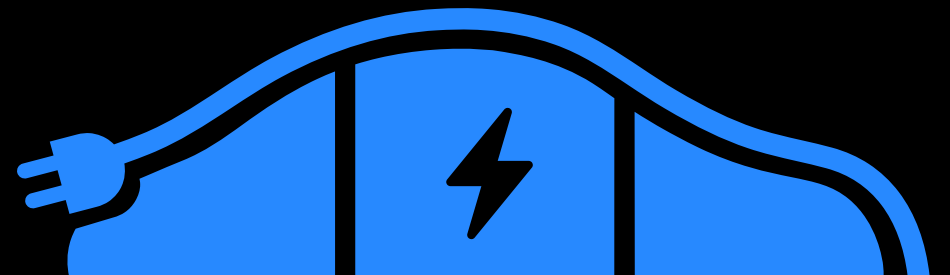


# ELECTRIC VEHICLE CHARGING USE SPECIFICATION

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

[www.evchargingspec.org](http://www.evchargingspec.org)

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



**EV CHARGING USE  
DATA SPECIFICATION**

...the station identifier used by the data aggregator can be upgraded, taken offline, or if the data provider is replaced. This ensures that the data aggregator should also have a process to inherit the attributes of the site where it is located and the project that funded it. Additional information specific to the individual charging station including exact location, power level, and other details should be maintained to support compatibility with existing columns and their formats. Additional information specific to the individual charging station including exact location, power level, and other details should be maintained to support compatibility with existing columns and their formats.

**Field Type and Format Reference** for more information on field types and formats. Additional information specific to the individual charging station including exact location, power level, and other details should be maintained to support compatibility with existing columns and their formats.

**Station Registration**

Field	Definition
id	Unique identifier of charging station – must match the data provider station id if managed by a third party data provider
project_id	Project identifier
location_id	Location identifier
date_entered	Date when entry was created
serial	Unique identifier of charging station derived from station serial number network identifier (e.g., 123-345-2)
name	Name of charging station
provider_org	Data provider organization name – may be the same as obligated party name
provider_poc_email	Email address for data provider point of contact – may be the same as obligated party point of contact
status	Operational status of station at date entered
power_level_kw	Maximum charging power level of the station in kilowatts
ports	Number of simultaneously usable ports

# 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 IJA 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



## OUR VISION FOR MDS

The way we move around our cities is changing quickly. With dockless e-scooters, bikeshares, and ride-hailing services already well established, and new technologies like autonomous vehicles just over the horizon, cities need to be prepared to digitally manage streets, sidewalks, and other public spaces that are more complex and dynamic than ever before.

MDS is designed to enable cities to manage any shared mobility option in the public right of way. That means giving cities the data they need to understand current and historic use patterns and the tools they need to improve the safety, equity, and quality of the mobility services on their streets. MDS is a free, open-source, digital-first platform, so all cities can manage mobility in the ways that work best for them.

GET INVOLVED



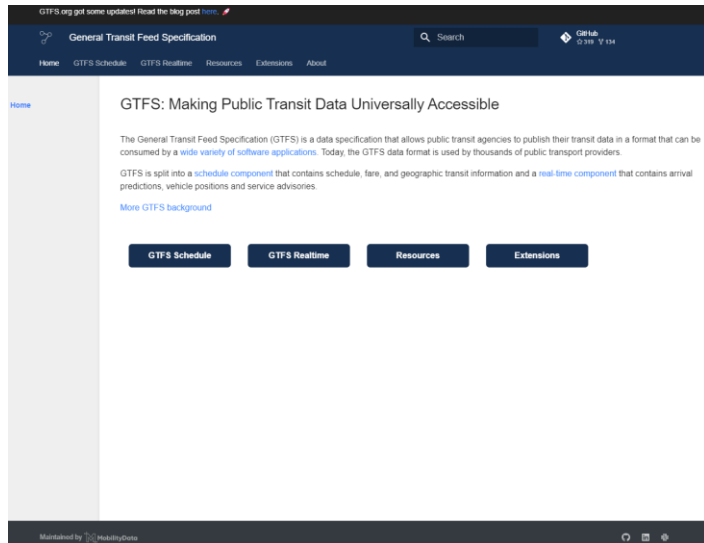
# EXAMPLES OF SIMILAR EFFORTS

## 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>)





*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**



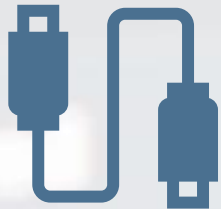
# OVERVIEW OF THE CHARGING USE DATA SPECIFICATION



