



EV Smart Fleets

PUBLIC SECTOR FLEET EV PROCUREMENT EXAMPLES

A CASE STUDY OF THREE ALL-ELECTRIC VEHICLE PROCUREMENTS
CONDUCTED BY THE U.S. NAVY, CITY OF NEW BEDFORD (MA), AND CITY
OF SEATTLE (WA)

June 2017

A NATIONWIDE INITIATIVE TO ACCELERATE ELECTRIC VEHICLE ADOPTION IN PUBLIC FLEETS

ABOUT EV SMART FLEETS

Public fleets are realizing significant benefits from the deployment of plug-in electric vehicles (EVs), and many public fleets want to 'lead by example' by showing the public the benefits of transitioning to EVs. Although EVs are increasingly becoming a cost-effective and viable opportunity for fleets, higher purchase costs, complex procurement processes, and insufficient charging infrastructure remain barriers to adoption.

EV Smart Fleets seeks to overcome these challenges and increase state and local fleet EV adoption by educating public fleets about EV benefits, conducting research on important elements for a new vehicle procurement, and developing a multi-state EV solicitation and procurement agreement. EV Smart Fleets goals include:

- Accelerate electric vehicle adoption by public fleets
- Lower the purchase price of electric vehicles for public fleets by at least 15% through volume purchases and creative financing and ownership tools
- Increase access to a wider range of electric models

EV Smart Fleets will also seek to improve access to EV charging stations for public fleets.

CLEAN CITIES COALITION PARTNERS

Clean Cities Coalitions nationwide will play an integral role in this project. Below are the current project partners:

- Columbia-Willamette Clean Cities Coalition
- Denver Metro Clean Cities Organization
- Granite State Clean Cities Coalition
- Long Beach Clean Cities
- New Jersey Clean Cities
- Greater New Haven Clean Cities Coalition
- Ocean State Clean Cities
- Sacramento Clean Cities Coalition
- Western Washington Clean Cities

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PROJECT TEAM



EXECUTIVE SUMMARY

The deployment of electric vehicles (EVs) helps fleets to reduce air pollution from vehicle emissions and lower operating costs associated with maintenance and fueling. However, EV procurement by fleets has been limited by the higher up-front purchase costs and lack of availability of EVs compared to their gasoline counterparts, as well as the availability of charging infrastructure. Despite the existing barriers, many state and local public fleets have successfully integrated EVs to their fleets, and several have used innovative procurement strategies to reduce the acquisition costs of electric vehicles.

This case study explores EV procurements conducted by the U.S. Navy, the City of New Bedford in Massachusetts, and the City of Seattle in Washington state—examples of public fleet procurements that captured federal or state financial incentives to reduce the vehicles' upfront cost.

To achieve significant cost savings, the fleets included in this case study designed procurements to take advantage of available incentives from federal and state governments and automakers. While the incentives may not be available in every jurisdiction and are a limited resource, these incentives are just one of the factors driving fleet EV procurements. For example, the New Bedford and Seattle EV procurements were also motivated by fleet and government goals for vehicle electrification and emissions reductions. Recognizing that procurements of EVs may be structured to accommodate the requirements, motivations, and available resources of public fleets, the case study also explores the cost savings and vehicle ownership options available from different procurement structures.

Table 1 summarizes the structure and elements of the U.S. Navy, City of New Bedford, and City of Seattle public fleet procurements. The following case studies then provide background and procurement details for each jurisdiction. The criteria analysis sections consider how the procurements address the stated objectives of the EV Smart Fleets effort, which are to 1) achieve cost savings for fleets, 2) be replicable in future years, 3) be useful to a wide variety of public fleets, and 4) increase a fleet's access to a wider range of plug-in hybrid and all-electric vehicle models. Each fleet procurement is assessed through these criteria and a brief assessment is included to highlight the opportunities and barriers associated with these procurements.

