

APRIL 16, 2021

## COLLECTING EV CHARGING STATION UTILIZATION DATA: MODEL LANGUAGE FOR STATE GRANTS AND PROCUREMENT CONTRACTS

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### INTRODUCTION

In the context of the electric vehicle (EV) charging ecosystem, the term “electric vehicle supply equipment (EVSE) utilization data” broadly refers to a combination of site-specific qualitative charging station data (e.g., location and equipment type) and quantitative charging session data (e.g., charging session start/end times). Together, these data are critical to understanding consumer charging behavior and electric grid impacts, assessing the returned value on EVSE investments, and informing strategic electric distribution system planning and EVSE network expansion.

The [Northeast Corridor EV Infrastructure Strategy for 2018-2021](#) identified the collection, sharing, and analysis of EVSE utilization data as an overarching issue critical to planning and deploying an EV charging infrastructure network that will effectively support increased EV adoption. In recognition of the potential value of such data and the opportunity presented by state investments in EVSE, the Multi-State ZEV Task Force<sup>1</sup> directed the Northeast States for Coordinated Air Use Management (NESCAUM) to develop recommendations for collecting and reporting these data from publicly funded charging stations. This document describes the benefits of collecting EVSE utilization data and provides model language for establishing uniform EVSE data collection and reporting standards in state EVSE grant and procurement contracts.<sup>2</sup>

### BENEFITS OF COLLECTING EVSE UTILIZATION DATA

EVSE utilization data collection can deliver many benefits to planners, policymakers, and EV drivers alike. Data collection is the first step to building a dataset that can help policymakers evaluate program success, make informed decisions to improve program effectiveness, and make efficient use of program funding and resources. Collection of EVSE utilization data also can help assess returned value on

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<sup>1</sup> The Multi-State ZEV Task Force for light-duty ZEVs consists of 10 member states—California, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island, and Vermont—that signed a Memorandum of Understanding committing to coordinated action to support accelerated EV adoption. See <https://www.nescaum.org/documents/zev-mou-10-governors-signed-20191120.pdf/>.

<sup>2</sup> NESCAUM would like to acknowledge the valuable input received from Atlas Public Policy; Center for Sustainable Energy; Electrify America; Energetics Inc.; National Renewable Energy Laboratory; Institute of Transportation Studies, University of California, Davis; EVSE service providers; and others that helped to inform this document.

investments in charging infrastructure and provide deeper insights into charging behaviors across various settings and use cases. In turn, these data can be used to identify remaining gaps in the charging infrastructure ecosystem and inform strategic investments designed to fill those gaps and meet the needs of EV drivers.

## MODEL PROVISION FOR EVSE UTILIZATION DATA COLLECTION AND REPORTING

Across the Task Force states, states are providing a variety of funding for Level 2 and DC fast charging infrastructure, creating a prime opportunity to collect EVSE utilization data. The model language recommended below is intended to apply to publicly funded charging stations that are networked. This provision would only apply once added to EVSE grant agreements and procurement contracts. It would not apply retroactively to existing publicly funded charging stations. Utilizing this model provision will help to ensure a consistent state-by-state approach to EVSE utilization data collection. This will allow for the creation of a larger dataset and enable more efficient state and regional analyses of charging behavior that can inform future charging infrastructure planning and deployment, and, in turn, accelerate EV adoption by targeting infrastructure investment where it will deliver the greatest benefit to EV drivers.

### EVSE UTILIZATION DATA COLLECTION AND REPORTING MODEL LANGUAGE

If the installed charging equipment is networked, the (grantee/recipient/contractor) must collect and submit all EVSE utilization data requested to [INSERT STATE AGENCY] on a [QUARTERLY/BIANNUAL] basis for a minimum of five years in the format prescribed by [INSERT STATE AGENCY].\* The data requested include but are not limited to the following fields: charging session ID; charging session date; charging session start/end times; charging station time zone; total time plugged in; total time spent charging; total energy dispensed (kWh); total transaction fee; charging station ID; plug ID; charging plug type; maximum power output (kWh); city, state, zip code; venue type; and charging station activation date. Where possible, the preferred submission method for these data is via an application programming interface (API). Furthermore, the (grantee/recipient/contractor) must add [INSERT STATE AGENCY] to its network account as an administrator with read-only rights to access charging data directly from the EVSE service provider for the duration of the five years. Funding will be withheld until confirmation that the [INSERT STATE AGENCY] has been added as an administrator to the (grantee's/recipient's/contractor's) network account.

\* An *EVSE Utilization Data Collection Template* can be viewed and downloaded [here](#).

## CONCLUSION

NESCAUM worked with the Multi-State ZEV Task Force to reach a consensus on the model language for state EVSE grant and procurement contracts for publicly funded charging stations to foster a consistent approach to collecting and reporting EVSE utilization data. In addition to creating a larger dataset for analysis of charging behavior and lessening the burden on EVSE service providers, a uniform approach to EVSE utilization data collection and reporting could lay the foundation for the creation of a centralized data warehouse capable of leveraging efficiency of scale to provide valuable insights into the evolution and impact of the EV market. A centralized data warehouse could lead to greater understanding of charging patterns across the states that can inform strategic development of inter-regional public charging infrastructure networks necessary to achieve widespread EV adoption.