

# BACK OFFICES AND INTERFACES

Agreements regarding communication between charging stations and underlying systems, e.g. communication protocols and payment options.

Sub-category	ID	Subject description	Guideline description	Required; Desired*	Priority**	Comments
Authentication	BI1	Authentication of user	Charging transactions can be initiated and ended through the back office system.	Required	Include	
Authentication	BI2	Authentication back office system	User authentication through the back office system supersedes authentication through the local database.	Desired	Recommended	
Technology	BI3	Communication protocol	The firmware structure for the correct data connection between the charging station and the back office system must be structured in accordance with the Open Charge Point Protocol version 1.6 JSON, with the exception of the possibility of reservations.	Required	Include	The OCPP specification and tools can be downloaded from the website: <a href="http://www.openchargealliance.org">www.openchargealliance.org</a> . Future guideline.
Technology	BI4	Implementation and correct operation OCPP	The contractor is responsible for the implementation and correct operation of OCPP.	Desired	Include	
Technology	BI5	Update OCPP	The contractor is responsible for updating OCPP to a new version free of charge (in consultation with the client).	Desired	Include	
Technology	BI6	Mobile communication	Communication takes place through a closed communication network (APN). The contractor shall select its own telecom provider. The contractor is responsible for the establishment of a correct data communication link.	Desired	Recommended	Future guideline.
Technology	BI7	Agreements regarding the interface with regard to real-time data sharing	The client and the contractor shall agree on the interface to be used with regard to real-time data sharing. If necessary, an interface will be developed together, in which the contractor will actively invest.	Desired	Include	The contractor shall make at least the following information available in real-time: <ul style="list-style-type: none"> <li>- Unique transaction code;</li> <li>- The amount of kWh charged per socket, per transaction, during the transaction;</li> <li>- The connection and disconnection times per transaction;</li> <li>- The start and end time of the transaction (time of connection and disconnection, and the start time and end time of charging, including a note if there are particularities such as Smart Charging, deferred charging, temporary charging at a lower power, and so on);</li> <li>- Which charge profile was active and what the input was for the charge profile;</li> <li>- Which charging station and socket applies to the charging data.</li> </ul>

For \* and \*\*: definitions on page 7.

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Sub-category	ID	Subject description	Guideline description	Required; Desired*	Priority**	Comments
Technology	B18	Diagnostics	The contractor shall provide the client with the possibility of retrieving diagnostics of the charging station or a selection of stations itself (via the back office system).	Desired	Include	
Technology	B19	Charging point as access point for configuration	The charging point supplier provides the municipality/contractor with the ability to operate all relevant functions and configurations of the charging point personally.	Required	Include	
Data	B110	Availability of third parties	The contractor offers a solution by which insight can be gathered into current availability of all the various charging points. This occurs in a straightforward manner and in a universal format suitable for exchange of up-to-date data, such as XML, SOAP, HTTPS and TCP/IP).	Required	Include	
Data	B111	Access to data	The contractor offers an open interface solution (such as OCPI) by which customers of other charge service providers can access the functionality of the charging station; for example, by using an app.	Required	Include	
Data	B112	Delivery of data	Data can be transferred or exported to third parties, including all historical application and usage information.	Required	Include	The requirements to be met by the tables for static charging station data and dynamic data per charging transaction can be requested from <a href="mailto:info@elaad.nl">info@elaad.nl</a> . These data will be made available via OCPI (or a similar protocol).

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Sub-category	ID	Subject description	Guideline description	Required; Desired*	Priority**	Comments
Data	B113	Usage data available	The contractor shall make all usage data available for a general and independent monitoring tool for monitoring the use of the charging stations. The contractor shall make the usage data available to the client at least once a month.	Desired	Include	The contractor shall make at least the following information available: <ul style="list-style-type: none"> <li>- Unique transaction code;</li> <li>- The number of transactions per socket;</li> <li>- The number of unique transactions per socket and per charging card;</li> <li>- The amount of kWh charged per socket, per transaction;</li> <li>- The connection and disconnection times per transaction;</li> <li>- The start and end time of the transaction (time of connection and disconnection, and the start time and end time of charging, including a note if there are particularities such as Smart Charging, deferred charging, temporary charging at a lower power, and so on);</li> <li>- Which charge profile was active and what the input was for the charge profile;</li> <li>- The uptime;</li> <li>- The number of malfunctions per charging station (possibly per socket) and the moments of these malfunctions.</li> </ul>
Data	B114	Ownership data	The client owns all available data.	Desired	Include	
Providing charging services	B115	Price	The contractor shall settle charging transactions with charging service providers and card holders for a maximum price to be determined.	Required	Include	
Providing charging services	B116	Price	Changes in the fee amount or fee structure for the charge services are possible in consultation with and after approval from the client.	Required	Include	

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Sub-category	ID	Subject description	Guideline description	Required; Desired*	Priority**	Comments
Payment	BI17	Offering access through a universal card for all public charging station	The charging station accepts valid charge passes/authentication methods (app) from various providers. The contractor is expected to sign contracts with service providers, making interoperable charge infrastructure available in the process. The contractor must also make agreements with foreign providers.	Required	Include	
Payment	BI18	Alternative payment method: smartphone	To allow one-time use (for example, in the case of tourists), an alternative payment option without subscription is possible, preferably through NFC.	Desired	Recommended	Future guideline.
Payment	BI19	Paying for charging and parking	The EV driver can pay for charging and parking at the same time.	Desired	Include	Supported in OCPI. Future guideline.
Price	BI20	Choice of power supplier	It must be possible for the EV driver to make use of their own power supplier at the charging station (either or not through their card supplier/service provider), or in any case to have the choice between various providers at the charging station.	Desired	Recommended	Future guideline.
Price	BI21	Displaying actual price prior to charging	The EV driver can use an app for insight into up-to-date charging fees and the status of the charging station.	Desired	Include	Future guideline.
Charging	BI22	Messaging if the charging point is out of service	The EV driver is actively informed about the status of their charge session and the status of the charging point to which they are connected.	Required	Include	Future guideline.
Charging	BI23	Messaging for driver when the battery is fully charged	A message is sent to the EV driver once their battery is fully charged.	Desired	Include	Future guideline.
Availability	BI24	Availability and pricing information	Up-to-date information about up-to-date availability and up-to-date pricing can be viewed on an app and will also be offered to third parties.	Required	Include	Future guideline.

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