



North Carolina

Motor Fleet ZEV Plan Update E080

NC Department of Administration

October 1, 2020

Introduction and Overview

In September of 2019, the NC Department of Administration (DOA) published the [Motor Fleet ZEV Plan](#) (ZEV Plan) as directed by Governor Cooper in [Executive Order No. 80, North Carolina's Commitment to Address Climate Change and Transition to a Clean Energy Economy](#). The ZEV Plan identified:

- The types of trips for which a ZEV is feasible;
- Infrastructure recommendations necessary to support ZEV use;
- Procurement options and strategies to increase the purchase and utilization of ZEVs; and
- An accounting of each agency's ZEVs and miles driven by vehicle type to be shared with the Climate Change and Interagency Council for submission to the Governor by October 1, 2019 and annually thereafter.

The October 2020 ZEV Plan Update (**ZEV Plan 2020 Update**) provides the mandatory annual summary of the state's fleet of electric vehicles, indicating how many vehicles each agency has adopted, and miles driven. Additionally, the ZEV Plan 2020 Update highlights notable achievements amidst unprecedented challenges due to the onset of the COVID-19 pandemic, as well as areas for continued focus and investment including agency awareness, stakeholder engagement, ZEV feasibility and infrastructure, procurement options, and partnerships.

Summary of Highlights

The ZEV Plan 2020 Update summarizes ongoing actions taken by the Department of Administration's Motor Fleet Management to increase the number of registered, zero-emission vehicles "ZEVs" in the state fleet. [The Motor Fleet ZEV Plan](#) states, in part, that "since acquiring its first ZEV in 2016, DOA's Motor Fleet Management Division increased its pool to 10 ZEVs and 5 hybrids." DOA's Motor Fleet Management set the goal to assign an additional 20 ZEVs by the end of 2020. Prior to the onset of the COVID-19 pandemic, Motor Fleet Management, in partnership with the relevant state entities, was set to surpass that goal. Budgetary changes and an abrupt halt to state business related travel impacted both Motor Fleet Management's ability to assign vehicles and an agency's need for transportation solutions. However, despite unforeseen challenges, the NC Department of Administration's Motor Fleet Management continues to prioritize collaboration with agencies across the state in order to achieve the common goal of replacing qualified gas-powered vehicles with electric vehicles.

Motor Fleet Management ZEV & Hybrid Vehicles

The table below reflects the first annual update of the accounting of each State Government entity's current ZEVs, hybrid vehicles, and miles driven by vehicle and type, as directed by Executive Order No.80.

As of October 2020, Motor Fleet Management has 35 electric vehicles, 25 of which are assigned to agencies with 301,958 miles driven over the lifetime of the ZEV program. The State Fleet also includes 5 hybrid vehicles, with agency assignments for all shown in the table below.