**Core  
Specification**



**Glossary &  
Type/Format Definitions**



**Extensions**



**Supplementary  
materials**

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

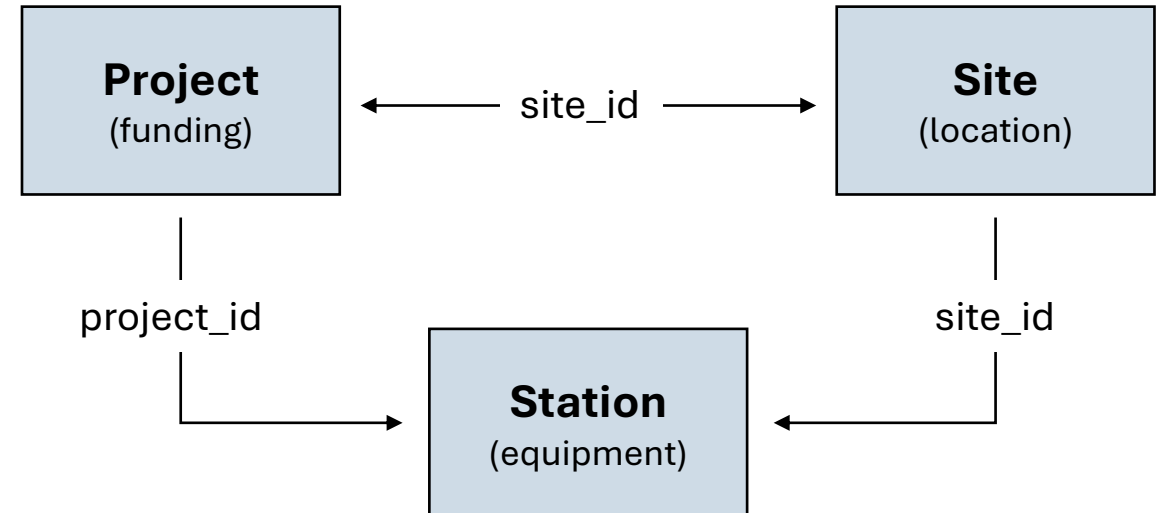
# CORE SPEC – STATION REGISTRATION

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

