

[EnergyKit](#) / [ElectricHVACLoadEvent](#)

## Structure

# ElectricHVACLoadEvent

A measurement of the electricity consumed by an HVAC system.

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

```
struct ElectricHVACLoadEvent
```

## Overview

Submit events representing electricity consumption to provide insights about electricity usage and their managed devices' adherence to [ElectricityGuidance](#). These events, called [ElectricHVACLoadEvents](#) 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 [ElectricityGuidance](#). Additionally, relative cost can be determined using the rate plan at the [EnergyVenue](#), if available. You must submit [ElectricHVACLoadEvents](#) as your managed devices consume electricity. You can request insights based on submitted [ElectricHVACLoadEvents](#). Insights are only available upon your submission of [ElectricHVACLoadEvents](#).

## Submit electrical HVAC load events

Save data to the [ElectricHVACLoadEvent](#) when the heating or cooling stage changes. An electric HVAC load event provides information about the state transitions of the HVAC unit when its actively consuming energy.

Significant changes may include:

- A person initiated an action.
- A pause in power consumption such as going idle.

- The heating or cooling stage changed.

Idle devices between heating or cooling cycles don't generate events. The device that requested [ElectricityGuidance](#) must submit the corresponding load events. Load events for an [Energy Venue](#) are accessible to all people that use the Home app.

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## Topics

### Creating an electrical load event

```
init(timestamp: Date, measurement: ElectricHVACLoadEvent.ElectricalMeasurement, session: ElectricHVACLoadEvent.Session, deviceId: String)
```

Creates an electric HVAC load event.

```
struct Session
```

A session that tracks the event.

```
struct ElectricalMeasurement
```

A description of the electricity consumed by a device.

### Getting the electrical load event information

```
let id: UUID
```

The unique identifier of the electrical load event.

```
let session: ElectricHVACLoadEvent.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: ElectricHVACLoadEvent.ElectricalMeasurement
```

The electricity consumption of a device.

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# Relationships

## Conforms To

Decodable  
ElectricalLoadEventProtocol  
Encodable  
Identifiable  
Sendable  
SendableMetatype

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## See Also

### Load events

`struct` `ElectricVehicleLoadEvent`

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

`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.