REAL-TIME POWER INTELLIGENCE

SMART CHARGING STATION MANAGEMENT SYSTEM

EFFICIENTLY UTILIZING AVAILABLE ENERGY TO MINIMIZE ELECTRICITY COSTS

**stanbury
RTPI**

SRTPI.COM

What is RTPI?

Real-Time Power Intelligence (RTPI) is an energy monitoring and management system for distribution of energy to electric vehicle fleets. Its variety of peak load and prioritization settings ensures an optimized process for charging your electric vehicles. The optimization encompasses both electric utility costs and site infrastructure required to support a fleet. The intuitive web interface allows users throughout the organization to gain insight into fleet fueling performance and utilization.

Application Areas

Optimized for fleet use the RTPI system can be deployed to gather data, generate insights, and optimize energy cost in a variety of applications:

> **Warehouses and Manufacturing:**
> Control peak demand across Lift Trucks and AGVs inside, and Terminal Trucks, Electric Box Trucks, or Electric Class 8 in the yard.

> **Airport:**
> Control peak demand across eGSE and Electrified Passenger Busses.

> **Maritime Port:**
> Control peak demand across Lift Trucks, Container Handlers, Terminal Trucks, and Class 8 Trucks.

> **Bus Depots:**
> Control peak demand and maximize the energy purchased off peak during summer rate schedule months.
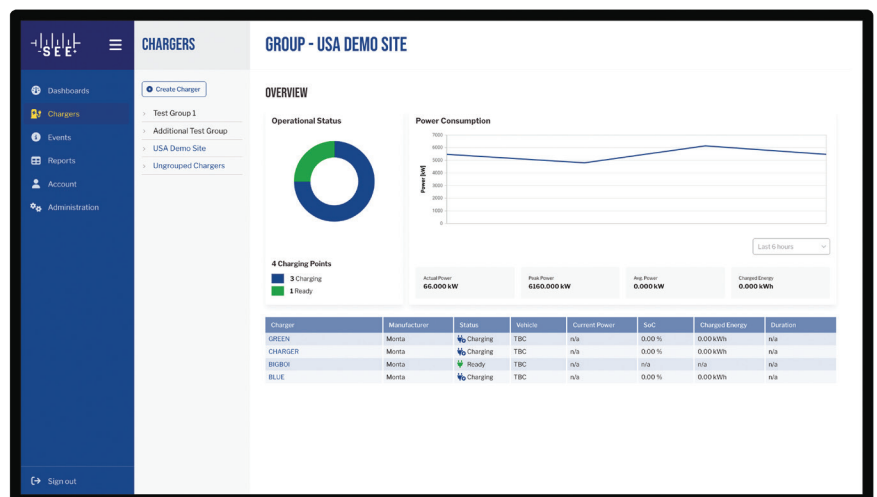
Local or Cloud

RTPI can be fully operated in the cloud for full charger fleet monitoring and optimization. With the addition of the RTPI edge device the full building demand can be monitored, and dynamic peak shaving at the charging stations can take the rest of the facility load into account.

The hardware establishes an internet connection between the charging stations and the cloud and handles time-critical requests.

Overview of Advantages

> Cross platform coordination of energy supply to material handling equipment in the building and high voltage EVs in the yard

> Minimize electric cost to fuel the fleet with time of day driven dynamic peak shaving capability

> Compatible with Infinity chargers for MHE, SEE chargers for EVs, and manufacturer agnostic with OCPP 1.6J and OCPP 2.0.1 communication protocols

> Optimized for electric fleet energy management across distribution warehouses, manufacturing campuses, bus depots, airports, and maritime ports

> Accumulate fuel usage data to generate ecological commodity income from LCFS, CFP, and CFS programs

> Vehicle authorization via RFID, PnC. Autocharge and other methods

The browser-based user interface provides easy access to all information to manage your charging infrastructure.

RTPI.EDGE

LOCAL CONTROLLER FOR DYNAMIC LOAD MANAGEMENT

What is RTPI.edge?

RTPI.edge is an optional local hardware for RTPI installed at the charging station side. It enables you to execute dynamic load management with short latency and high reliability. Moreover, it ensures continued operation of your charging infrastructure in case of an internet connection failure. This is especially beneficial for authorization and reporting features. All configurations can be made conveniently in RTPI in the cloud via the browser interface.

