Hamre, John G.

From: Sam Kozel <skozel@e9insight.com>
Sent: Monday, November 14, 2022 4:20 PM
To: -Info-Public Service Commission
Cc: Dan Bowerson
Subject: Comments of The Alliance for Automotive Innovation: PU-22-147
Attachments: Comments of the Auto Innovators.PU-22-147.pdf

Hello,
Please see the attached comments on behalf of Dan Bowerson at the Alliance for Automotive Innovation (Auto Innovators), to be filed in Case Number **PU-22-147,** Investigation in to Electrification of Transportation

Kind regards,
Sam

-- Sam Kozel | Director | E9 Energy Insight | 847.894.1144 | skozel@e9insight.com

37 PU-22-147 Filed 11/14/2022 Pages: 12
Public Comments
Alliance for Automotive Innovation
Dan Bowerson

STATE OF NORTH DAKOTA
THE NORTH DAKOTA PUBLIC SERVICE COMMISSION

Public Service Commission **Case No. PU-22-147**
Electrification of Transportation
Investigation: **November 14, 2022**

Comments of The Alliance for Automotive Innovation

Introduction:

The Alliance for Automotive Innovation (Auto Innovators) is pleased to submit these comments in response to the Notice of Issues and Request for Comment issued by the North Dakota Public Service Commission (Commission) on October 3, 2022 in the above-captioned proceeding. Auto Innovators appreciates that the Commission is undertaking this timely request and hopes that our comments will support the Commission as it determines its appropriate next steps in the promotion of the electrification of the transportation sector.

Auto Innovators is the singular, authoritative and respected voice of the automotive industry. Auto Innovators represents the manufacturers that produce nearly 98% of cars and light trucks sold in the U.S., original equipment suppliers, technology companies and other value-chain partners within the automotive ecosystem. Representing approximately 5.5 percent of the country's GDP and responsible for roughly 10 million jobs, the automotive industry is the nation's largest manufacturing sector.

Our members recognize that the future of personal mobility is increasingly electric. Toward that end, the auto industry will invest more than $515 billion by 2025 to reach the goal of an electrified future. Twenty six million electric vehicles (EVs) on U.S. roads by 2030[1] will require an expanded role for utilities, energy regulators and other stakeholders to create opportunities for new and existing businesses to participate in this transformation.

[1] Edison Electric Institute, Electric Vehicle Sales and the Charging Infrastructure Required Through 2030. June 2022: https://www.eei.org/-/media/Project/EEI/Documents/Issues-and-Policy/Electric-Transportation/EV-Forecast--Infrastructure-Report.pdf

Auto Innovators believes that well-informed, thoughtful policies can greatly accelerate adoption of EVs and their integration into the electric grid, and help customers and communities around the country benefit from the transition to electric transportation. We are committed to working with policymakers and stakeholders to build durable policy frameworks that align public policy objectives at the state and federal level. To this end, Auto Innovators' ZEV Infrastructure working group has developed a set of guiding principles to convey our priorities to utilities, regulators, and other stakeholders as we work together to deploy charging infrastructure to significantly advance EV acceptance and use.

These comments are informed by our Guiding Principles, appended in Attachment A. In summary, they are as follows:

1. Provide no-compromise mobility for EV drivers and fleets by rapidly scaling up access to charging infrastructure at home and work, around town, and on the highway.

2. Accelerate the pace of infrastructure deployment through public-private partnerships and collaboration across government entities, industries, and stakeholder groups, and by building on the experience of early-acting states.

3. Adopt utility rates and programs for EV charging that ensures it is affordable, compensates EV drivers if providing grid services, supports fleet electrification, and enables high-powered charging business models.

4. Prepare for timely, cost-effective grid upgrades to support EV charging.

5. Ensure that all utility customers, especially those in underserved communities, benefit from transportation electrification.

Specific Comments:

The Auto Innovators offers the following specific comments in response to the Commission issues for comment:

1. Whether ownership of electric vehicle charging stations should be permitted by regulated utilities. If permitted, under what conditions?

