

## SolarTech Power Solutions

# Front-end on-site energy solar power supply principle



## Overview

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How can on-site solar PV & energy storage improve sustainability?

To achieve sustainability goals while meeting the increasing electricity demands of electrification, organizations are pairing on-site solar PV generation with on-site energy storage. These systems, which are considered as “behind-the-meter” (BTM) systems, allow facilities to maximize the benefits of on-site renewable generation.

Is rooftop solar a good option for a building?

Rooftop solar remains one of the most accessible and cost-effective ways to generate on-site power, particularly for facilities with high daytime energy usage. These systems can typically offset a large portion of energy consumption in a building and are relatively simple to install.

Why are off-site supply options more sensitive to energy prices fluctuations?

The off-site supply options have larger part of the annual cost used for energy cost, and thus the total annual costs are more sensitive for the energy prices fluctuations than the on-site supply options. Fig. 8.

Do on-site and off-site renewable supply options have reverse trends?

Both on-site and off-site renewable supply options were taken into consideration. The analysis has shown that the life cycle cost of on-site and off-site RES options have reverse trends.

Why are off-site energy supply options important?

A growing number of the off-site supply options results in higher share of green energy in the overall energy infrastructure and thus lower primary factors of the grid.

Should solar PV production be reduced on-site?

Increasing the amount of solar PV production on-site can provide additional cost and emission reductions and resiliency benefits for facilities. However, the additional generation that can result from larger systems during peak daylight hours must be exported or managed through curtailment on-site.

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