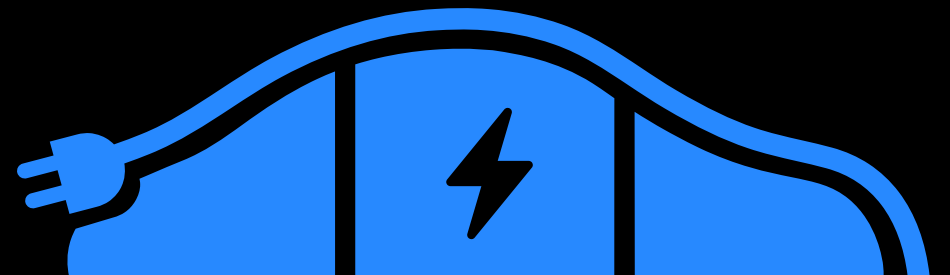# ELECTRIC VEHICLE CHARGING USE SPECIFICATION

A common process for collecting EV charging station use data and standardizing the metrics for reporting on EV charging station utilization.

www.evchargingspec.org

Peter Benzoni, Josh Rosenberg, James Di Filippo, and Nick Nigro of Atlas Public Policy

EV CHARGING USE
DATA SPECIFICATION

OVERVIEW

Why a charging use specification?

Why Atlas Public Policy?

Specification Overview

Roadmap

Engaged Parties

WHY A CHARGING USE SPECIFICATION?

...because data collection is a critical part of any infrastructure funding program and a specification ensures that the right kind of data is collected to support program goals, inform policy, and plan for the future

- Tracking, verifying and evaluating charging station deployment and usage key for stewardship of public and ratepayer funds
- Insights from data can improve equity, efficiency and efficacy
- Data is critical to understand and plan for impacts of EV loads on electrical grids

WHY A CHARGING USE SPECIFICATION?

...because a widely adopted common specification outlining required data type, format, and structure of reporting data streamlines collection efforts for all parties

- Creates a reference for data requirements which can be cited in RFPs and contracts

- Establishes consistent data collection and reporting between programs and among jurisdictions

- Broadly consistent data reporting requirements, fields, and formats reduces reporting costs for program administrators, funding recipients and charging networks

- Consistent data collection can enable multi-program research efforts and inter-program comparison and benchmarking

WHY A CHARGING USE SPECIFICATION?

...because data collection needs are set to multiply over the next few years and many jurisdictions that have not yet administered infrastructure funding programs will begin to develop them

- $5 billion in IIJA infrastructure funding coming – States will have to collect data
- Utilities have committed more than $3 billion in ratepayer funds to spend in coming years
- Opportunities exist to transfer lessons and experience from existing programs

EXAMPLES OF SIMILAR EFFORTS

General Transit Feed Specification: GTFS
- Standardizes transit agency route and real-time transit operations data for use for navigation and other software
- Developed by Google® and now maintained by MobilityData (https://gtfs.org)

Mobility Data Specification
- Data sharing specification for mobility services to help cities manage mobility in the public right of way
- Maintained by the Open Mobility Foundation (https://www.openmobilityfoundation.org/about-mds)

ATLAS PUBLIC POLICY
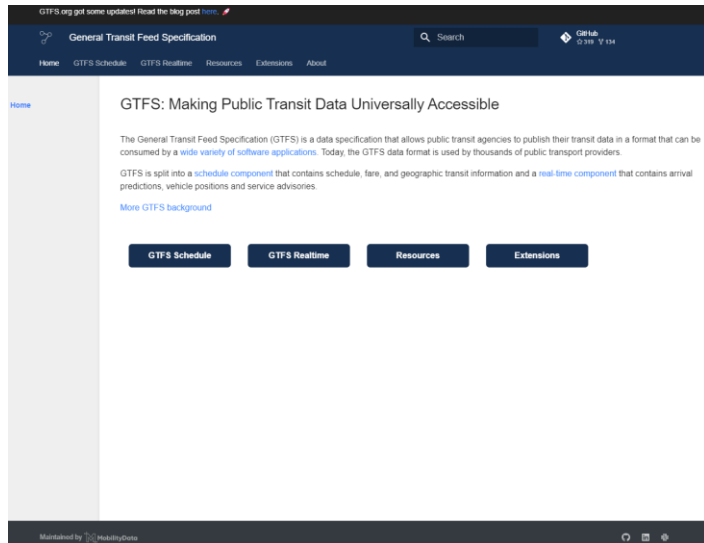
A DC-based policy tech firm established 2015

