

[EnergyKit](#) / ElectricVehicleLoadEvent

Structure

ElectricVehicleLoadEvent

A measurement of the electricity consumed or generated by an electric vehicle while connected to a charger.

iOS 26.0+ | iPadOS 26.0+ | Mac Catalyst | macOS 26.0+

```
struct ElectricVehicleLoadEvent
```

Overview

Submit events representing electricity consumption or generate to provide insights about electricity usage and their managed devices' adherence to [Electricity Guidance](#). These events, called [ElectricVehicleLoadEvents](#) are data points recorded at specific points in time for a given [EnergyVenue](#) that allow the venue to determine when the device used electricity and its cleanliness based on historical Electricity Guidance. Additionally, relative cost can be determined using the rate plan at the EnergyVenue, if available. You must submit Electric VehicleLoadEvents as your managed devices consume or produce electricity. You can request insights based on submitted ElectricVehicleLoadEvents. Insights are only available upon your submission of ElectricVehicleLoadEvents.

Submit electrical vehicle load events

Save data to the ElectricVehicleLoadEvent with a sampling rate that's proportional to the rate of change of electrical quantities such a power. Generally, one sample every 15 minutes (at 0, 15, 30, and 45-minute marks) is sufficient when the device's session is active and no significant changes occur to its power state.

Significant changes may include:

- A person initiated an action.

- A pause in power consumption such as going idle.
- The power changed.

Unplugged or plugged in vehicles while idle between charging sessions don't generate idle events. The device that requested [Electricity Guidance](#) must submit the corresponding load events. Load events for an [EnergyVenue](#) are accessible to all people that use the Home app.

Topics

Creating an electrical load event

```
init(timestamp: Date, measurement: ElectricVehicleLoadEvent.ElectricalMeasurement, session: ElectricVehicleLoadEvent.Session, deviceID: String)
```

Creates an electric vehicle load event.

```
struct Session
```

A session that tracks the event.

```
struct ElectricalMeasurement
```

A description of the electricity consumed or generated by a device.

Getting the electrical load event information

```
let id: UUID
```

The unique identifier of the electrical load event.

```
let session: ElectricVehicleLoadEvent.Session
```

The session information.

```
let timestamp: Date
```

The timestamp for when the event occurred.

Getting the device information

```
let deviceID: String
```

The device's unique stable identifier.

```
let measurement: ElectricVehicleLoadEvent.ElectricalMeasurement
```

The electricity consumption or generation of a device.

Relationships

Conforms To

Decodable
ElectricalLoadEventProtocol
Encodable
Identifiable
Sendable
SendableMetatype

See Also

Load events

`struct ElectricHVACLoadEvent`

A measurement of the electricity consumed by an HVAC system.

`struct EnergyVenue`

A physical site that uses or produces electricity at that location.

`enum ElectricityFlowDirection`

Information about which direction the electricity moves.

`protocol ElectricalLoadEventProtocol`

A type that can represent an electrical load event.