TABLE 1: PROCUREMENT OVERVIEW

Fleet	United States Navy & Marine Corps	City of New Bedford, MA	City of Seattle, WA
Description	The Navy Facilities Engineering Command in California released a request for proposal (RFP) for EVs in 2016 to procure between 400 and 600 all-electric vehicles in a commercial lease to capture the federal tax incentive. The winning contractor, AutoFlex AFV (lessor), is now delivering vehicles.	The City of New Bedford developed its own solicitation and procured 10 Nissan LEAFs in 2015 for the City's Health Department. The City then followed with three additional procurements for a total of 13 Nissan LEAFs for other City departments using the statewide vehicle procurement contract.	The City of Seattle has purchased nearly 80 Nissan LEAFs, approximately half of which have been purchased off the state's vehicle contract. Starting in 2016, Nissan began providing a corporate discount of \$10,000 per vehicle that incorporated the federal EV tax credit. As of June 2017, the incentive was still available.
Ownership Structure	Commercial lease, closed-end with base period and option to renew.	Municipal lease; the City has three end-of-lease options: (1) return the vehicle; (2) extend the lease; or (3) purchase the vehicle.	Purchase
EV Models Procured	Ford Focus Electric	Nissan LEAF	Nissan LEAF
Contract Type	One-time contract	One-time contract	Open (Washington State Nissan Contract)
Incentives used	The lessor is anticipating a successful application for the federal EV tax incentive and this has been used to reduce lease costs. Thirty of the vehicles would also be eligible for a California state rebate for fleets if the lease lasts 30 months or longer.	Both in 2015 and 2016 the city used the Massachusetts state incentive for public fleets (\$7,500) and received the benefit of the federal EV tax incentive (\$7,500). As of June 2017, the Massachusetts state incentive was still available.	Beginning in 2016, Nissan Corporate provided a \$10,000 discount for the purchase of LEAFs that included the federal EV tax credit.

UNITED STATES NAVY & MARINE CORPS

BACKGROUND

On January 5, 2016, the Navy Facilities Engineering Command released a solicitation request for proposal (RFP) to procure 400 to 600 all-electric vehicles through a commercial lease that captures the federal electric vehicle (EV) tax credit.¹ Proposals were evaluated on price, past performance and relevant experience, small business utilization, and management/technical approach. The winning contractor was leasing company AutoFlex AFV, which is now delivering vehicles to the Navy in California. The federal government was interested in a commercial lease through General Service Administration (GSA) Schedule 7512 that could leverage public incentives. This approach required an open market procurement rather than a procurement through the GSA leasing program, resulting in a lease where the vehicle title is owned by a taxable entity (AutoFlex AFV).

PROCUREMENT DETAILS

The Navy contracted with AutoFlex AFV to lease 426 Ford Focus all-electric vehicles. The lease is a Fair Market Value (FMV), closed-end lease and does not require the Navy to purchase the vehicles at the end of the term.³ AutoFlex holds title to all vehicles during the lease term. The Federal government can self-insure, which costs much less than third-party insurance. Vehicles are delivered from the automaker to dealers certified to service EVs. AutoFlex directs vehicle deliveries through its dealer network to Ford dealers in California that are able to accept EV deliveries. AutoFlex then delivers vehicles directly to the Navy once they have been prepared for use by the dealer. The basic contract period is for 12 months, and the Navy then has two 12-month options to extend the contract for a maximum duration of 36 months. The Navy can return vehicles after the base period or after subsequent options are concluded. At the end of the lease term, AutoFlex plans to resell the vehicles in secondary markets. During the lease, maintenance is the responsibility of the Navy, but AutoFlex helps organize annual preventative-maintenance inspections once per vehicle as an additional service. AutoFlex also offers emergency roadside assistance, collects lease finance data, and monitors vehicle performance based on lease customer feedback and automaker maintenance service records, which are available from EV-authorized auto dealer subcontractors.

AutoFlex may be able to capture and pass on the federal EV tax credit; however, AutoFlex does not have any documentation from the U.S. Internal Revenue Service (IRS) that assures their ability to capture the tax credit. AutoFlex has consulted tax professionals and the IRS directly and has been assured that the company will be able to capture the full value of the tax credit (\$7,500 per vehicle) so

¹ GovTribe website: <https://govtribe.com/project/100-electric-vehicle-lease-for-navfac-southwest-aor>

² GSA Schedule 751 is a mechanism that allows federal agencies to contract with commercial leasing companies.