For mass adoption of EVs to become a reality, consumers and fleet operators must be able to count on *no compromise mobility*. Achieving this vision requires convenient, reliable and accessible charging at home and at work, around town and along travel corridors. Auto Innovators is supportive of all ownership types of EV charging infrastructure, especially during these early phases of market development. Charging must be affordable in all venues and charging off-peak should never cost more than filling an equivalent gasoline-powered vehicle. Utilities have played, and should continue to play, a central role in deploying EV chargers, especially in providing charging in areas that may not be adequately served by Electric Vehicle Service Providers (EVSPs) and site hosts. Auto Innovators believes the utilities have a central role in ensuring that the electrification of the transportation sector results in safe, reliable and affordable electricity service for North Dakota and state ratepayers.

Since the passage of the Infrastructure Investment and Jobs Act (IIJA) in November 2021, public-private partnerships that leverage federal funding to develop EV charging stations are being forged across the nation. The North Dakota Department of Transportation (NDDOT) is expected to receive approximately $25.95 million in National Electric Vehicle Infrastructure (NEVI) formula funds over the 5-year period ending in federal fiscal year (FY) FY 2026.[2] Inclusive of the minimum 20 percent non-federal match required to secure that funding (or an additional $6.49M), a minimum total 5-year program amount of $32.44 million will be made available to develop this infrastructure for the state of North Dakota. If additional non-federal matching (including private funding) is invested, that amount could increase. The Commission should help ensure maximum non-federal matching dollars are invested in this infrastructure in order to maximize benefits and access to EV charging infrastructure for state ratepayers. Examples of supportive EV policies include make-ready investments, rebates for charging equipment, exploring commercial rate design options to address the operational challenges of low load factor DCFC, and the development of managed charging programs that leverage on-vehicle telematics and other networked EVSE as substitutes to redundant submetering requirements.

[2] NDOT NEVI Plan at pg 29. Section 4.3 NEVI Formula Funding Sources. August 2022: https://www.fhwa.dot.gov/environment/nevi/ev_deployment_plans/nd_nevi_plan.pdf

2. What should the Commission consider regarding unfair competition between third party charging entities and regulated utilities?

As mentioned, Auto Innovators is supportive of investments that maximize convenient, reliable and accessible charging infrastructure for North Dakota EV drivers, whether at home, work, or around town and along travel corridors. Toward that end, we believe that the Commission should establish rules and policies that ensure that the market for EV charging supports solutions provided by both private entities and regulated utilities. As noted above, we believe that the Commission should be guided by an objective to accelerate the pace of infrastructure deployment through public-private partnerships and collaboration across government entities, industries, stakeholder groups and by building on the experience of early-acting states. We believe this can be accomplished by supporting solutions that maximize customer benefits, whether provided by utilities, private parties or through collaborative partnerships.

3. Should the Commission consider special tariffs or rates for residential electric vehicle charging?

With regard to EV-specific rates or tariffs, Auto Innovators suggests that:

1. Utilities should make TOU rates universally available to all EV drivers and structure programs that ensure suitable enabling technology is deployed and available to all customers and drivers.
2. Utilities should make both whole-house and EV-only TOU rates available to their customers.
3. Utilities and regulators should adopt Commercial and Industrial (C&I) EV rates that ensure commercial viability of fleet electrification and DCFC stations in the early stages of operators and sustain DCFC stations in lightly trafficked areas, while fully recovering costs and preserving incentives for innovation.
4. EV rates and managed charging programs should be available to all drivers.

All EV drivers should have the opportunity to leverage their ability to provide load flexibility and to receive compensation for the grid services they provide. This compensation for load flexibility can be provided through targeted EV rates, demand response (DR) programs or

new incentives or rates that target specific grid needs. In order to realize these benefits, it is important that enabling technologies are deployed that allow control to be implemented by the customer directly or remotely by the utility, Original Equipment Manufacturer (OEM) or third-party aggregator.

Whether the rate or program applies to the EV-only or the entire load at the driver's home is a crucial distinction. Isolating the vehicle load spotlights the bill savings and/or emission reductions of shifting charging. As the public's perception of EVs and drivers' charging behavior are still in the formative stages, highlighting these benefits will be crucial in the coming years. Separating out EV charging for billing purposes requires a submeter, which can be costly and inconvenient for customers and deter participation in smart charging. Our response to the next question offers recommendations on how to remove this barrier.