Atlas Public Policy equips businesses and policymakers to make **strategic, informed decisions that serve the public interest**. Atlas builds analytical tools and dashboards using powerful, accessible technology, and offers expert advisory services to tackle the pressing issues of the day.

Transportation   Buildings   Climate   Disinformation

BRINGING OUR EXPERIENCE TO BEAR

- Atlas has collected and processed charging use data for many key players in the market:
  - NYSERDA
  - Colorado Energy Office
  - Joint Utilities of New York
  - Electrify America
- We have developed specifications for charging use projects
- We focus our work on bringing data to public policy
- We have unique perspective on the purpose and value of charging use data
- Atlas's work on the specification is being funded by the **Alliance for Transportation Electrification**
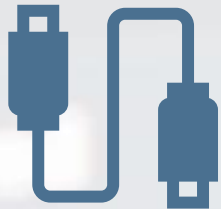
OVERVIEW OF THE CHARGING USE DATA SPECIFICATION

Core Specification

Glossary & Type/Format Definitions

Extensions

Supplementary materials

Live on GitHub: https://github.com/AtlasPublicPolicy/charging-use-spec

CORE SPEC – STATION REGISTRATION

Accurate recording of the **location**, **attributes**, and **identifiers** of charging equipment is crucial to successful reporting

Attributes include power level, host land use, project funding, and others

The specification outlines a format and structure for program administrators to record these key data **during the onboarding process**