³ FMV closed-end lease: Where the lessee has the option to either continue the lease at the FMV renewal rate after the base period or to end the lease term and return the vehicle. The lessor assumes depreciation risk for the term of the contract and the lessee has no obligation to purchase the vehicle at the end of the lease term.

long as it is available.⁴ It is AutoFlex's understanding that as a leasing company they can exercise the tax credit in a lease to a government agency, because AutoFlex will be the title holder. Given that the tax credit is awarded at the discretion of the IRS and can only be exercised during the tax year in which the vehicles were put in service, uncertainty exists as to whether the credit will be captured. AutoFlex indicated that it anticipates capturing the tax credit, and that any other scenario would be assessed and addressed. Most of the expected value of the federal EV tax credit was deducted from the lease cost; AutoFlex modelled the distribution of the credit after solar tax credit transactions.⁵ AutoFlex has also advised the Navy to take advantage of the California state rebate, which can be applied to up to 30 vehicles, so long as the lease term lasts at least 30 months.

PROCUREMENT CRITERIA ANALYSIS

- *Achieve cost savings for fleets:* Allowing self-insurance reduces costs compared to third-party insurance. The preventive maintenance services may also lower operating costs for the fleet. Leasing vehicles through a third-party can enable the capture of state and federal tax incentives for nontaxable entities, which can lead to significant savings. Even though fleets have been successful in capturing tax incentives, there is risk that these incentives cannot be captured due to uncertainties over tax liability and the availability of tax incentives.
- *Be replicable in future years:* The cost savings in the procurement are highly dependent on the capture of the federal EV tax credit, and the future availability of the tax credit would need to be considered. In addition, the FMV lease is an operating lease, which will no longer be possible for public fleets beginning in 2019, thereby discouraging this lease structure in the future.⁶
- *Be useful to a wide variety of public fleets:* Many public fleets do not practice leasing and instead prefer to purchase vehicles outright due to fleet specific policies and preferences. For other fleets, leasing can provide predictable expenses and lease terms can be customized to fit a fleet's usage. Additionally, some fleets have their own in-house maintenance services, and may not benefit from a procurement that includes preventative maintenance services.
- *Increase a fleet's access to a wider range of plug-in hybrid and all-electric vehicle models:* This procurement does not increase EV model availability unless the vehicle model can only be leased (e.g., hydrogen fuel cell Toyota Mirai).

⁴ Interview with AutoFlex AFV on February 22, 2017.

⁵ 26 U.S. Code § 48C - Qualifying advanced energy project credit: <https://www.irs.gov/pub/irs-pdf/i3468.pdf>

⁶ In February 2016, the Financial Accounting Standards Board issued guidance that lessees will no longer be able to keep vehicle leases off their balance sheets so operating leases will no longer be viable. The provision takes effect for public agencies in fiscal years beginning after December 15, 2019 and will result in all existing leases being treated as capital leases, since vehicles will be treated as fleet assets. http://www.fasb.org/jsp/FASB/FASBContent_C/NewsPage&cid=1176167901466

CITY OF NEW BEDFORD, MASSACHUSETTS

BACKGROUND

The City of New Bedford, Massachusetts (the City) has converted more than 30 percent of its 70-vehicle passenger car fleet to all-electric vehicles, making it the municipality in Massachusetts with the highest percentage of electric fleet vehicles. In June 2015, New Bedford procured 10 Nissan LEAFs as the result of an independent municipal solicitation.⁷ In February 2016, the City leased an additional nine Nissan LEAFs through the Massachusetts statewide vehicle contract.⁸ The City switched to the state contract in part because the dealer they had worked with previously was added as a vendor on the state contract. New Bedford's latest procurement was for an additional four LEAFs in December of 2016. The City captured the value of both the federal EV tax credit and state purchase incentive (the Massachusetts Electric Vehicle Incentive Program or MassEVIP)⁹ in the leases for all 23 vehicles. The City's stated goal is to electrify 80 percent of its passenger car fleet by 2025.

