTHAMPTON • MASSACHUSETTS
OFFICE OF THE MAYOR
Nicole LaChapelle

March 28, 2023

IMMEDIATE RELEASE

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Mayor Nicole LaChapelle Partners with MoveEV to Become First Mayor in U.S. to Offer an Employee Benefit for EV Adoption and Transition all City-Owned Vehicles to Electric Vehicles

Easthampton, MA - Mayor Nicole LaChapelle has partnered with [MoveEV](#), an AI-powered green technology solution that aims to make electric vehicle (EV) adoption practical and affordable for municipalities and municipal employees. As part of this partnership, MoveEV is giving Easthampton's employees a benefit that enables them to switch to EVs while simultaneously transitioning all municipal-owned vehicles to electric. This is a significant development for the region as it strives to achieve its comprehensive Climate Action Plan, which targets net-zero carbon emissions by 2040. The EV initiative will help Easthampton's city-owned vehicle fleet save roughly \$360,000 annually on gas and eliminate 600 MTCO₂ in the next five to ten years. An Earth Day event will mark the beginning of Easthampton's 100 percent EV transition.

The partnership with MoveEV has immense economic and environmental savings potential for the city of Easthampton and its employees. Collectively, city employees could claim up to \$3 million in federal and state incentives and save \$900,000 on gas annually by switching to EVs. Swapping out these vehicles for clean EV alternatives cuts an average of 4.7 metric tons of carbon dioxide (MTCO₂) a year per vehicle and collectively could remove 1,500 MTCO₂ annually. The planned transition over the next 5-10 years for the city's fleet vehicles should save the city \$360,000 a year on gas alone and will remove 600 MTCO₂ annually.

"We are excited to partner with MoveEV to help Easthampton reach our sustainability goals. In a fast-moving industry, this public-private partnership with MoveEV gives Easthampton the technical support necessary to move toward vehicle decarbonization," said Mayor Nicole LaChapelle. "Electric car by electric car, the City will see a measurable material impact - environmental and financial - while leveraging government and private incentives."

The announcement coincides with the city of Easthampton's Earth Day event for employees, which will take place on April 20th. It is an essential and concrete step toward the city's

commitment to local carbon reduction. The event will be held at City Hall, 50 Payson Avenue, from 12 pm-4 pm and is open to all municipal employees with remarks from Mayor LaChapelle and MoveEV CEO David Lewis at 1 p.m. and 3 p.m.

"We are thrilled to be working with the City of Easthampton to help them halve their emissions by 2030," said MoveEV's founder and CEO, David Lewis. "Electric vehicles are a game-changer for the environment and will save the city and its taxpayers a tremendous amount of money. With the combination of MoveEV's fleet and HR programs, we are confident that Easthampton will be a leader in helping Massachusetts reach its sustainability goals."

Municipal employees who attend the event at City Hall will be able to test-drive electric vehicles on-site. At the event, the MoveEV portal for employee benefits will be presented, assisting employees in comprehending the financial and environmental effects of their current gas vehicles and commuting behaviors. The portal offers an easy-to-use, personalized, sequential process for employees to make the transition to an electric vehicle and take advantage of government incentives at the federal, state, and local levels. MoveEV's conversion planning and management software walks employees through the EV adoption process, including calculating the value of switching to an EV, suggesting the right vehicle, monitoring supply, order placement and delivery, installing charging, and filling out incentive paperwork.

The need to pursue sustainable and climate-conscious initiatives, such as the partnership between Easthampton and MoveEV, has been a focus for the Easthampton community since the City Council passed a resolution declaring a climate emergency in 2021.

For more information on MoveEV/Easthampton's sustainability initiative, visit, <https://easthamptonma.gov/736/5398/MoveEV-Fleet-Electrification>

About MoveEV

MoveEV is an AI-driven green tech solution that helps organizations and municipalities accelerate electric vehicle (EV) adoption, reduce their carbon footprint, save money, and achieve net-zero emissions targets by 2035. MoveEV offers software and services for both fleet and employee vehicle electrification.

