

Which parameters are essential to enable Dynamic Load Management over OCPP 1.6?

Original text as published before the redesign of this article. Wording unchanged.

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Please review our list of supported devices over the OCPP 1.6 protocol.

OCPP 1.6-J related question to enable Dynamic Load Management over OCPP 1.6 with Reduxi:

- Does it support »Charging profiles« and EVCS accept when the Energy management system sets the desired values?
- Is it possible to set the parameter "MeterValueSampleInterval" to 1 second?
- Is it possible to get the following measurement data every second in the profile »MeterValuesSampledData":
 - Energy.Active.Import.Register,
 - Current.Import,
 - Power.Active.Import,
 - SoC" (SoC is optional if you have DC EVCS)
- How often is EVCS internally doing samples of measurement data? Every second?
- Is captured measurement data stored only internally, or can the Energy management system read it? Every Second?

Why is it essential to have MeterValueSampleInterval set to 1 or 2 seconds?

It is essential because energy meters have internal circuit breaker limitations, which shut down the electricity based on 1-minute intervals if we reach the limit.

Suppose we have information on every EVCS every 1 second. In that case, we can provide precise dynamic load management functions (DLM) and control the house or building load management based on the current situation of electricity demand.

If we capture data in 30 to 60-second intervals, this would mean that load management of EVCS would be done with 60-second old data where a situation in the house or building was already changed, and we made sub-optimal EVCS management.

If we have only one charging station, and we would have 60 seconds of old data, we would be able to control EVCS based on primary grid meter data, but as soon we have more than one EVCS, this is not an option because we would not manage multiple EVCS correctly.

With the data availability in the 1-second intervals, we can provide the most accurate DLM.

Why must "MeterValuesSampledData" send all the following data parameters: "Energy.Active.Import.Register, Current.Import, Power.Active.Import, SoC"?

To provide DLM function, it is essential to have measurements of active energy, currents, and active power. Otherwise, we cannot know if the EVCS accepted the required demand from Reduxi, and we don't know what is happening with EVCS, so it is essential to have all these data and that EVCS is internally updating these values every second.