

# GENERAL MOTORS

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VW Settlement

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**Subject: GM Comments relative to Delaware's Proposed VW Environmental Mitigation Plan**

General Motors LLC (GM) appreciates the opportunity to provide input on the proposed use of funding in the state's Environmental Mitigation Plan and supports Delaware's decision to firmly allocate the maximum allowed 15% of the fund (equating to almost \$1.5mil) to increase the availability of much-needed electric vehicle (EV) charging stations that will drive both current electrification and advanced mobility strategies for the state, such as self-driving EVs in shared mobility applications. There are over 1,200 EVs registered in Delaware today and only 8 DC fast-charging stations (SAE industry standard) in the state. According to NREL's recent National PEV Infrastructure Analysis\* (September, 2017), Delaware will be home to an estimated 50,000 plug-in EVs by 2030, requiring 60 DC fast-charging stations, 1,500 workplace chargers, and 1,100 additional public Level 2 charge stations. Because the business case for EV charging infrastructure in today's early market is challenging due to high upfront costs and low station utilization, infrastructure investment has been lagging, and therefore we appreciate all efforts in Delaware to develop an infrastructure strategy for the state and commit to a corresponding investment in this infrastructure network that will address consumer and industry concerns.

To maximize the limited state funds and optimize the RFP approach that Delaware is proposing, we agree that it is critical to establish the project eligibility and scoring criteria in advance, so that the RFPs can be assessed against a rigorous and cohesive state-wide infrastructure plan. A comprehensive vision for EV charging infrastructure in Delaware should ensure that the resulting EV charging infrastructure is as effective and visible to consumers as possible. It's important to recognize that the quality of infrastructure placement is generally more important than the quantity of EVSEs deployed. This means it is key to establish an overall vision and strategy for the placement of EV charging infrastructure, based on sound expert stakeholder input, that will result in an overall

compelling “story” that will change consumers’ perceptions and convince them that EV charging infrastructure is everywhere it needs to be.

Automakers have made enormous investments in the electrification of transportation – GM alone has invested billions of dollars to develop electrification technologies, including the state-of-the-art Chevrolet Volt and Chevrolet Bolt EV, which has swept the industry’s most prestigious car awards, including North America Car of the Year, Motor Trend’s® 2017 Car of the Year, MotorWeek’s 2017 Drivers’ Choice “Best of the Year” Award, and Green Car Journal’s Green Car of the Year. The Bolt EV is the industry’s first affordable, long-range EV with an EPA estimated range of 238 miles-per-charge, and is available now at Chevrolet dealers across Delaware. This advanced technology will require more widespread charging infrastructure to convince consumers that EVs can be driven anywhere they need to go. Thus, the urgency to rapidly expand EV charging infrastructure in Delaware.

While the majority of all EV charging today is done at the home, there are still critical infrastructure needs not met by single-family home charging. And to maximize the impact of limited state funds, it is important to invest strategically. GM would prioritize today’s key infrastructure needs as follows:

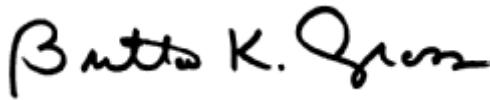
1. **Highway corridor DC fast-charging** most visibly inspires consumer confidence in the driving range, and practicality, of EVs. A 2016 survey of 2,500 consumers by Altman Vilandrie & Company found the top reason customers gave for not wanting to purchase a plug-in electric vehicle was a perceived lack of charging stations (85%). Highly visible corridor EV charging (SAE industry standard) can help address this consumer perception issue.
2. **Workplace EV charging** creates an EV “showroom” that very effectively grows EV awareness among corporations, and employees of these corporations. According to US DOE data, workplace charging results in employees 6X more likely to purchase an EV than employees at companies not offering workplace charging.
3. **Multi-unit dwelling EV charging** provides an important opportunity to expand EV adoption to consumers residing in townhomes, condominiums, and apartments, who may not have access to a “home” charger every evening. This is currently an untapped segment of potential EV buyers. This need can be met by Level 1 or Level 2 charging directly at the multi-unit dwellings, or by neighborhood DC fast-charge hubs that can serve these residents.
4. **Public EV charging at key destinations** is also important to increase the practicality of EVs and the number of places an EV can go, with a special focus on destinations typically outside a consumer’s normal daily driving patterns (e.g. airports, beaches, hotels, resorts, etc.).
5. **Urban core DC fast-charging** is critical to attracting and supporting high-mileage commercial mobility solutions such as car-sharing, ride-hailing, and autonomous vehicles as both people-movers and in goods movement.

EV charging infrastructure is vital to the growth of the EV market and will lead to long-lasting emissions reductions that increase over time as the market expands. And Delaware’s relatively low

electricity prices mean that electric vehicles are an important economic driver for Delaware. Delaware can increase the impact of these investments by directly engaging electric utilities in the strategic planning of EV infrastructure to ensure the most cost-effective and grid-responsible EV charging solutions.

The VW Environmental Mitigation Trust is an opportunity to invest in forward-looking infrastructure that lays a much-needed foundation for EV market growth and will help attract even more advanced transportation technologies to Delaware. GM greatly appreciates Delaware's commitment to support the strategic transition to transportation electrification and all efforts to help drive this emerging market.

Sincerely,

A handwritten signature in black ink that reads "Britta K. Gross". The signature is written in a cursive, flowing style.

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\* NREL National PEV Infrastructure Analysis (Sept 2017) -- <https://www.nrel.gov/docs/fy17osti/69031.pdf>