- MoveEV provides AI-backed fleet conversion, planning, and management software for fleets, with a team of experts and project managers overseeing the entire process. They also offer new KPIs and metrics for reporting to constituents on the transition, vehicle GHG emissions reductions, cost savings, and future charging infrastructure needs.
- For employees, MoveEV offers a groundbreaking HR benefits solution that guides employees through the entire EV adoption process, including finding the right vehicle, monitoring supply chain issues, suggesting appropriate charging, and navigating applicable incentives.



CITY OF
TUCSON

ELECTRIC VEHICLE READINESS ROADMAP

2022



Prepared by The Office Of Tucson Mayor



MAYOR

Regina Romero

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Introduction

Climate change is a threat to our public health, economy, environment, and our way of life. As the third fastest warming city in the U.S., the City of Tucson ("The City") is committed to becoming a climate resilient city, while centering frontline communities most impacted by climate change.

On September 9, 2020, Mayor and Council adopted Resolution 23222 - Climate Emergency Declaration that commits The City to reach carbon neutrality by 2030 and identifies electrification of both the public transit and City fleets as one pathway toward meeting that goal.

Electric Vehicles (EVs) have emerged as a key climate strategy to reduce greenhouse gas (GHG) emissions from the transportation sector, the largest source of carbon pollution in the U.S. The transportation sector is responsible for more than 28% of the United States' GHG emissions, of which 59% comes from light-duty vehicles¹ alone. In Pima County, transportation contributes about one-third of total annual GHG emissions (Regional Greenhouse Gas Inventory, 2014-2019, PAG).

When considering solutions, electric vehicles will assist in mitigating the worst impacts of climate change The City will face, while providing numerous consumer protections if implemented correctly. Accelerating the adoption of EVs in Tucson advances several Plan Tucson and Resolution 23222 goals and realizes multiple economic, public health and environmental and socioeconomic benefits, including:

¹ Light-duty vehicles include sedans, SUV's and light-duty trucks that weight under 8500 pounds.

- **Reduced GHG and harmful tailpipe emissions** that cause and exacerbate respiratory diseases. Communities of color and other vulnerable populations often face increased health burdens from pollution. Increasing EVs in these communities can help address environmental injustice.
- **Achieved greater efficiency** compared to gasoline powered internal combustion engines, light-duty electric vehicles can travel the same distance using approximately 30% less energy.
- **Reduced fuel and maintenance costs**, EVs drivers pay the equivalent of \$1.15 per gallon to recharge their vehicles. Fewer moving parts means lower annual maintenance costs and no oil changes.
- **Lower total cost of ownership**, EVs have a lower total cost of ownership than gasoline vehicles and the higher upfront cost is quickly offset by their lower fuel and maintenance cost. Additionally, the upfront cost of EVs is expected to reach parity with conventional vehicles by the mid-2020s as battery prices decrease.
- **Increased locally produce energy source**, Arizona does not have oil refineries and all its motor gasoline is imported by pipeline from California and Texas. As Arizona transitions its transportation fuel source from gasoline to electricity, those energy dollars stay in the regional economy.
- **Stimulate the local economy**, EVs will create jobs in engineering, construction, and electrical work.

There has been an increasing movement towards vehicle electrification across the nation. One of the biggest drivers of EV innovation and adaptation is public policy that aims to mitigate greenhouse gases, spur economic development, and address Arizona's prevailing issues with ground-level ozone pollution non-attainment.

Per the Arizona Corporation Commission (ACC), in Decision No. 772894, Arizona Public Service (APS) and Tucson Electric Power (TEP) developed a statewide Transportation Electrification Plan, through which they committed to help bring over one million electric vehicles to the state by 2030. Locally, TEP has committed to generate 70% of its energy with renewable resources by 2035 (Integrated Resource Plan, TEP).