A good starting point is time-of-use (TOU) rates. Easy to understand and follow, they introduce drivers to the concept of saving money by shifting charging, and they deliver a threshold level of benefits to the grid. Pilots have consistently shown that EV drivers respond to TOU rates, especially when they have ready access to enabling technology. For example, smartphone apps provided by OEMs, utilities and third parties make it easy for EV drivers to take advantage of savings without risking the possibility of an incomplete charge. TOU rates that apply only to the vehicle (EV-only) are more effective than whole house TOU rates; however it is currently more common for utilities to offer EV drivers only whole-house TOU rates.

4. Whether the Commission should consider pilot programs in anticipation of the electrification of the transportation sector? If so, what pilot programs?

In many (if not most) cases, it is our experience that EV-specific programs or rates do not require pilot programs because North Dakota can benefit from the experience of EV activity in other states or from other pilot programs. To the extent that the Commission determines that a pilot program is a necessary or beneficial first step, we encourage the Commission to identify the unique insight to be gained from the pilot program. For example, it may be the case that managed charging that leverages vehicle telematics instead of a secondary meter could validate for the Commission that this technology pathway is viable for full implementation. However, where feasible and practical, we encourage the Commission to favor immediate and full deployment of EV rates, tariffs and programs that have proven successful in other jurisdictions

and only consider pilot programs for those applications that are truly unique, ground-breaking and unproven. When undertaking a pilot, Auto Innovators believes it is important for the Commission to establish specific goals, objectives and metrics and require a sound experimental design that will yield robust analytic results.

5. What is the anticipated distribution system impact from residential and fleet charging?

EVs are expected to be one of the largest, if not the largest, sources of demand-side flexibility.[3] As the electric power system becomes more integrated to better align the distribution demands of distributed energy resources and EVs with supply-side requirements, coordinating and managing EV charging can result in lower total system costs by reducing system peaks and absorbing and smoothing demand curves. Since personal vehicles are on average parked nearly 96% of the time, properly dispatched managed EV charging can satisfy driver mobility needs while also supporting the grid.[4] The distribution impacts of this load can result in positive outcomes for the distribution systems of North Dakota electric service companies. To enable these additional benefits, investments in hardening, upgrading and modernizing the grid will be needed to ensure a safe, secure, reliable and affordable electricity system.

A recent NREL study found significant benefits of EV managed charging, including decreased emissions, improved reliability, supporting large-scale deployment of variable generation and lower power system costs. Some studies show that EV managed charging could provide thousands of dollars of value per EV every year. Studies show that managed charging improves system efficiency and can lower average retail electricity rates for all consumers, benefiting more people than just EV owners. Managed charging is particularly valuable in systems with high levels of variable renewables to provide flexibility to match supply and demand.[5]

In short, Auto Innovators believes that the impacts to the distribution system include both challenges and opportunities. Through the policies it establishes and the guidance it offers, the

[3] National Renewable Energy Lab (NREL), Aligning Electric Vehicle Customer Charging with Grid Needs Muratori, Matteo: March 2022: https://www.nrel.gov/docs/fy22osti/82414.pdf
[4] Ibid.
[5] National Renewable Energy Lab (NREL), Aligning Utilities and Electric Vehicles for the Greater Grid, January 2022: https://www.nrel.gov/news/program/2022/aligning-utilities-electric-vehicles-for-greater-grid.html

Commission will be able to accentuate the benefits and mitigate the disruptive impacts to the grid from residential and fleet charging.

Conclusion

Auto Innovators welcomes the opportunity to submit these comments in response to the Commission's request for comments and to provide the perspective of the automotive industry on the important issue of U.S. innovation and competitiveness with regards to EV rates and supportive infrastructure investment. We look forward to continued engagement with the Commission as it seeks a stronger understanding of the state's role in consideration of measures to promote greater electrification of the transportation sector and enhance the U.S. technological leadership in this space.

Sincerely,

Dan Bowerson
Senior Director, Energy and Environment
The Alliance for Automotive Innovation
Dbowerson@autosinnovate.org

Attachment A:

Auto Innovators

EV Infrastructure Guiding Principles

ALLIANCE FOR AUTOMOTIVE INNOVATION

ACCELERATING THE TRANSITION TO ELECTRIC: EV INFRASTRUCTURE AND CONSUMER ACCEPTANCE

The Alliance for Automotive Innovation (Auto Innovators) recognizes that the future of personal mobility is increasingly electric, and the auto industry will have invested more than $330 billion by 2025 to reach the goal of an electrified future. All of that is in addition to continued improvements for conventional cars and light duty trucks to address air quality, greenhouse gas emissions and fuel economy.