PROCUREMENT DETAILS

Prior to issuing the first solicitation, City fleet personnel test drove both the LEAF (battery electric vehicle) and the Chevrolet Volt (a plug-in hybrid electric vehicle). Fleet personnel preferred the LEAF, and in April 2015, New Bedford issued a solicitation for the vehicle. The solicitation was for a 36-month lease agreement, and required as a condition of award that the lease agreement capture the value of the federal tax credit. Four Nissan dealers in Massachusetts offered bids. The criteria for awarding the contract included lowest price, model type with mechanical specifications, contract type (36-month lease), and a minimum maintenance obligation for the City (i.e., tires, bulbs, windshield wipers, and other small items).

Milford Nissan was the winning bidder on the City's solicitation. In June 2015, the City entered into commercial closed-end three-year operating leases for 10 LEAFs with Nissan Motor Acceptance Corporation (NMAC), Nissan's financing arm. NMAC offered a public-sector fleet manufacturer's incentive on each vehicle of \$12,000. Milford Nissan captured the value of the federal EV tax credit, which along with grants from the MassEVIP, further lowered the monthly lease payment. The City also elected to make a single one-time upfront payment of \$26,150 for all 10 vehicles, the equivalent of a \$73 monthly per car lease payment. Under the lease agreement, New Bedford is responsible for minimal maintenance of the vehicles.

Between February and December of 2016, the City acquired an additional 13 LEAFs through the Massachusetts statewide vehicle procurement, VEHg8. At this point, Milford Nissan had become an authorized dealer under the statewide contract as well, and supplied the 13 LEAFs to New Bedford and the quasi-public Harbor Development Commission. The statewide procurement used the same

⁷ City Leases 10 Low-Cost Electric Vehicles: <http://www.government-fleet.com/news/story/2015/06/city-leases-10-low-cost-electric-vehicles.aspx>.

⁸ Mass. City Converts 25% of Fleet to Electric Vehicles: <http://www.government-fleet.com/channel/electric/news/story/2016/08/mass-city-converts-25-of-it-fleet-to-evs.aspx>.

⁹ Massachusetts Electric Vehicle Incentive Program: <http://www.mass.gov/eea/agencies/massdep/air/grants/massevip.html>

commercial three-year closed-end lease terms and conditions as the previous procurement, which included the manufacturer's incentive, the federal EV tax credit, and the MassEVIP incentive.¹⁰

Under the terms of both lease agreements, upon expiration of the lease, the City has the option to renew the lease, return the vehicle, or purchase the vehicle. Leases on the first 10 vehicles will expire in June of 2018, and the City is actively considering its end-of-lease options.

PROCUREMENT CRITERIA ANALYSIS

- *Achieve cost savings for fleets:* As is the case with many public-sector fleets, the City of New Bedford self-insures. Allowing self-insurance reduces costs compared to third-party insurance. Leasing vehicles through a third-party can enable the capture of available state and federal tax incentives for nontaxable public-sector fleets, which can lead to significant savings. There is uncertainty, however, about the continued availability of state and federal incentives, and the ability and willingness of a dealership to take advantage of tax credits, even when available. Working with NMAC, the Nissan's financing arm, enabled the fleet to capture an additional \$12,000 per vehicle fleet incentive in the June 2015 and February 2016 procurements.
- *Be replicable in future years:* The cost savings in the procurement are highly dependent on the capture of the federal EV tax credit, and the future availability of the tax credit and state purchase incentives. In addition, public sector fleets will lose the benefit derived from operating leases in 2019, when the leases will no longer be able to be structured as operating leases. Though NMAC did provide the fleet incentive in consecutive years (2015 and 2016) it is uncertain if NMAC would continue providing an incentive in future procurements.
- *Be useful to a wide variety of public fleets:* Many public fleets have procurement policies that do not allow leasing as an option. For fleets that are able to lease, however, leasing can provide predictable expenses and lease terms can be customized to fit a fleet's usage. In addition, leasing allows fleets to take advantage of newer technology as it evolves. Finally, manufacturer discounts, such as the \$12,000 per vehicle fleet incentive provided by NMAC in the June 2015 and February 2016 procurements are not widely available for all fleets. Working with NMAC would only be a viable practice for fleets that lease.
- *Increase a fleet's access to a wider range of plug-in hybrid and all-electric vehicle models:* This procurement does not increase EV model availability unless the vehicle model can only be leased (e.g., hydrogen fuel cell Toyota Mirai).

