

Case Study

Corporate Campus

Overview

A corporate campus initially installed 45 Level 2 EVSE (electric vehicle supply equipment) in two garages, 19 at Garage A and 26 at Garage B. To meet increased employee charging demand the campus needed to increase charging to a minimum of 170 EVSE between the two garages. However the site had reached the maximum EVSE potential on existing infrastructure.

To add additional stations a new electrical substation would need to be constructed to increase electrical capacity. With seven figure project costs, adding additional EVSE to meet demand made the project cost prohibitive.

Using EverCharge technology the corporate campus was able to leverage existing electrical capacity to support 300+ EVSE and avoid the costly electrical upgrades.

Solution

Leveraging EverCharge's SmartPower technology, 173 EVSE were installed, 40 in Garage A and 133 in Garage B. This was accomplished by using existing electrical capacity in the garage that supplied the original 45 stations and adding electrical sub panels in centralized areas to provide breaker spaces and minimized EVSE install distances.

Additionally, two DC fast charging stations one for each garage for rapid charging usage, were requested. EverCharge was able to design the system to allow for two 50kW DC fast charging stations in addition to the 173 level 2 charging stations on-site.

Technology

SmartPower, EverCharge’s power management technology, utilizes a wireless mesh network for instantaneous, continuous monitoring and management of electrical capacity for vehicle charging. When any EVSE finishes charging or is unused, power allocated to that EVSE is re-allocated to other EVSEs.

Figure 1.1 displays charging at this site over a four day period. This group of 40 EVSE in Garage A are connected to a 250-Amp 3 phase panel. During each day the peak demand briefly exceeds 150A. A traditional unmanaged system would have limited this electrical infrastructure to only 10 EVSE. By utilizing EverCharge SmartPower Technology, we can see there is ample available capacity to support more EVSE utilization.

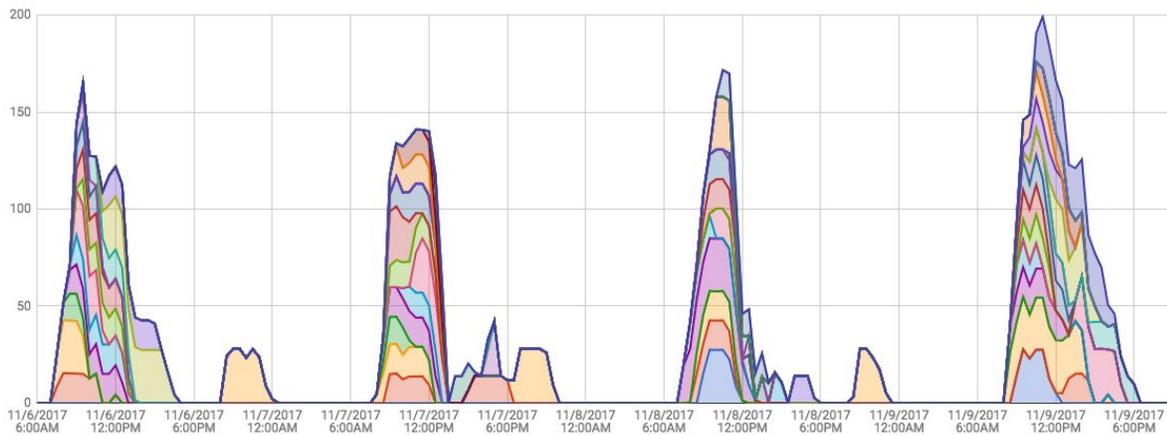


Fig 1.1 Total amperage accumulated from each charge station.
Peak demand only exceeds 150 Amps of the 250 Amps available

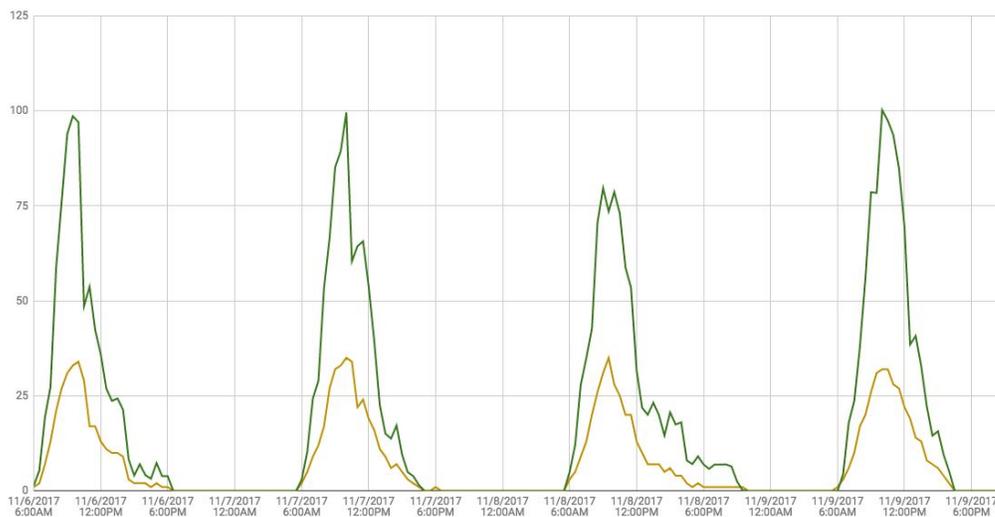


Fig 1.2 Peak kW usage and number of active charge stations