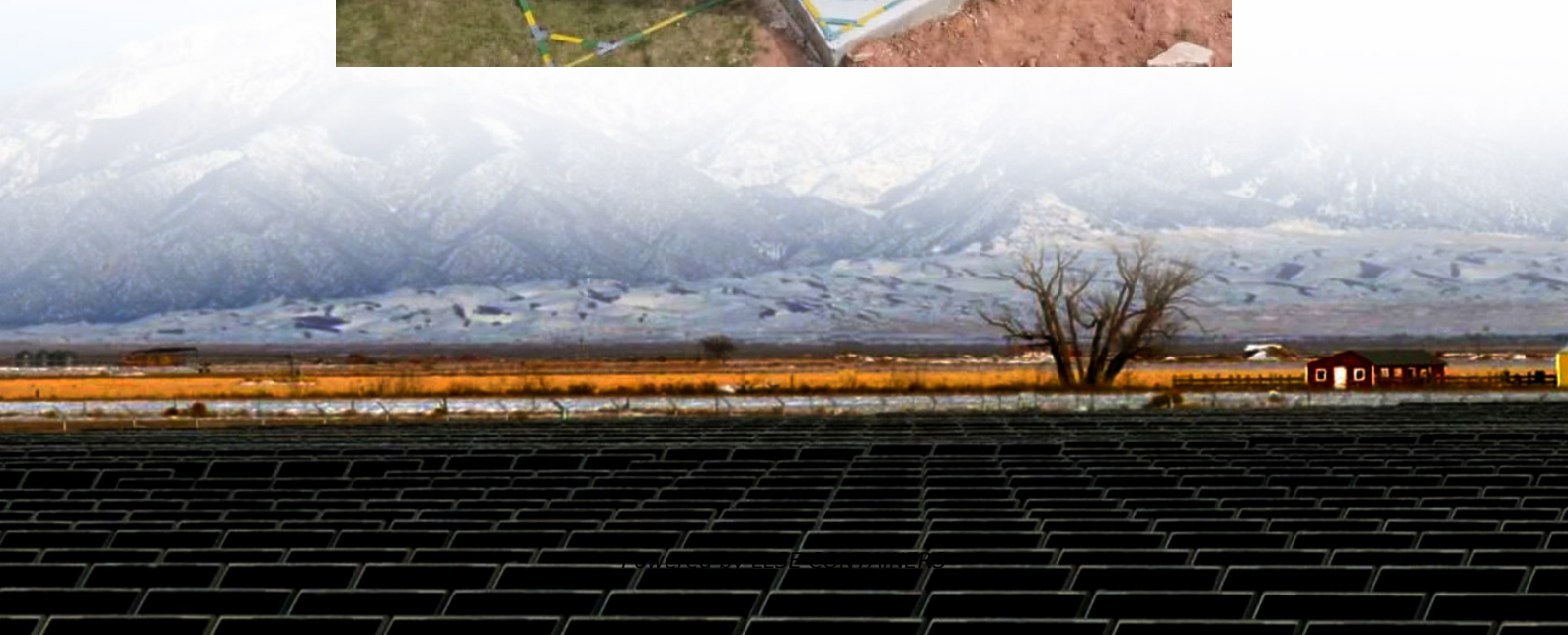


Fuel Cell Base Station Power Supply





Overview

In this article, we described the test-ing of a backup power supply system combining a storage battery and fuel cells and examined fuel-cell halting voltage, storage-battery capacity and voltage adjustment under parallel operation as guidelines for optimally configuring equipment and making settings. Can a fuel cell backup power system be used for telecom applications?

Other than the added cost of the fuel cell backup power system, no obvious hurdles—considering technique, installation, and operation—exist in deploying such a system for telecom applications. The hydrogen level may be monitored remotely to allow the user to maintain the fuel supply.

Are fuel cell power systems a viable alternative power supply technology?

Clean and efficient fuel cell power systems have shown great potentials as an alternative power supply technology for distributed energy resource (DER) needs. They are also attractive for telecommunications companies that want to avoid prolonged power outages and disruption of service to their customers.

Do fuel cell backup systems add value to the grid?

This study evaluates the strategic integration of clean, efficient, and reliable fuel cell systems with the grid for improved economic benefits. The backup systems have potential as enhanced capability through information exchanges with the power grid to add value as grid services that depend on location and time.

How many fuel cell systems are there?

Since 2007, more than 3,000 fuel cell systems have been installed at cellular facilities owned by telecom companies—Sprint, T-Mobile, Verizon, AT&T, and others—to power their facilities. The sites include both remote and urban locations. The fuel cell systems are networked and monitored remotely, providing benefits that include: small foot print.



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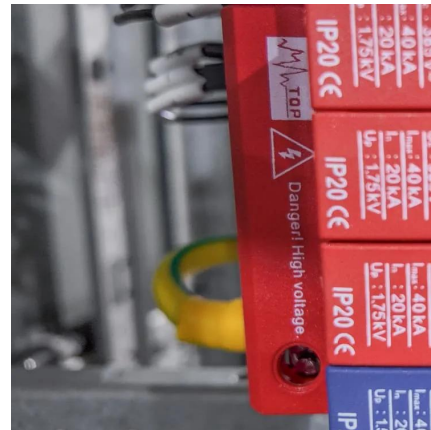


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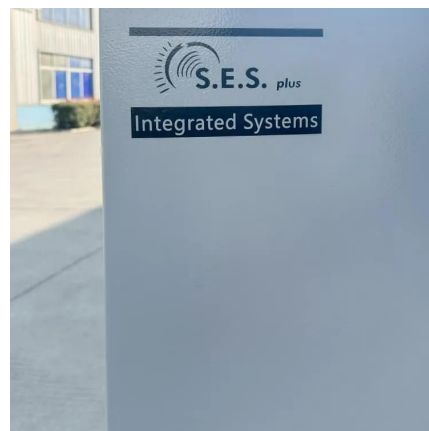
Fuel Cell System

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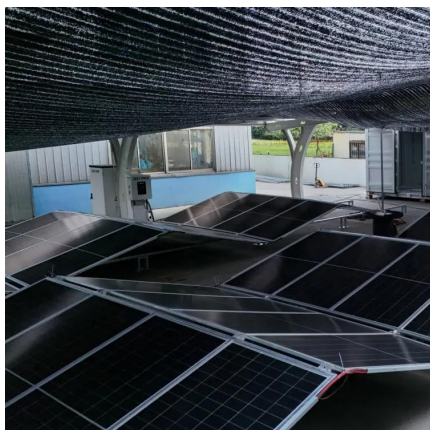
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