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Title: On-site energy solar model recommendation

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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.

Can solar energy storage systems improve self-consumption and self-sufficiency?

As energy storage systems are typically not installed with residential solar photovoltaic (PV) systems, any "excess" solar energy exceeding the house load remains unharvested or is exported to the grid. This paper introduces an approach towards a system design for improved PV self-consumption and self-sufficiency.

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.

What are the benefits of an on-site solar PV system?

For the scenario represented in the graph, an on-site solar PV system allows the facility to reduce the amount of electricity drawn from the grid during the middle of the day. Increasing the amount of solar PV production on-site can provide additional cost and emission reductions and resiliency benefits for facilities.

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