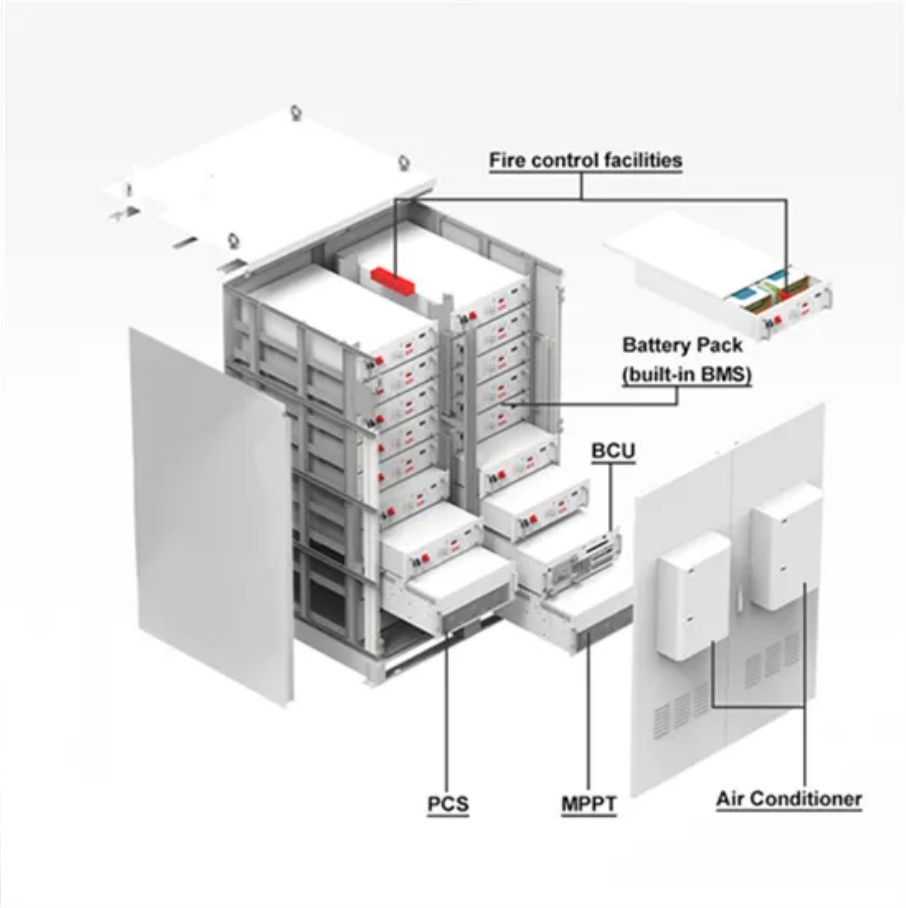
ContainerPower Energy Solutions

Industrial enterprise peak-shaving energy storage power station



Overview

Can peak shaving applications unlock the full potential of energy storage systems?

Energy and facility man-agers will gain valuable insights into how peak shaving applications can help unlock the full potential of energy storage systems. The electrical energy systems sector is a corner-stone of modern society, generating, transmit-ting, and distributing electricity for residential, commercial, and industrial use.

Can peak shaving reduce energy costs?

Modern consumers actively seek cost-effective energy solutions and sustainable practices. This white paper explores peak shaving as an effective method to minimize energy costs. Energy and facility man-agers will gain valuable insights into how peak shaving applications can help unlock the full potential of energy storage systems.

When should a battery be charged in a peak shaving application?

In a peak shaving application, the batteries must be discharged when the power demand exceeds a predefined threshold, namely the peak shaving level. However, battery charging can be performed according to different strategies: Low power threshold: charges the battery when the demand falls below a low power limit.

What is the difference between peak shaving and load shifting?

It is essential to differentiate peak shaving from load shifting. Load shifting involves adjusting en-ergy consumption patterns or postponing electric-ity usage to a later time. Base Peak shaving, sometimes called load shedding, involves reducing the peak electricity demand to lower demand charges.

Is peak shaving a good alternative to grid upgrades?

Electric vehicle chargers – With the emerging demand for fast E.V. charging

infrastructure, BESS is an alternative to grid upgrades, enabling integration of these new peak loads with a limited impact on the site electrification and on the grid. Peak shaving is an excellent application for the expansion of E.V. charging infrastructure.

Does fast-charging reduce optimum peak shaving level?

In general, the series in Fig. 9 reaffirm the results obtained in Fig. 8, with fast-charging as the strategy that lowers the optimum peak shaving level and, therefore, lowers the monthly average billing, followed by time-based and low-power threshold cases.

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