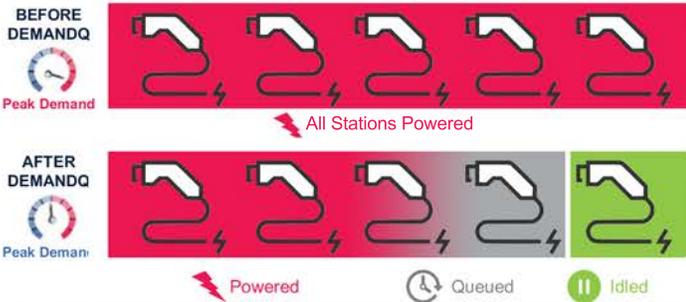# DEMAND Q

## Intelligent Demand Optimization for EV Stations

Installing EV charging stations at your commercial property can complicate business operations and increase your electic bill by 50% or more. DemandQ's SaaS Intelligent Demand Optimization for EV stations can significantly reduce your electric demand charges. DemandQ's behind-the-meter system manages EV-generated peak demand at the point of charge and optimizes demand loads across your entire operation. And because DC fast charging reduces the functional life of EV batteries, DemandQ significantly extends EV battery life.
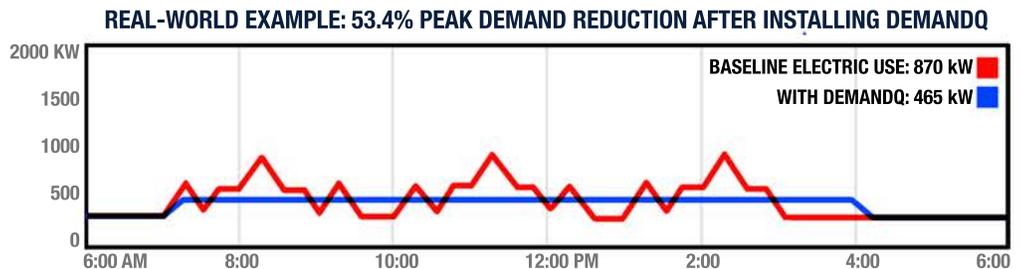


**BEFORE DEMANDQ** — Peak Demand — All Stations Powered

**AFTER DEMANDQ** — Peak Demand — Powered · Queued · Idled

Redistributes timing and use of power **dramatically reducing peak demand charges**

Charging sites are being installed as an auxilliary service in retail and commercial settings throughout the US. These EV stations often share the same grid power source as the business site. DemandQ's Intelligent Demand Optimization cloud service automatically adapts to the entire load presented by these complex sites, holistically mitigating coincident peak demand in near real time.

DemandQ's patented Intelligent Demand Optimization currently serves 50 million square feet of diverse commercial property across 46 states in the US. In response to the rapidly expanding deployment of EV stations, DemandQ has fully integrated its services with the Open Charge Point Protocol, enabling 24/7/365 reductions in electric utility costs and in associated operational risks for commercial, industrial and municipal EV customers.

### COMPARATIVE PERFORMANCE ANALYSIS

DemandQ's integration and interoperations with EVSEs has a dramatic impact on the 15-minute moving average used by utilities to compute demand charges. As detailed in this graph, by implementing DemandQ's Intelligent Demand Optimization, the coincident peak demand of the Charging Station in this study is reduced by over 40%. Applying the nationwide average of $11/kW, DemandQ's algorithm would save over $6,000/month on a Charge Station of this type.



**REAL-WORLD EXAMPLE: 53.4% PEAK DEMAND REDUCTION AFTER INSTALLING DEMANDQ**

BASELINE ELECTRIC USE: 870 kW
WITH DEMANDQ: 465 kW

DemandQ integrates with the EV charging environment through an OCPP-compliant Local Controller. OCPP-J transactions are routed to and from the Local Controller, which in-turn governs the charging profile of the Charging Station EV Supply Equipment. Inputs to DemandQ's system include the current and desired state of charge, continuously updated fleet logistics, current system capacity, and governing utility tariffs.



Active EV current state of charge · EVSE power capabilities · Desired departure state of charge · EV battery capabilities · Tariff / time of use data → DemandQ Intelligent Demand Optimization → EVSE charging Plan