Application Area

The operation of charging infrastructure requires large supplies of power, which is limited by the grid connection.
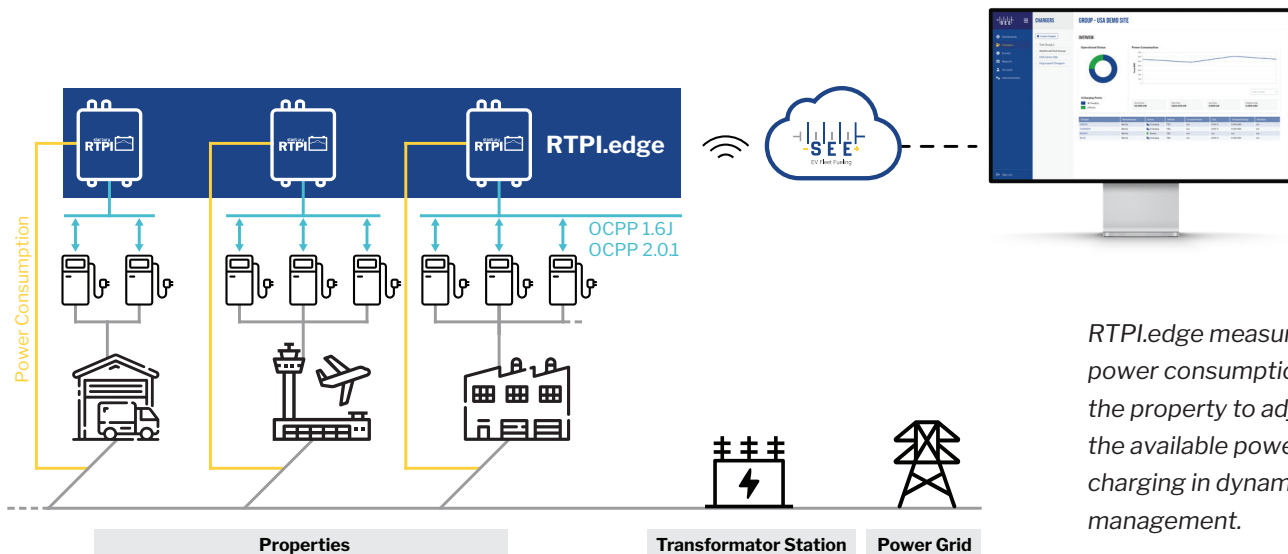
The connection can be extended, but this is not possible in every case. Therefore, load management controls the grid connection as efficient as possible. Static load management uses a fixed maximum charging power. The maximum value is usually set conservatively so that the grid connection limit is not exceeded. If less power is needed in the property, the difference is not used. As opposed to this, in dynamic load management RTPI.edge measures the actual power consumption of the property and sets the maximum charging power depending on the consumption. Thus, more power can be used to charge faster without extending the grid connection.

Overview of Advantages

> Utilize all available power for charging with dynamic load management

> Short latency thanks to local hardware

> High reliability of load management and authorization in case of internet failures

> Data can be accessed from anywhere through cloud connection

> Charging station manufacturer-independent solution using OCPP protocols

> Manage multiple properties in one dashboard

System Overview

RTPI.edge is installed locally at the charging station side. It connects on one hand to the charging stations via OCPP and on the other hand to RTPI running in the cloud. In dynamic load management it measures the power consumption of the property.

OCPP 1.6J
OCPP 2.0.1

Power Consumption

Properties

Transformator Station

Power Grid

RTPI.edge measures the power consumption of the property to adjust the available power for charging in dynamic load management.

Core Features

> **Charging Station Administration**
Add, configure and monitor your charging stations

> **Charging Station Control**
Change the availability, restart the charging stations and update their firmware.

> **Notifications**
React fast with notifications on events and failures. The event history provides detailed information.

