Subject: 2022-R-A-0011: Low Emission Vehicle Program - Public Hearing Comment
Date: Friday, May 26, 2023 at 7:52:56 AM Eastern Daylight Time
From: Chris Malm
To: HearingComments, DNREC (MailBox Resources), mmcvety@gannett.com, rwalters@wboc.com, bleoni@wrde.com, charlie@delawarelive.com, Ramone, Michael (LegHall), LC_Reception, Leghall (MailBox Resources), Longhurst, Valerie (LegHall)
CC: mcnally.carol@yahoo.com, Jennifer Malm
Priority: High

Good Morning,

My name is Christopher Malm from Lewes, and I am sending this email as I am a subject matter expert on EV charging, EV Infrastructure, and EV operations and maintenance. I currently hold the title of Director - Aftermarket Service eMobility for a large national company. You can validate my experience by viewing my LinkedIn profile by clicking on this link, Chris Malm | LinkedIn . I am in full support of the movement from ICE vehicles to full electric, however my professional opinion is the current charging infrastructure and station conditions will not be able to support the proposed mandate.

Current public infrastructure

1. The current install base of Level 3 DC fast public chargers in Delaware is substantially behind compared to the demand of EV chargers. If you look at the popular public EV charging location site www.plugshare with a filter to show all CCS connectors, there are currently only two available DC fast chargers available to the public, which are located in Smyrna at the Harley Davidson dealership and the Public Library in Ocean City. When the filter is changed from CCS to Tesla , the choices are more naturally, but there is a gap between Dover and Lewes.
2. The Level 2 AC charger is still the work horse in the industry, but they are designed for long term parking as charging rates are 3-19kw. At these levels, it can take over 12 hours to obtain 80% charge. This is not a conducive situation for an area that has high levels of tourism.
3. Nissan is the only manufacturer that uses the CHAdeMO connector, which there is NO available public station south of the Newark/Wilmington area.
4. Many public facing EV charging stations are not used properly by EV drivers. I have seen many L2 stations installed that appear to have been mistreated and possibly vandalized. Since the station owner is not generating revenue to help fund repairs, the decision many times is to abandon the equipment in place. Please reference the article written by Molly McVety on the following link. The picture of the CT4000 in the article is installed at the Rehoboth outlet center. Just by looking at the picture, I found the cable management system for the right side broken, the charging cables are internally twisted which will cause increase load and heating, and the display which is needed to commence a charge session has been scratched making it unviewable. This specific and popular model does not allow for the cable to be replaced. The entire charging head would need replacing which will cost up to $6000 for the part and labor. Electric cars in Delaware: Plan could be approved soon for move to EVs (delawareonline.com)

Delaware hopes to phase out sale of new gas-powered cars. What to know about the proposal.

Proposed legislation to phase-out gasoline-powered vehicles in Delaware is receiving pushback from Republican officials.

www.delawareonline.com

Current Industry Obstacles

1. Annual preventive maintenance is not being performed on current public facing EC charging stations nationwide. In the electric service industry, maintenance scope and intervals are performed not only by the direction in the manufacturer O&M manuals, but also NFPA 70B and 110. The 2019 version of NFPA 70B finally calls out for businesses, building owners and municipalities to SHOULD include a maintenance program. The issue is the word "should", as this does not mandate maintenance. The question we need to ask is, why isn't it mandated?
2. To expand on the above bullet point, with weak mandates, EV Charing manufacturers have placed the maintenance requirements on the back burner in order to get as many chargers installed as quickly as possible. I ask that you review the O&M manuals and compare them across the 40+ EVSE manufacturers. You will be shocked at the inconsistency of quality content. The lack of maintenance content allows the station owners to neglect the need for proper maintenance and service. The supporting information does not provide the correct content to justify the expense of having maintenance performed. To support my theory, the company I work for has installed 14,426 ChargePoint stations, which 3,343 are in need of repair.
3. Currently, product lead times for Level 3 DC fast chargers range from 6 months to 18 months. The 24kw DC chargers do have the shortest lead time, however they take longer to charge a vehicle compared to the 18-month lead time of a 360kw charger. Repair part availability is in a worse condition with the industry and NEVI requirement demanding 97% uptime. It has taken me 4 months to receive a replacement charging cable for a customer on their non-public charging station.

EV Charging Priority

1. Unfortunately, the country currently treats EV chargers as a convenience. In order to support the electric vehicle mandate, the county needs to treat EV chargers as a mission critical fuel supply. Similar to gas stations or fuel systems for emergency power systems. Until we move to this mindset, the country will never have a sustainable charging network to support 40% EV adoption.
2. The industry needs to improve the EV charging network to a more sustainable solution with robust maintenance and service requirements before the infrastructure can support 40% electric vehicle population.

I would like to offer my experience and service to help educate legislatures and the public on how to

obtain the sustainable solution the nation is looking for. Receiving advise from the EV manufacturers is needed, but please remember that they are driven by volume. Service providers are needed to part of the discussion and in creating the solutions.

Thank you,

Chris Malm
443-298-1089