A new generation of electric vehicles (EVs) is coming, and IHS Markit predicts there will be 130 models for sale in the U.S. market by 2026, up from over 50 models today.[1] These will include battery electric, plug-in hybrid, and fuel cell electric technologies with longer range, more capability, and in different market segments at a variety of price points. Although EV sales amounted to roughly 2 percent of all U.S. vehicle sales in 2020, consumer interest is growing because these vehicles are reliable, efficient, safe, and particularly fun to drive. To realize an increasingly electrified future, a comprehensive plan, as outlined in Auto Innovators' EV letter to President Biden, is needed at all government levels to support a cost-effective, no-compromise experience for Americans.

Despite the significant number of EVs coming to market, consumers are unlikely to buy a vehicle that cannot be conveniently fueled. Although roughly 80 percent of EV charging takes place at home, more options are needed. This includes: affordable and readily available charging and hydrogen fueling infrastructure, easy-to-understand utility rate structures that reward off-peak charging, and improved charging or refueling times. Consumers consider all of these elements before buying or leasing an EV.

The shift to EVs also means expanded roles for utilities, energy regulators, and other stakeholders to create opportunities for new and existing businesses to participate in this clean transformation. With this in mind, Auto Innovators remains committed to partnering with public- and private-sector stakeholders to advocate for policies that create viable business models, attract new capital sources, and stimulate competition and innovation to successfully accomplish this shift.

We are at a pivotal time on the journey to a cleaner, safer, and smarter transportation future. The auto industry is committed to producing EVs. With timely, focused, and sustained leadership and investment from a variety of public and private stakeholders, consumers can fully realize the full benefits of EVs.

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[1] Stephanie Brinkley, *IHS Markit Forecasts EV Sales to Reach US Market Share of 7.6% in 2026*, IHS Markit, https://ihsmarkit.com/research-analysis/--ihs-markit-forecasts-ev-sales-us.html (May 28, 2019).

To that end, the Auto Innovators puts forth the following *EV Infrastructure Guiding Principles* to significantly advance EV acceptance and use.

Provide no-compromise mobility for EV drivers and fleets by rapidly scaling up access to charging infrastructure at home and work, around town, and on the highway.

- *EV drivers need access to convenient, accessible, affordable, and reliable charging for their vehicles wherever they live, work, and play. Hydrogen fueling stations need to be built to support fuel cell electric vehicles.*
- *Public and utility investments are needed to help EV charging networks reach a sustainable scale and to ensure infrastructure is available in more challenging settings, including multifamily housing, underserved communities, and rural areas.*

Accelerate the pace of infrastructure deployment through public-private partnerships and collaboration across government entities, industries, and stakeholder groups, and by building on the experience of early-acting states.

- *By working together, we can accelerate infrastructure deployment, fully realize the benefits of transportation electrification, and minimize the cost of this transition.*

Adopt utility rates and programs for EV charging that ensures it is affordable, compensates EV drivers if providing grid services, supports fleet electrification, and enables high-powered charging business models.

- *EV charging should offer drivers cost savings relative to traditional petroleum-based fuels and be designed to encourage charging when the grid is less congested and as renewable energy is abundant.*
- *Utility rate design can make or break the business case for fleet electrification and deployment of charging infrastructure, especially high-powered charging. Utilities and their regulators should address this potential barrier.*

Prepare for timely, cost-effective grid upgrades to support EV charging.

- *EV drivers need to be confident that grid technology is reliable, resilient, and able to accommodate their charging needs.*
- *Collaboration among utilities, automakers, EV charging companies, fleet owners, local governments and others will be critical.*

Ensure that all utility customers, especially those in underserved communities, benefit from transportation electrification.

- *Transportation electrification at scale offers many potential benefits including savings on transportation costs for EV drivers, lower overall energy cost, valuable grid services, lower GHG emissions, and improved air quality around high-traffic areas including fleet depots, ports, and freeways.*
- *Cost savings realized from EV rates and programs should be shared across participating EV owners and other utility customers.*

Adopt building codes that require level 2 chargers in 100 percent of new residential parking spaces at new multi-unit dwellings and single-family homes, and measurably increase the number of new workplace and public chargers based on dwell time.

- *Installing EV chargers during new construction can be five times as cost effective as retrofitting to add chargers.*