Over the years, The City has made significant progress in moving away from gasoline and diesel fuel vehicles. The largest gains have been made in transitioning diesel vehicles in the transit and refuse fleets. Sun Tran has 90 Compressed Natural Gas (CNG) buses, and 5 electric buses as part of their fleet, with 5 more electric buses on their way. More than 85% of the refuse fleet now operates as CNG which significantly lowers GHG emissions. There is a total of 44 hybrid fleet vehicles in addition to the 2 electric fleet vehicles in The City's inventory.

However, an integrated and holistic approach is needed to fully transition to zero emission vehicles and advance the adoption of EVs in the community as well as The City's operations. Ensuring The City is "EV-Ready" is a community effort that requires supportive planning, partnerships, policies, infrastructure development, and education and outreach.

This **Electric Vehicle Readiness Roadmap** is a tool for the City of Tucson to investigate the actions that it can take to support EV adoption in the community. Cross departmental collaboration and partnerships with community members and other stakeholders will be vital to the success of this Roadmap. The Roadmap includes a vision, goals, and clearly defined roles for City departments, public and private partners, and the Tucson community.

VISION



The City of Tucson is a leader in clean, convenient, and affordable transportation that is accessible to historically underserved communities and it is powered by locally sourced clean and renewable energy. Tucson is a city where residents, businesses, and visitors will choose electric vehicles over conventional fuel vehicles.

GUIDING PRINCIPLES

To achieve this vision, and in alignment with Arizona Thrives Alliance, the City of Tucson is committed to solutions that:

- **Promote clean air:** Clean air that protects public health, our natural environment and sustainable economic growth.
- **Accelerate clean energy:** Energy that is affordable, reliable and carbon neutral.
- **Prove effective:** Solutions that are integrated, durable, credible, and actionable.
- **Benefit economy wide:** Innovation in how we move, where we live and work, and how we power our economy while limiting adverse impacts in our communities.
- **Ensure a healthier future:** A process that values equity, access, and healthier communities and environment.

GOALS

City Government

- Transition 100% of the City light-duty vehicle fleet to electric by 2030.
- Increase the stock of zero emissions battery powered transit to 90% by 2030.
- Invest in the charging infrastructure needed to support EVs in the City fleet and provide adequate workplace charging for municipal employees.
- Increase awareness and use of personal EVs among City employees.

Community-wide

- Support school districts increase the stock of zero emissions battery powered school buses.
- Increase the use of EVs over gasoline and diesel fuel vehicles in the region.
- Improve awareness of EV purchase, operation, and the life-time costs and benefits among residents, businesses, and visitors to Tucson.
- Make EVs and charging infrastructure accessible and equitable to a broad range of users, including historically underserved communities, by making it easier to purchase, charge, operate, and ride an EV.
- Integrate EVs with a renewably powered electric grid to minimize heat trapping gases and air pollutants, maximize energy system resilience, and reduce costs to City of Tucson residents, businesses, and government.
- Create well-paying jobs with few educational barriers that support local communities and the growth of the EV industry in Tucson.



STRATEGIES

To advance and achieve these goals, The City needs to institute a series of strategies that address Arizona's barriers and opportunities for EV adoption.

The EV-Readiness strategies include actions, lead department, partners, timeline, budget, level of effort and potential impact.

- **Actions:** A series of actions to advance the strategy
- **Lead Department:** Lead department responsible for initiating and owning the strategy.
- **Partners:** Key partners who will need to be consulted to move forward with related actions.
- **Timeline:** Suggested timelines for when a strategy should be implemented. While start and stop times are not always listed, timelines indicate when a strategy should actively be pursued or is scheduled to be pursued.
- **Budget:** Funding, other than staff time, needed from the City to complete the strategy. Budget is noted using a low, medium, and high indicator. Budget level is relative among the strategies.
- **Level of Effort:** Staff time and work needed to complete the strategy. Level of effort is noted using a low, medium, and high indicator. As with budget, level of effort is relative among the strategies.
- **Potential Impact:** A gauge of the extent to which the completion or achievement of a strategy will affect the Roadmap goals. Potential impact is noted using a low, medium, and high indicator. Because there are many factors that determine success, the Roadmap does not identify impact in terms of emissions reduction or other quantifiable metrics

March 9, 2023
FOR IMMEDIATE RELEASE

Scranton Unveils Fleet of Electric Vehicles

Pennsylvania Department of Environmental Protection grants and American Rescue Plan Act funds used to lease 10 2023 Chevrolet Bolt EVs, build electric vehicle charging stations.