Assignments as of September 2020

VehicleNumber	VehicleYear	VehicleMake	VehicleModel	LastLogMileage	AgencyName	VehicleStatusDesc	Assignment Date
261275	2014	Nissan	Leaf FWD	21694	DHHS Blind Services	Assigned	6/14/2017
261277	2014	Nissan	Leaf FWD	26282	UNV UNC-Asheville	Assigned	8/24/2016
261278	2014	Nissan	Leaf FWD	21772	UNV NC State University	Assigned	5/24/2016
261279	2014	Nissan	Leaf FWD	29415	DHHS Central Administration	Assigned	8/8/2016
261280	2014	Nissan	Leaf FWD	33819	UNV UNC-Charlotte	Assigned	6/23/2020
264741	2020	Chevrolet	Bolt	2116	DHHS Child Development	Assigned	1/23/2020
264742	2020	Chevrolet	Bolt	982	Dept Of Natural & Cultural Resources	Assigned	2/11/2020
264743	2020	Chevrolet	Bolt	74	Dept Of Public Safety	Assigned	8/13/2020
264745	2020	Chevrolet	Bolt	313	UNV Appalachian State U	Assigned	5/21/2020
264746	2020	Chevrolet	Bolt	3760	Dept Of Natural & Cultural Resources	Assigned	3/12/2020
264747	2020	Chevrolet	Bolt	35	Dept Of Public Safety	Assigned	8/17/2020
264748	2020	Chevrolet	Bolt	0	Dept Of Public Safety	Assigned	9/22/2020
264749	2020	Chevrolet	Bolt	47	Dept Of Public Safety	Assigned	7/30/2020
264750	2020	Chevrolet	Bolt	657	UNV Appalachian State U	Assigned	5/21/2020
264751	2020	Chevrolet	Bolt	0	Dept Of Public Safety	Assigned	9/22/2020
264752	2020	Chevrolet	Bolt	161	Dept Of Public Safety	Assigned	8/25/2020
264756	2020	Chevrolet	Bolt	208	UNV Appalachian State U	Assigned	6/30/2020
264759	2020	Chevrolet	Bolt	432	UNV Appalachian State U	Assigned	6/29/2020
264761	2020	Chevrolet	Bolt	810	UNV UNC-Asheville	Assigned	1/21/2020
264762	2020	Chevrolet	Bolt	1201	UNV UNC-Asheville	Assigned	1/21/2020
261381	2015	Nissan	Leaf FWD	20892	DHHS Health Benefit	Assigned	3/21/2017
261382	2015	Nissan	Leaf FWD	12354	UNV UNC-Charlotte	Assigned	6/23/2020
261383	2015	Nissan	Leaf FWD	14156	UNV UNC-Chapel Hill	Assigned	8/20/2018
261384	2015	Nissan	Leaf FWD	14661	UNV UNC-Chapel Hill	Assigned	8/20/2018
261385	2015	Nissan	Leaf FWD	13890	UNV Fayetteville State U	Assigned	1/22/2018
261276	2014	Nissan	Leaf FWD	35486		Available	
261281	2014	Nissan	Leaf FWD	26208		Available	
264744	2020	Chevrolet	Bolt	511		Available	
261380	2015	Nissan	Leaf FWD	20022		Available	
264753	2020	Chevrolet	Bolt	0		New	
264754	2020	Chevrolet	Bolt	0		New	
264755	2020	Chevrolet	Bolt	0		New	
264757	2020	Chevrolet	Bolt	0		New	
264758	2020	Chevrolet	Bolt	0		New	
264760	2020	Chevrolet	Bolt	0		New	
261368	2012	Toyota	Camry Hybrid FWD	78541	Dept Of Justice	Assigned	5/26/2016
264431	2019	Chevrolet	Volt AWD	14239	Dept Of Environmental Quality	Assigned	5/15/2019
264517	2019	Chevrolet	Volt AWD	8944	UNV Appalachian State U	Assigned	7/17/2019
264763	2019	Chevrolet	Volt AWD	3462	UNV UNC-Charlotte	Assigned	6/23/2020
264764	2019	Chevrolet	Volt AWD	3476	UNV UNC-Charlotte	Assigned	9/17/2019

Ongoing Use: Telematics Data & Sawatch Labs

As outlined in the ZEV Plan, NC Department of Administration's Motor Fleet Management has ensured telematics is on every state vehicle, allowing data-informed decisions and mileage tracking to determine vehicles best suitable for ZEV replacement. The ZEV Plan identified 572 traditional, gas-powered vehicles for replacement with ZEVs, finding that doing so would save taxpayers an estimated \$3.8 million and reduce emissions by more than 22,000 metric tons over the lifetime of the vehicles. The original EV Suitability Assessment (ezEVSA) was provided to the NC Department of Administration by Sawatch Labs.



After the original assessment, completed in September of 2019, Sawatch Labs continued to score and assess the state fleet. The Sawatch Labs scoring analysis of approximately 2,500 Motor Fleet Management vehicles is continuously shared with agency fleet coordinators and is used as a basis to recommend EV replacement.

In December 2019, a National Renewable Energy Laboratory (NREL) sponsored a new Sawatch Labs analysis of telematic data related to the entire 7,000+ vehicle state fleet. The complete assessment and scoring of the state fleet will provide a comprehensive view of possible EV replacements and will inform a new cycle of goal setting related to EV assignment and implementation. The new analysis is on track to be complete by December 2020. Motor Fleet management will continue to use telematics data to identify fleet vehicles which can be replaced with a ZEV where mid-day charging is minimal and overnight parking is consistent. The new NREL and Sawatch Labs analysis will also be used to focus on infrastructure recommendations, necessary to inform agency partners of the true feasibility of ZEV adoption.

Agency Awareness and Stakeholder Engagement

In addition to implementation efforts related to the ezEVSA, the NC Department of Administration has prioritized efforts to transition to electric vehicles whenever feasible through educational outreach and the development of strategic partnerships.

Educational Outreach

The NC Department of Administration's Executive Order No. 80 [online information portal](#) includes *Climate Change & Clean Energy: Plans & Progress Updates* related to the environmental benefits and cost savings related to prioritizing clean energy goals.

Over the past year, the portal has featured notable updates, including the invitation received by Motor Fleet Management Director, Robert Riddle, to present to the National Conference of State Fleet Administrators of ZEVs, and again for the AltWheels Fleet Day, due to the prioritization of electrification taking place in North Carolina, as well as NC's growing ZEV fleet.