¹⁰ Milford Nissan Master Blanket Purchase Order:
<https://www.commbuys.com/bsa/external/purchaseorder/poSummary.sdo?docId=PO-16-1080-OSD01-OSD10-0000006266&releaseNbr=0&parentUrl=contract>

CITY OF SEATTLE, WASHINGTON

BACKGROUND

The City of Seattle is a national leader in fleet EV procurement. In 2014, Seattle updated their Green Fleet Action Plan,¹¹ in which EVs and associated infrastructure play a crucial role in the City's suite of solutions that aim to lower carbon and other atmospheric emissions associated with fleet operations. In late 2016, Seattle rolled out its Drive Clean Seattle Initiative, committing to reduce greenhouse gas emissions from the City's fleet by 50 percent by 2025. The city fleet currently operates approximately 80 battery electric vehicles—all Nissan LEAFs—along with 10 plug-in hybrids, which are a mix of the Toyota Prius Plug-In, Chevrolet Volt, and Ford Fusion Energi.

PROCUREMENT DETAILS

Since 2011, the City of Seattle has purchased Nissan LEAF vehicles through Washington State's Nissan LEAF procurement contract with a local Nissan dealership (contract #08915WA).¹² The vehicles Seattle has procured under this contract represent approximately half of its LEAFs, or about 40 vehicles. The contract is available to public sector and non-profit organizations in Washington and Oregon. Since January 2016, Nissan Corporate has given the dealership \$2,500 per vehicle in rebates to pass along to the purchaser. Nissan was also able to pass along the federal tax credit (\$7,500), so the dealership ended up passing along a total savings of \$10,000 per vehicle for LEAFs procured by Seattle.

The City of Seattle explored a leasing option but was deterred because Nissan required that each vehicle have personal liability insurance through a third-party insurer. Since Seattle self-insures, the cost of third-party insurance would have negated the tax credit savings.

PROCUREMENT CRITERIA ANALYSIS

- *Achieve cost savings for fleets:* The City saved \$10,000 per vehicle by combining the captured value of the federal EV tax credit (\$7,500) with an additional \$2,500 discount from Nissan Corporate.
- *Be replicable in future years:* Seattle believes that EVs will continue to be available on the Washington State contract used to procure the vehicles, but city fleet officials are unsure as to whether capturing the federal tax credit will be a viable long-term option. Additionally, there is no guarantee that Nissan will provide future assistance for capturing the credit, or that Nissan will provide the additional discount.

¹¹ Seattle's 2014 Green Fleet Action Plan: <https://www.seattle.gov/Documents/Departments/FAS/FleetManagement/2014-Green-Fleet-Action-Plan.pdf>

¹² Washington Nissan LEAF Contract: <https://fortress.wa.gov/ga/apps/ContractSearch/ContractSummary.aspx?c=08915WA>

- *Be useful to a wide variety of public fleets:* The Washington State contract mechanism is available to public and non-profit fleets in Washington who have signed the Master Contract Usage Agreement, as well as some similar, qualifying organizations in Oregon. Additionally, discounts from Nissan Corporate are uncommon and would have to be organized for each procurement.
- *Increase a fleet's access to a wider range of plug-in hybrid and all-electric vehicle models:* This procurement does not increase EV model availability.

References

The information for each procurement included in this case study is derived from interviews with contractors including AutoFlex AFV (Navy) and Milford Nissan (New Bedford), as well as discussions with public officials from the City of New Bedford and the City of Seattle. Additional information was derived from the following documents related to each procurement:

- U.S. Navy: The [RFP from the Navy Facilities Engineering Command](#) and the resulting contract with AutoFlex AFV.
- New Bedford, MA: The statewide [Massachusetts Light Duty Vehicle Contract \(VEH98\)](#) and the resulting [master blanket purchase order for Milford Nissan](#), as well as a [press release from the city](#).
- Seattle, WA: The [Washington State Nissan LEAF contract](#).



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