IMPORTANT

- **The 2023 Chevrolet Bolt EVs have an Environmental Protection Agency estimated 259-mile range on a full charge.**
- **Additional electric vehicle charging stations to be installed in the Linden Street garage.**
- **ARPA funds totaling more than \$270,000 and DEP grants totaling more than \$120,000 used for vehicle leases and charging stations.**

SCRANTON, PA. – Members of the Pennsylvania Department of Environmental Protection (DEP) joined Scranton officials as they unveiled the City’s new electric vehicle fleet on Thursday. Vehicles are on lease and will be used exclusively by the Code Enforcement Office. The five-year leases for the 10 2023 Chevrolet Bolt EVs were funded through a PA DEP grant and a portion of the City’s American Rescue Plan Act (ARPA) award.

“Scranton gained its nickname, the Electric City, as the home of the first electric trolley lines,” Mayor Paige G. Cagnetti said at Nay Aug Park, 500 Arthur Ave., Scranton. “Today feels like the first step in transforming Scranton into the Electric Vehicle City. By making smart investments in environmentally friendly practices, we can address climate change issues right here in northeast Pennsylvania.”

“The Shapiro Administration is committed to growing the Commonwealth’s economy while protecting Pennsylvanians’ constitutional right to clean air and pure water,” added Pennsylvania DEP Acting Secretary Rich Negrin. “Scranton is among a growing number of municipalities in Pennsylvania that want to lower their transportation emissions. We’re excited for the Electric City and pleased to support their transportation electrification goals to improve air quality, address climate change, and increase the use of renewable energy.”

In April 2022, then-Pennsylvania Gov. Tom Wolf announced the City’s receipt of \$75,000 for its electric vehicle fleet and \$45,642 for vehicle charging stations from DEP’s Alternative Fuels Incentive Grant program.

In a spending plan approved by City Council in May 2022, the City allocated \$225,052 and \$45,000 in ARPA funds to support the electric vehicles and charging stations, respectively. Charging stations will be installed in the parking garage at the intersection of Linden Street and North Washington Avenue. Plans to continue providing public access to the stations during the day and for the recharging of City vehicles overnight are being developed.

According to the U.S. Department of Energy's Alternative Fuels Data Center, all-electric vehicles like the Chevrolet Bolt have significant emissions benefits over conventional vehicles, producing zero tailpipe emissions.

Northeast Pennsylvania's greatest concentration of alternative fueling stations already exists in Scranton, according to the Department of Energy's maps. Charging stations are in place in the City's Linden, Connell, Casey, and Medallion garages, but the pending addition of 10 new charging stations will improve accessibility for environmentally conscious drivers who work and shop in Scranton's downtown.

Developing sustainable infrastructure in support of climate change mitigation and adaptation is one of the core infrastructure goals of Mayor Cignetti's strategic development plan.

ABOUT THE AMERICAN RESCUE PLAN ACT (ARPA) OF 2021: ARPA is a \$1.9 trillion federal economic stimulus bill. The City of Scranton has been awarded \$68.7 million in ARPA funds to respond to the COVID-19 public health emergency and its economic impacts. The mission of Scranton's ARPA program is to give people access to resources, rebuild the infrastructure systems that impact their everyday lives, and foster equitable wealth generation that targets the needs of Scranton residents. More information about Scranton's ARPA plan is online at scrantonpa.gov/arpa.

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