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CharIN Response to Ford Announcement to use the NACS Proprietary Network

June 2, 2023 - WASHINGTON, D.C. - In response to Ford Motor Company's announcement on May 25 to utilize the North American Charging Standard (NACS) Proprietary Network in 2025 Ford EV models, the Charging Interface Initiative (CharIN) and its members remain committed to providing EV drivers with a seamless and interoperable charging experience using the Combined Charging System (CCS).

CharIN is the largest global association focused on the electrification of all forms of transportation enabled by CCS and the Megawatt Charging System (MCS). CCS and MCS are the global standards for charging vehicles of all kinds.

The global EV industry cannot thrive with several competing charging systems. CharlN supports global standards and defines the requirements based on the input of its international members. CCS is the global standard and therefore focuses on international interoperability and, unlike NACS, is future proofed to support many other use cases beyond public DC fast charging. Early, unconsolidated announcements of changes create uncertainty in the industry and lead to investment obstacles.

Further, CharIN also does not support the development and qualification of adaptors for numerous reasons including the negative impact on the handling of charging equipment and therefore the user experience, the increased probability of faults, and effects on the functional safety. There are also a variety of technical challenges related to lower current ratings, variations of electrical requirements, and mechanical loads caused by the weight of the adaptor which may lead to wear and mechanical malfunctioning of the vehicle inlet (see <u>CharIN's position paper</u>).

Focus on market acceleration and adoption of CCS should be the first choice. Abandoning open standards for proprietary standards will inevitably lead to further consumer confusion and delay EV adoption. CCS has gone through many years of rigorous standardization processes, which is a required activity for any new standard proposal. After a decade of collaborative work, the domestic and international EV industry has aligned around CCS. For example:

- More than 300 domestic and international CharIN members are using or investing in CCS.
- The majority of major domestic and international automakers are using and supporting CCS, including Audi, BMW, Daimler, Ford, General Motors, Honda, Hyundai/Kia, Lucid, Lotus, Mazda, MAN, Mercedes-Benz, Navistar, New Flyer, Nikola, Nissan, PSA Groupe, Proterra, Renault, Rivian, Scania, Stellantis, Subaru, Suzuki, Tata Motors, Tesla, Toyota, Volvo, and Volkswagen.
- In the U.S., CCS is used in over 50 passenger vehicle models, with more coming soon. The anticipated volume of these vehicles will exceed a single NACS supplier volume soon.

- Charge point operators, infrastructure/component suppliers, electric utilities and oil companies rely on CCS with high open market dynamics.
- The charging ecosystem is still nascent and requires certainty around CCS to be confident in investments. Every deviation from CCS will impact market traction.
- The Combined Charging System can connect to all AC charging stations without an adapter via the J1772 standard.
- Worldwide, there are 81,000 DC fast chargers using the CCS connector, compared to 45,000 Tesla Superchargers according to data published by CharlN and Tesla.
- In North America (including the U.S. and Canada) there are 22,262 CCS connectors compared to 22,128 Tesla Supercharger connectors and 204,253 J1172 connectors compared to 16,009 Tesla destination connectors, according to recent PlugShare data (includes public and restricted use).
- CCS cables and connector assemblies are NRTL recognized, which makes it easier for EVSE manufacturers to adopt the standard and build equipment.
- The CCS standard has been developed with full backward compatibility ensuring early investments are relevant to the growth of the industry, unlike other proprietary standards, including NACS.

In addition to the global dominance of CCS, it is important to note three additional facts:

1) NACS is not a standard

NACS is not a published or recognized standard by any standards body. For any technology to become a standard it has to go through due process in a standards development organization, such as ISO, IEC, and/or SAE. Such a process is collaborative and enables all interested parties to contribute their ideas.

The current CCS standard, including connectors and related communications protocols, is a true international standard that has gone through the standardization process. Any newly introduced idea, including a mechanical improvement to the existing CCS connector design, would have to follow the same process before the industry can safely adopt it. There is a significant chance that what is ultimately approved in the standards development process may not align with what is currently proposed.

2) This announcement is a proprietary implementation between two automakers and should not re-open eligibility decisions on public infrastructure funding

Public funding must continue to go towards open standards, which is always better for the consumer. Public EV infrastructure funding, such as the National Electric Vehicle Infrastructure (NEVI) Program, should continue to only be approved for CCS-standard-enabled chargers per federal minimum standards guidance.

3) Recent activities and announcements will address concerns about charger reliability

CharIN joined the Joint Office of Energy and Transportation and the National Laboratories to support the launch of the National Charging Experience Consortium. The Consortium will address charger interoperability and reliability issues in public CCS deployments, which is appropriate to address jointly as an industry. Additionally, CharIN will announce other major interoperability initiatives in the coming weeks, including upcoming interoperability testing

events. The entire EV industry should double down on activities to support public fast charging for the long-term.

We strongly encourage the EV industry to work with CharIN's membership base to create a fully interoperable EV charging network that best serves the needs of all consumers and will enable a better and faster transition to electric vehicles.

Ecosystem-driven collaboration is a proven method to create true standards accepted and adopted by a multitude of stakeholders, as well as a testing and conformance infrastructure to guarantee interoperability in the field. This is how CharIN, an inclusive, industrywide coalition representing over 300 leading e-mobility stakeholders, seeks to accelerate the e-mobility market in North America.

CharIN North America has invited all EV ecosystem stakeholders to participate in CharIN Focus Groups and elsewhere to improve the standards where necessary. For example, providing support for the next generation standard connector to incorporate additional features, like AC V2G, which hasn't been fully addressed in the U.S. market. The EV industry must have a consolidated solution that is in the best interest of all customers -- a single interoperable charging standard.

About CharlN Inc.

The Charging Interface Initiative (CharIN) Inc. serves as a leading industry association bringing CharIN's global approach to decarbonization through the electrification of North American transport. Convening together industrywide e-mobility stakeholders including automakers, charging station manufacturers, component suppliers, energy providers, government officials, and grid operators, our organization assists members in coordinating, advancing, and advocating for interoperability across electric vehicle charging infrastructure. Driving forward the widely-adopted Combined Charging System (CCS) and the Megawatt Charging System (MCS) platforms, CharIN works to ensure all electric vehicles – from light-duty passenger cars to freight trucks, e-ferries, ships, and planes – can work seamlessly with available charging stations and services. CharIN serves as a pivotal, unified voice for industry-standard, interoperable charging technologies and best practices, working with federal, state, and local regulatory agencies and policymakers to unleash innovation and encourage the rapid adoption of electric vehicles in municipal, commercial, and private use.

About CharIN e.V.

The Charging Interface Initiative (CharIN) is the leading global association with over 300 international members dedicated to promoting interoperability based on the Combined Charging System (CCS) and the Megawatt Charging System (MCS) as the global standard for charging vehicles of all kinds. Our goals include expanding the global network of companies supporting CCS, drafting requirements to accelerate the evolution of charging related standards, and defining a certification system for all manufacturers implementing CCS in their products. https://www.charin.global/

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