EV Charging Solution

DeltaGrid® EV Management

- Smart charging with load and energy management
- Functional integrity for charging service operation
- System interconnectivity and digital services

Household   Community   Commercial   Campus   Parking Lot   Factory

Forward-looking **Smart Charging Solution** Equipped with Advanced **Energy Management**

To help charging service providers balance electricity safety, reasonable costs and service accessibility when building EV charging infrastructure, Delta includes EV chargers into the scope of load management and energy dispatching from the perspective of high-energy-consuming equipment. By charger grouping, prioritization, and scheduling to limit the maximum current output and leverage time-of-use electricity prices, DeltaGrid® EV Management ensures reliable charging services under existing power facilities. By going further to integrate energy storage and solar systems, we can capitalize on the advantages of peak shaving, PV self-consumption, and off-peak electricity load shifting.

Smart Charging

- Max. power **current limitations** for different durations

- **Charger grouping** for different rates and charging priorities

- Customizable **tariff settings** based on TOU and date
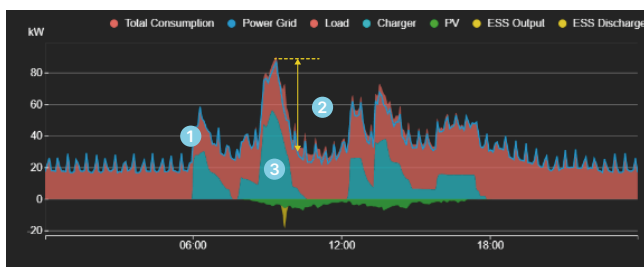

Energy Optimization

- **ESS and PV** integration to support EV charging during peak hours

- **Automatic control and AI scheduling** based on energy usage profiles

- Leverage **off-peak** or **night-time capacity** to prepare for peak demand in the next day
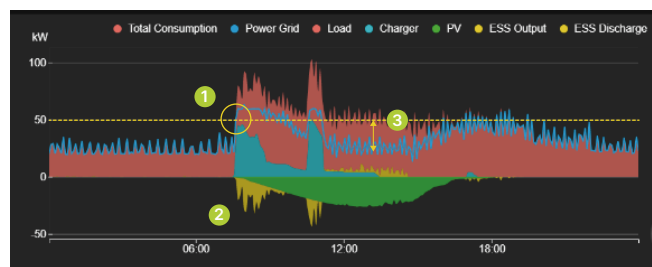
Implementation Outcomes

Daily Load Profile **Before** Implementation

Daily Load Profile **After** Optimization

1. Unpredictable and unmanageable load variation
2. Gap between peak and regular consumption
3. EV charging accounts for the bulk of building energy consumption

1. Activate peak shaving when consumption exceeds preset levels
2. ESS output to support peak demand
3. Solar power contributes to reducing energy purchase from the grid

Features and Benefits

- ✅ Smooth out demand during peak hours
- ✅ Prevent overloads and power trips
- ✅ Ensure no contract demand penalties
- ✅ Leverage existing power infrastructure

Smart Charging with Load and Energy Management

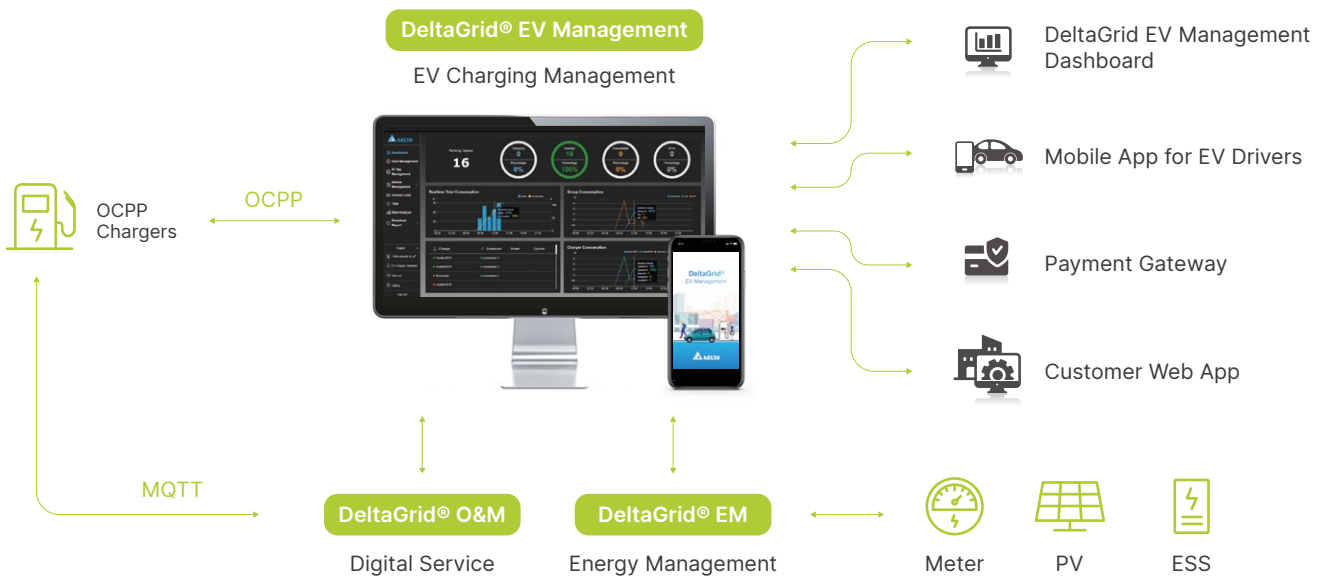|	
Charger Management	Load Management	Energy Management

System Interconnectivity and Digital Service

3rd Party Integration   O&M

Functional Integrity for Charging Service Operation

Account Management   Charging Tariff Setting   Multi-Site Management   Dashboard   User APP

System Interconnectivity

Open for third-party system integration via an API as well as management of major OCPP chargers to enable efficient charging service operations.

OCPP Chargers

OCPP

DeltaGrid® EV Management
EV Charging Management

MQTT

DeltaGrid® O&M
Digital Service

DeltaGrid® EM
Energy Management

DeltaGrid EV Management Dashboard

Mobile App for EV Drivers

Payment Gateway

Customer Web App

Meter   PV   ESS

ΔELTA

Version and Function List

		Standard (On-Premise)	Standard (Cloud)	Professional (Cloud)
	Applicable Scenario	**Single Site** Basic management requirement for chargers and facilities	**Single Site** Needs an APP as EV drivers' operational user interface	**Multi-Site** Management of multiple charging stations and large-scale charging networks
Basic Functions	Dashboard	●	●	●
	Account / RFID Management	●	●	●
	- Prepayment	●		
	Charger Management	●	●	●
	- Grouping	●	●	●
	- Current Limit	●	●	●
	- Time-of-Use (TOU)	●	●	●
	Charging Records	●	●	●
	Statistics / Reporting	●	●	●
Data Analysis	Notification	● (Line / IM)	● (Email / App)	● (Email / App)
	O&M Services		●	●
	- Work Order Integration		●	●
	- Predictive Maintenance			○
	Mobile APP		●	●
	- Charger Settings		●	●
	- Reservation / Navigation		●	●
	- Payments		●	●
EMS Integration	Metering		○	●
	Load Management		○	●
	Scheduling		○	●
	Multi-Site Management			●
	Energy Management (PV, ESS integration)			○

● Provided   ○ Optional