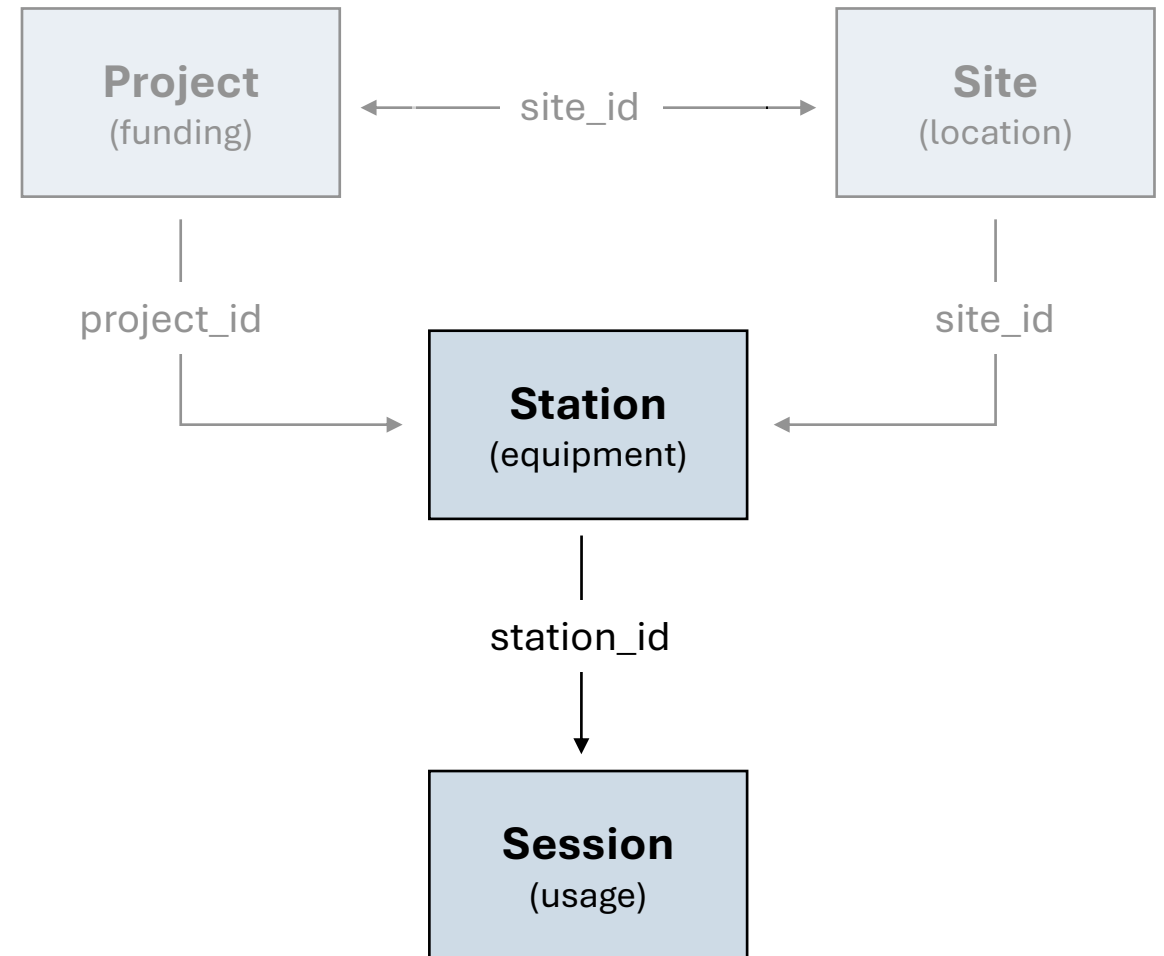**Station Registration Structure**
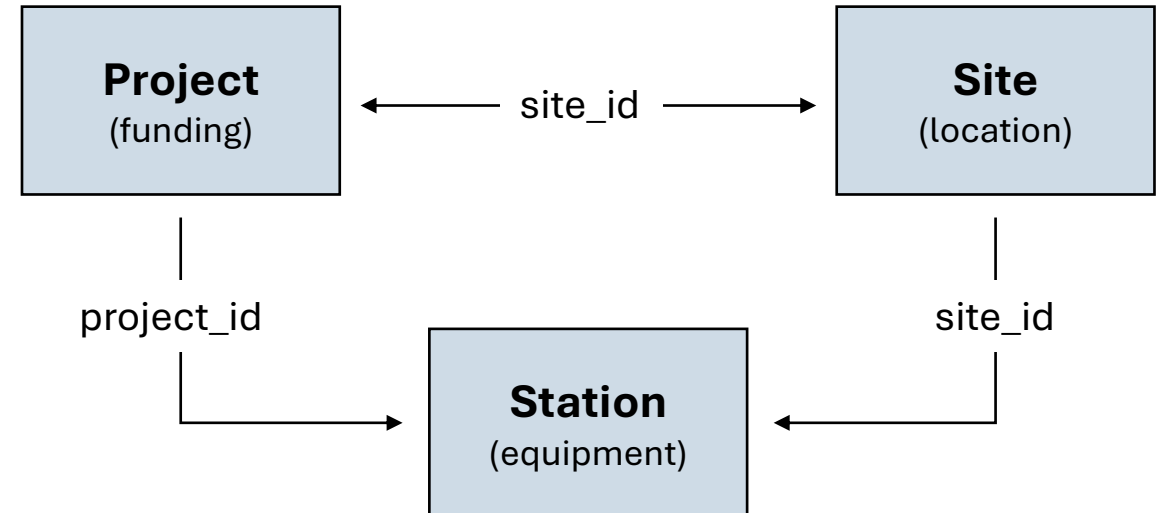
CORE SPEC – SESSION DATA