> **Vehicle Authorization**
Manage and verify vehicle authorization requests.
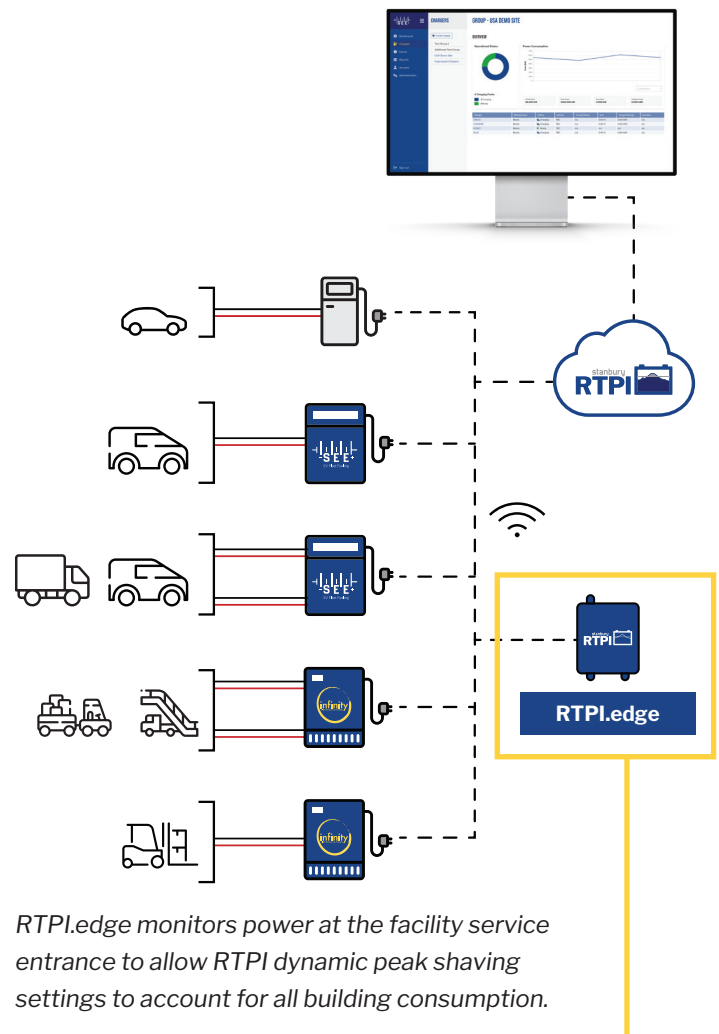
> **Reporting**
Evaluate the usage of your charging infrastructure with comprehensive reports.

> **Browser User Interface**
Keep track of your charging infrastructure via web browser.

> **Role Management**
Grant different rights to specific user groups.

Additional features of RTPI.edge
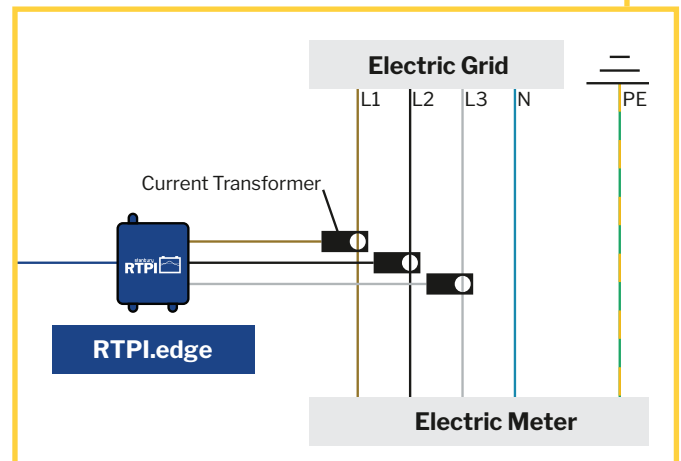
> **Load Management: Static/Dynamic**
Manage the maximum load statically or dynamically and benefit from a variety of charging strategies.

> **Expert Control**
Get access to expert functions such as device model editing, log file upload, security certificate management.

> **Plug and Charge**
Authorize vehicles without driver interaction based on digital certificates.

RTPI.edge monitors power at the facility service entrance to allow RTPI dynamic peak shaving settings to account for all building consumption.

RTPI.edge

Electric Grid
L1 L2 L3 N   PE

Current Transformer

RTPI.edge

Electric Meter

CONTACT

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