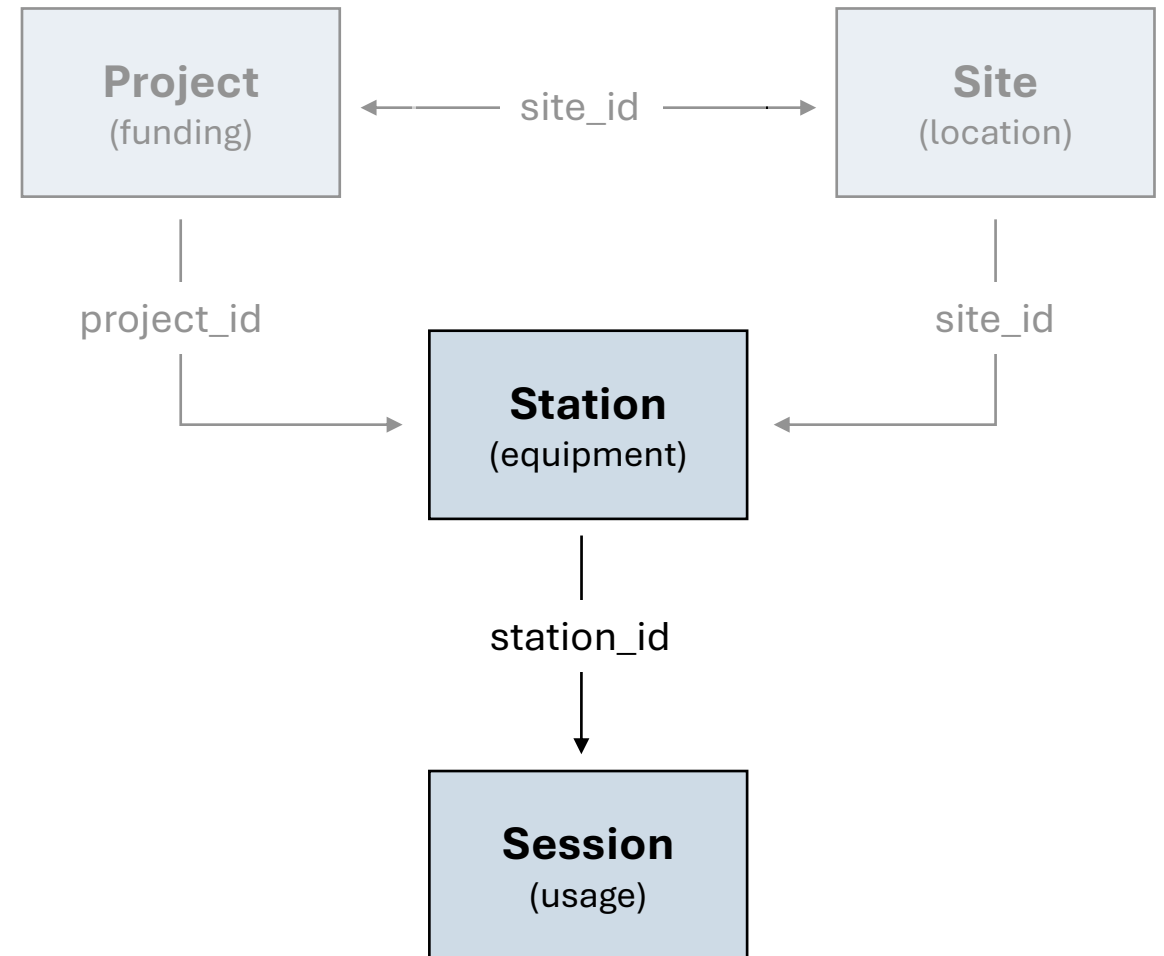


# CORE SPEC – SESSION DATA

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

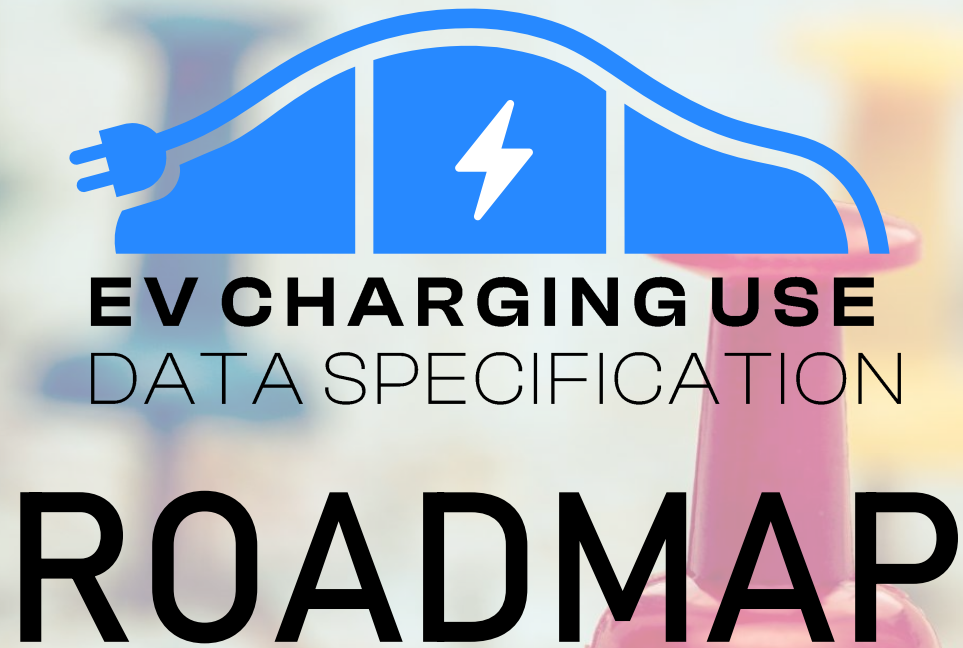
- Missing values
- Duplicates
- Short/excessive length
- Too much or too little energy
- Invalid geography



