



Peak shaving bridgetown

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Utilities need to cover the cost of maintaining and upgrading the electrical grid, especially handling peak loads, which require larger capacity generation, transmission, and distribution systems. Energy providers charge commercial and industrial users different electric rates to encourage customers to manage and reduce their peak demand, thereby promoting more balanced and efficient use of the electrical grid.

Such demand charges are typically based on your highest level of grid use during a billing period. While these fees can greatly impact electricity expenses, EV charge point operators (CPOs) and fleets who optimize their charging operations through strategies such as peak shaving can minimize utility energy demand charges by using resources more efficiently.

Prepare for the future of peak shaving with Sparkion's smart energy management. Download our white paper to learn more. Download the brochure What is peak shaving in EV charging? Peak shaving, also known as load shedding or peak load shedding, is an energy management strategy to minimize short-term spikes in demand. Since demand charges are calculated based on the highest level of power demand (measured in kilowatts), peak shaving strategies in EV charging involve "shaving" your highest levels of electric vehicle site electricity usage to smooth energy consumption from the grid during popular periods to avoid or reduce high fees as grid operators work to balance electricity supply.

Together, peak shaving and load management help optimize electricity usage and enhance the efficiency of EV charging sites while reducing strain on the electrical grid to prevent overloads and minimize the need for additional power generation capacity. It's a win-win for customers and grid operators alike.

Most companies tend to have main activities that demand a lot of power such as heating boilers or turning on heavy machinery. For CPOs and fleet owners, that's charging electric vehicles. Peak shaving can help cut down the maximum power demand for EV charging during peak hours to offer a number of benefits to businesses. Benefits of peak shaving in EV charging include:

Peak shaving can have many advantages if done well. Here are a few things to think about when developing your energy management strategy.

It's important to start by understanding your energy consumption patterns over time and how your utility bill is affected by your load profile. Commercial and industrial businesses track consumption surges using a registered load profile, a detailed record from the local utility that shows how much electricity is used over a specific period of time. This profile is typically created with data from smart meters that record energy usage at regular intervals (such as every 15 minutes or hourly).

Then, define your business goals and determine how your site's electricity traffic needs to change to achieve



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them. By analyzing your load profile, charge point operators can identify when and why these surges occur, allowing them to implement strategies like peak shaving to manage their energy use more effectively.

Investing in a battery energy storage system to contain excess energy during off-peak times can be valuable in reducing peak demand charges. Stored energy can be used during peak demand periods to power EV chargers, reducing reliance on the grid. Pairing a battery with onsite solar also allows generating and storing your own sustainable energy on-site to use for peak shaving.

Also, investing in a smart energy management system can help direct when EV chargers use power and from what source (the grid, solar, battery, etc.) to dynamically adjust charging rates based on real-time grid demand, electricity prices, and overall site goals. This helps automatically distribute the energy load to avoid peak periods while making the site less costly to operate and more profitable.

Businesses should continuously monitor their peak shaving strategies and be ready to make adjustments as needed to ensure that they are managing demand patterns and changing grid conditions successfully.

Also, know that you don't have to go at it alone. It can help to work with utilities and get customers on board to perfect your peak shaving practices. Communicating closely with the utility can provide valuable data and resources that can help in understanding grid conditions and getting support for implementing peak shaving measures. Likewise, educating EV customers or fleet drivers about the benefits of charging during off-peak hours and even providing incentives for doing so will encourage them to participate in load management efforts.

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