Session data carries **key usage behavior** linked to associated stations, sites and projects

The specification outlines the expected fields, data types and format for session data **sent by data providers or program participants**

Fields include, session time/date, duration, energy delivered among others

CORE SPEC – VALIDATION AND REPORTING
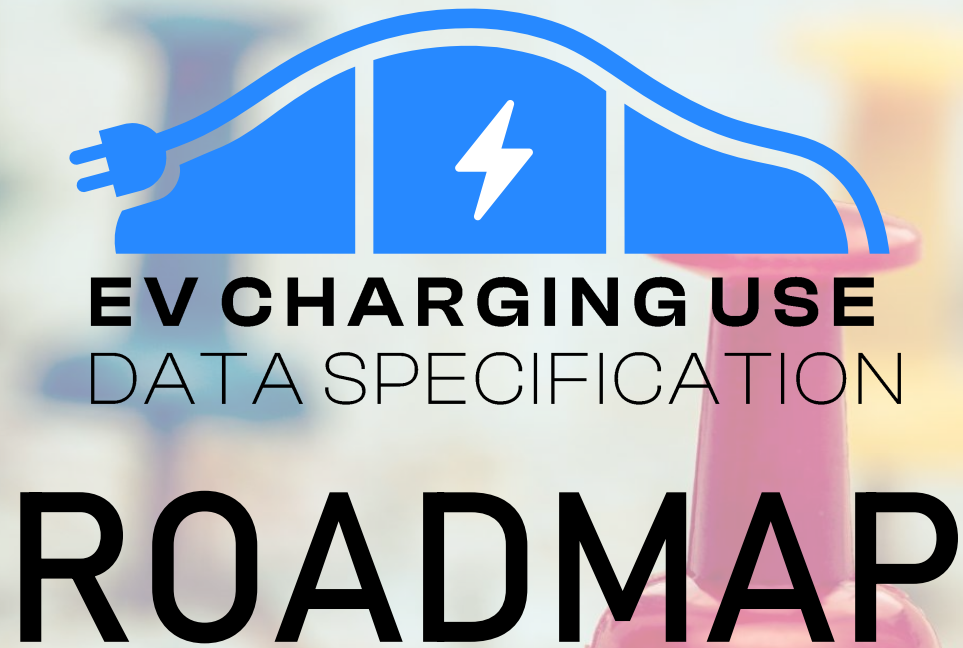
Validations

Ensure conformity and screen for errors

- Missing values
- Duplicates
- Short/excessive length
- To much or too little energy
- Invalid geography

Reporting

Summarize registration and session data into useful reporting metrics

- Station count
- Session count
- Energy delivered
- CO_2 reduction

RELEASE v1.0 - JULY 2022

Atlas is soliciting comment on the beta version of the specification that is currently live on GitHub.

Comments submitted prior to June 30, 2022 will be considered in revisions ahead of the v1.0 release

EXTENSIONS – SUMMER 2022

Atlas is developing three extensions to the specification for summer 2022 alpha releases:

1. Costs Metrics and Data Collection
2. Station Reliability Metrics and Data Collection
3. Grid Impact Metrics and Data Collection

Atlas is seeking input from interested parties on how to best measure station reliability and to collect grid impact (interval) data

COMMENT AND SUGGEST CHANGES ON GITHUB

Anyone can contribute on GitHub by either leaving a comment, replying to other comments, or suggesting revisions to the specification itself through GitHub's collaboration tools.