## Reporting

Summarize registration and session data into useful reporting metrics

- Station count
- Session count
- Energy delivered
- CO<sub>2</sub> reduction



**EV CHARGING USE  
DATA SPECIFICATION**

# ROADMAP

## **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

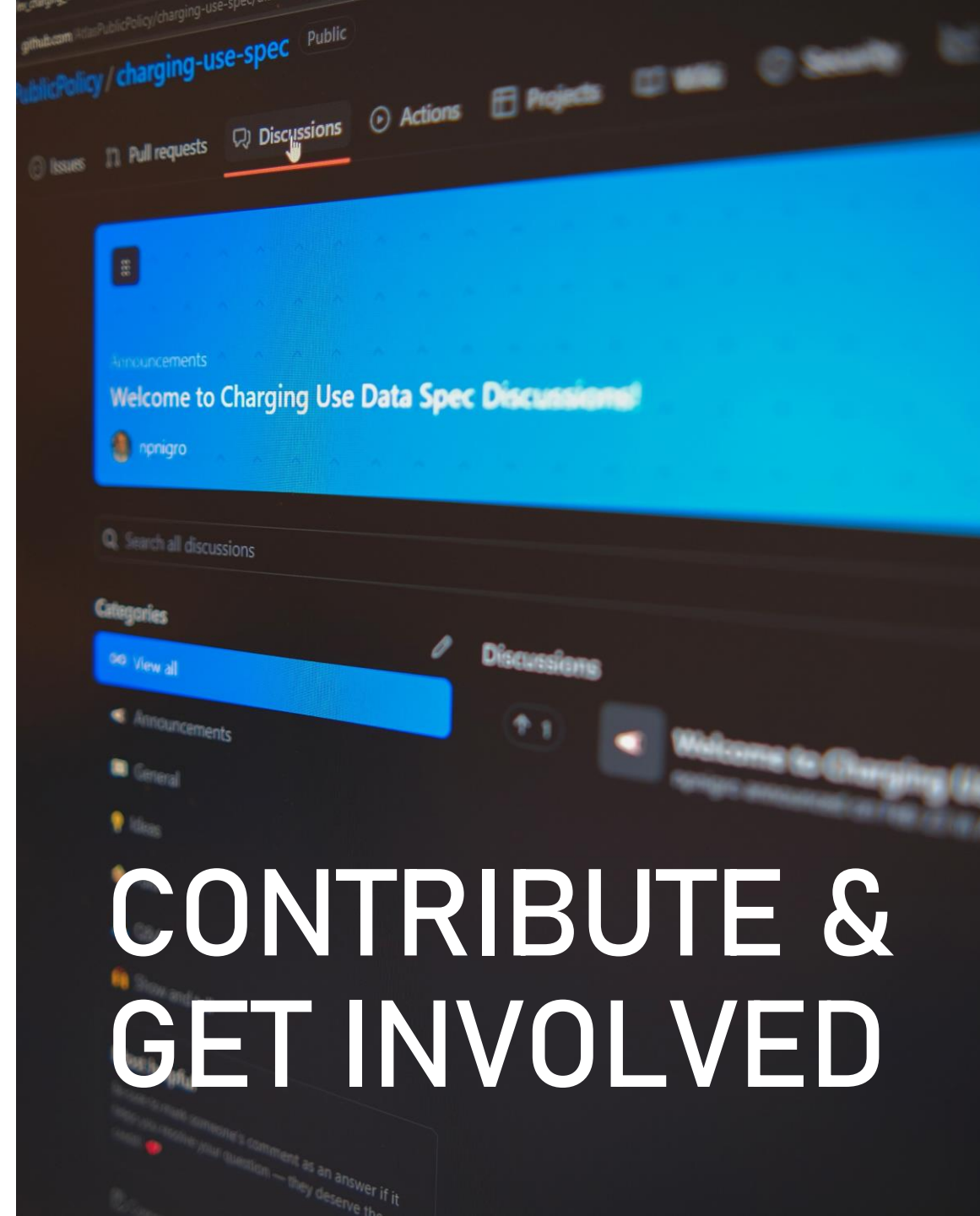
Atlas is seeking input from interested parties on how to best measure station reliability and to collect grid impact (interval) data

## 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](mailto: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](mailto:info@evchargingspec.org) if you'd like to be listed under **Engaged Parties** on <https://evchargingspec.org>.*



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