The DOA EO 80 webpage also includes information and resources for [Vehicle Infrastructure and Charging Stations](#), the factor continuing to present the greatest obstacle for widespread

adoption of ZEV's. Notably, the DOA EO 80 webpage presents information related to [ZEV charging stations](#) within the State Government Capital Complex for state employees and the general public. The [ChargePoint](#) graphics and information have also been added to the Motor Fleet Management webpage.

A *Testimonials Section*, including highlights from state agencies who have successfully adopted ZEVs, will be featured on the DOA website by December 2020.

Additional ZEV-related educational information has been shared through DOA's social media channels, department-wide newsletters, to boards and commissions housed under DOA, and directly with agency fleet coordinators and agency heads. DOA will continue to prioritize educational opportunities and information sharing with agency partners in the coming year.



Strategic Partnerships

WEX Inc. & ChargePoint

Motor Fleet Management's existing partnership with fuel card provider, WEX Inc., has been leveraged to create an efficient charging and billing solution for electric vehicle users. Motor Fleet Management is now able to provide a ChargePoint EV charging credit card, which bills through WEX. The new card is provided with each EV and gives drivers the option to charge their vehicle at over 720 ChargePoint locations across NC and mitigates the uncertainty some new EV drivers face when seeking accessible charging options. The billing system for the new ChargePoint credit card is seamless and leverages the existing system used by client agencies.

New Opportunities & Challenges

Procurement Options

The Department of Administration is committed to providing procurement solutions that allow the prioritization of ZEVs in the purchase or lease of new vehicles for agency business travel when feasible. The NC Department of Administration is currently overhauling the vehicle purchase contract, [070A](#). In the past, this contract has been awarded as a "winner take all" for each vehicle class, in that all vendors bid to be the single provider for each vehicle class. For example, if Ford won the light duty truck class, North Carolina could only purchase F-series trucks.

The next contract, set to be executed in 2021, will award the entire portfolio of each manufacturer who bids. After that award, North Carolina agencies will be able to choose the light duty truck which best fits their requirements and budget from all manufacturers who bid.

The same increased flexibility for purchasing agencies will be true for vehicles classified as battery electric vehicles (BEVs) or plug-in hybrid vehicles (PHEVs). As more manufacturers bring PHEV's and BEV's online, they can add the new vehicles to the contract via addendum.

COVID-19 Setbacks & Demand for Vehicles

Motor Fleet Management's immediate implementation of stringent health and safety precautions allowed them to maintain operations during the COVID-19 pandemic and for the duration of North Carolina's [Stay at Home Order](#). Motor Fleet Management staff supported mandatory and essential positions including Law Enforcement, DHHS and Mail Service Center. In June alone – three months into the COVID-19 State of Emergency – Motor Fleet Management serviced over 350 vehicles. In partnership with DOA's Purchase & Contract Division, Motor Fleet Management coordinated the procurement and distribution of PPE for state agencies. Just prior to the enactment of the COVID-19 State of Emergency, Motor Fleet Management received 20 preordered ZEVs and continued to assign them to agencies throughout the duration of the State of Emergency, all while simultaneously reprioritizing duties to serve the state's essential personnel.

Like all state entities, Motor Fleet Management has experienced setbacks related to the COVID-19 pandemic and its adverse effects on budget and business sustainability. State Entities, once committed to adopting ZEVs, have had to adjust to shifting priorities and make unforeseen adjustments, often with budgetary implications. Receipts-supported agencies, including university motor pools whose fleet usage is dependent on student presence on campus, are returning vehicles and not accepting new replacements at this time. The same is true for State Agencies that have furloughed positions directly tied to vehicles and paused commutes and business travel indefinitely.

Closing Statements

The NC Department of Administration will continue to assess the feasibility of EV implementation and advocate for transitioning when it is identified as suitable using telematics data, while taking into consideration available charging options.

The need for investments in charging infrastructure, as identified in the ZEV Plan, continues. The ZEV Plan 2020 Update affirms the necessity of increasing funds for developing charging infrastructure, critical for expanding ZEVs within the state's motor fleet.

Additionally, the onset of the COVID-19 pandemic has brought forth unimaginable changes that will require all parties to continue to adapt while striving to achieve North Carolina's clean energy goals. The increased adoption of teleworking, budget cuts, and loss of revenue will remain a factor in the feasibility of adopting EVs in the future. Motor Fleet Management will continue to adapt to the changing landscape and work with state partners to assign vehicles and increase ZEVs in the state fleet.