COMMENT BY EMAIL

Atlas is also processing comments by email at info@evchargingspec.org. All received comments will be published on GitHub (with or without attribution)
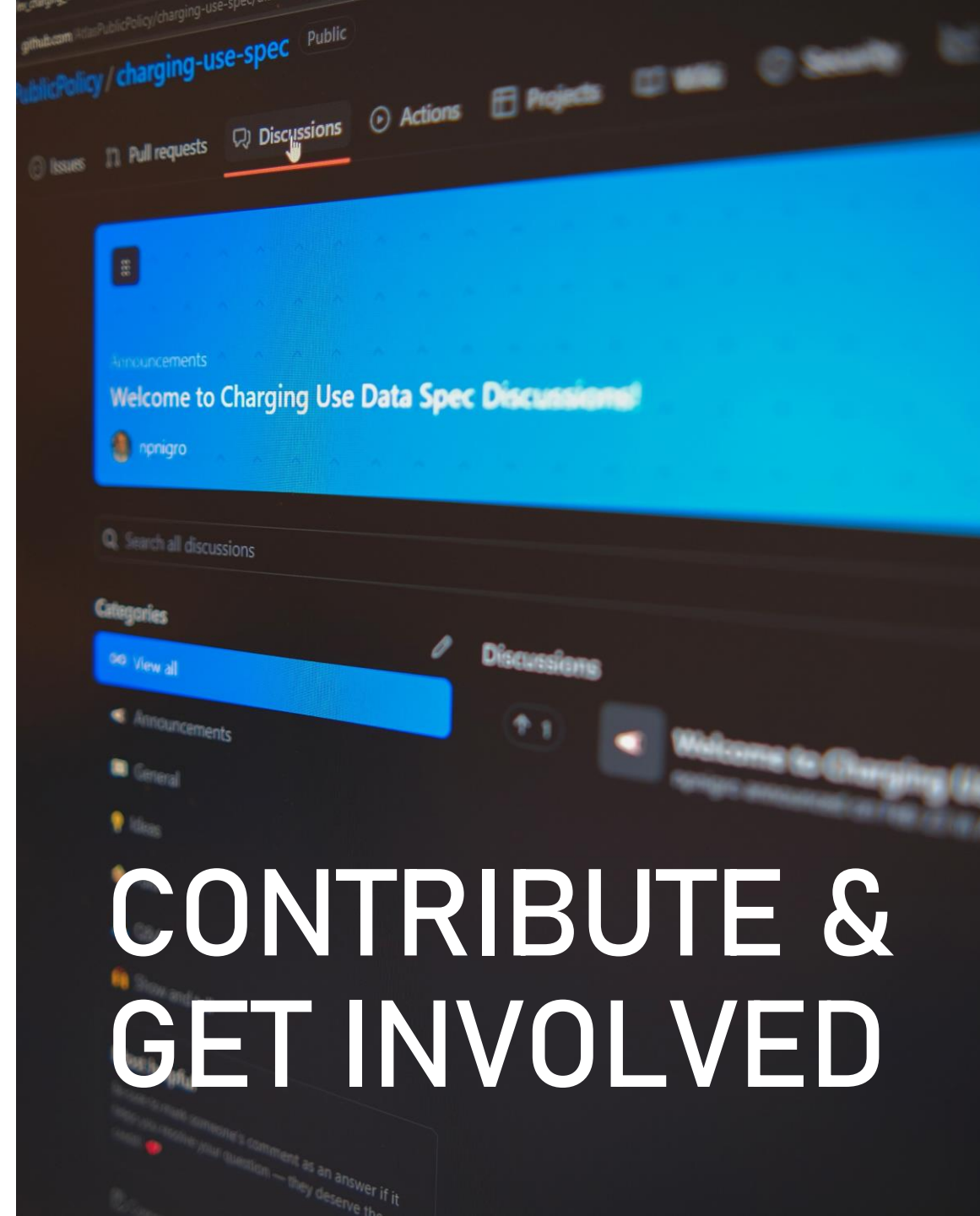
CONTRIBUTE & GET INVOLVED

ENGAGED PARTIES

- Alliance for Transportation Electrification
- Idaho National Laboratory
- State Energy and Environment Offices
- Federal Agencies
- State Associations
- Utilities and Charging Service Providers

*Drop us a line at info@evchargingspec.org if you'd like to be listed under **Engaged Parties** on https://evchargingspec.org.*

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