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E-Charging Station – static data collection

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Preliminary information

The preferred way to collect e-charging stations data in the Open Data Hub platform¹ is through an API that was jointly defined with a group of local e-mobility operators. Thanks to this API, the process is fully automated and allows the sharing of real-time information as well. The perspective is to substitute this API with an open standard, namely OCPI.

In case the implementation of this API (or of a OCPI interface) is technically or economically not feasible, a second method is proposed. In this case the process is semi-automated and is limited to the collection of the metadata associated to the e-charging stations (i.e., no real-time data is collected). The workflow is the following:

- Data Providers sign an agreement with NOI Techpark to share this data under an open license and provide the list of charging stations to be shared, with the level of details requested by NOI;
- NOI insert this data in a specific shared file, which Data Providers can also see in read-only mode
- This data is automatically inserted and periodically updated in the Open Data Hub and made available together with the other real-time charging stations datasets.

The sharing of this information is subject to the signature of a contract, according to a standard template provided by NOI. The recommended data license is the CC0 license². The shared file is the following one: <https://docs.google.com/spreadsheets/d/1ucCQzAVGmvyRpeq-lIPffALQaWcG4LfPakc2mjt79fY/edit?usp=sharing>

The quality, correctness and continuous update of the information provided is entire responsibility of the operator. NOI is responsible to insert this data in correct way in this shared file and make it then available through its Open Data Hub platform, so that 3rd parties could reuse it. For instance, this data will be integrated in the web applications developed with STA Green Mobility and available at <https://www.greenmobility.bz.it/en/green-mobility/charging-stations/>

This document specifies in detail what information is requested and how this data is integrated in the Open Data Hub according to its data model

¹ <https://opendatahub.com/>

² <https://creativecommons.org/publicdomain/zero/1.0/deed.en>

Fields specification

Field	Description
PROVIDER_NAME	The name of the Data Provider. Should be an acronym
STATION_NAME	A string that identifies the e-charging station for the end-user. A charging station could be for example a hotel, a restaurant or other points of interest where charging possibility are available.
POINT_NAME	Each e-charging station can have several points for making a charging operation. Each point should be identified a separate name. Could be also something STATION_NAME_1, STATION_NAME_2, etc.
LATITUDE	The position of the e-charging station (latitude). To be provided as a double in the WGS84 format. Accuracy requested: five decimal places after the decimal point. All charging points associated to the same station will have the same latitude.
LONGITUDE	The position of the e-charging station (longitude). To be provided as a double in the WGS84 format. Accuracy requested: five decimal places after the decimal point. All charging points associated to the same station will have the same longitude.
STATE	It indicates the state of a charging point. Is a string that can have one of the following values: <ul style="list-style-type: none"> • ACTIVE (e-charging station that is available for use) • INSTALLED (e-charging station installed but still not available for use) • MAINTENANCE (e-charging station temporarily not available for use due to maintenance activities or other issues) • REMOVED (e-charging station that is no more available for use) • PLANNED (e-charging station that is planned but is still not installed)
ACCESS_TYPE	It indicates the type of the e-charging point. Is a string that can have one of the following values: <ul style="list-style-type: none"> • PUBLIC (e-charging station owned by a public administration that is available for everybody for use) • PRIVATE_WITHPUBLICACCESS (e-charging station owned by a private organisation that is available for everybody for use) • PRIVATE (e-charging station owned by a private organisation that is available only for a restricted group of users)
CONNECTOR_TYPE	It provides information about which outlets are supported by a charging point, e.g. Type2Mennekes, CCS, CHAdeMO

Integration in the Open Data Hub

This data is saved both as EChargingStation as well as EChargingPlug in the **station** table of the Open Data Hub database. More in detail:

EChargingStation:

- **name:** mapping with STATION_NAME
- **origin:** set as 'spreadsheet-sta-echarging'
- **pointprojection:** mapping with LATITUDE and LONGITUDE
- **stationcode:** set as 'PROVIDER_NAME:STATION_NAME'
- **stationtype:** set as 'EChargingStation'

EChargingPlug:

- **name:** mapping with PLUG_NAME
- **origin:** set as 'spreadsheet-sta-echarging'
- **pointprojection:** mapping with LATITUDE and LONGITUDE
- **stationcode:** set as 'PROVIDER_NAME:PLUG_NAME'
- **stationtype:** set as 'EChargingPlug'

EChargingPlug have a reference to an entry in the **metadata** table and to the corresponding EChargingStation they belong to (through the field **parent_id**). The following fields are saved as a JSON in the metadata table: **STATE, ACCESS_TYPE, CONNECTOR_TYPE.**