

NASEO

Grid Interactive Efficient Building

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ZNE: Early Adoption to Code!



UC Davis West Village



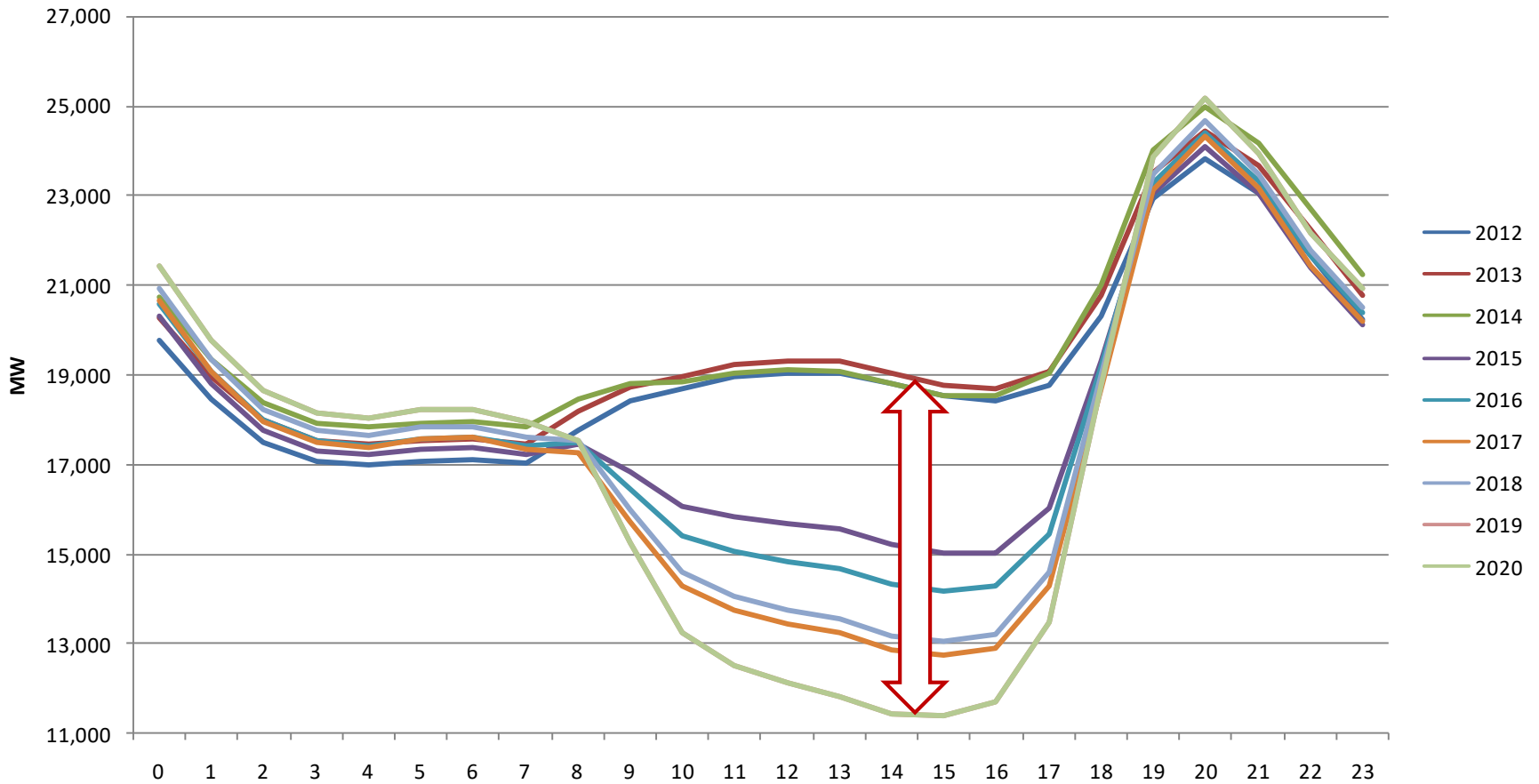
San Francisco in the Future?





The Changing Grid

CAISO Net Load --- 2012 through 2020





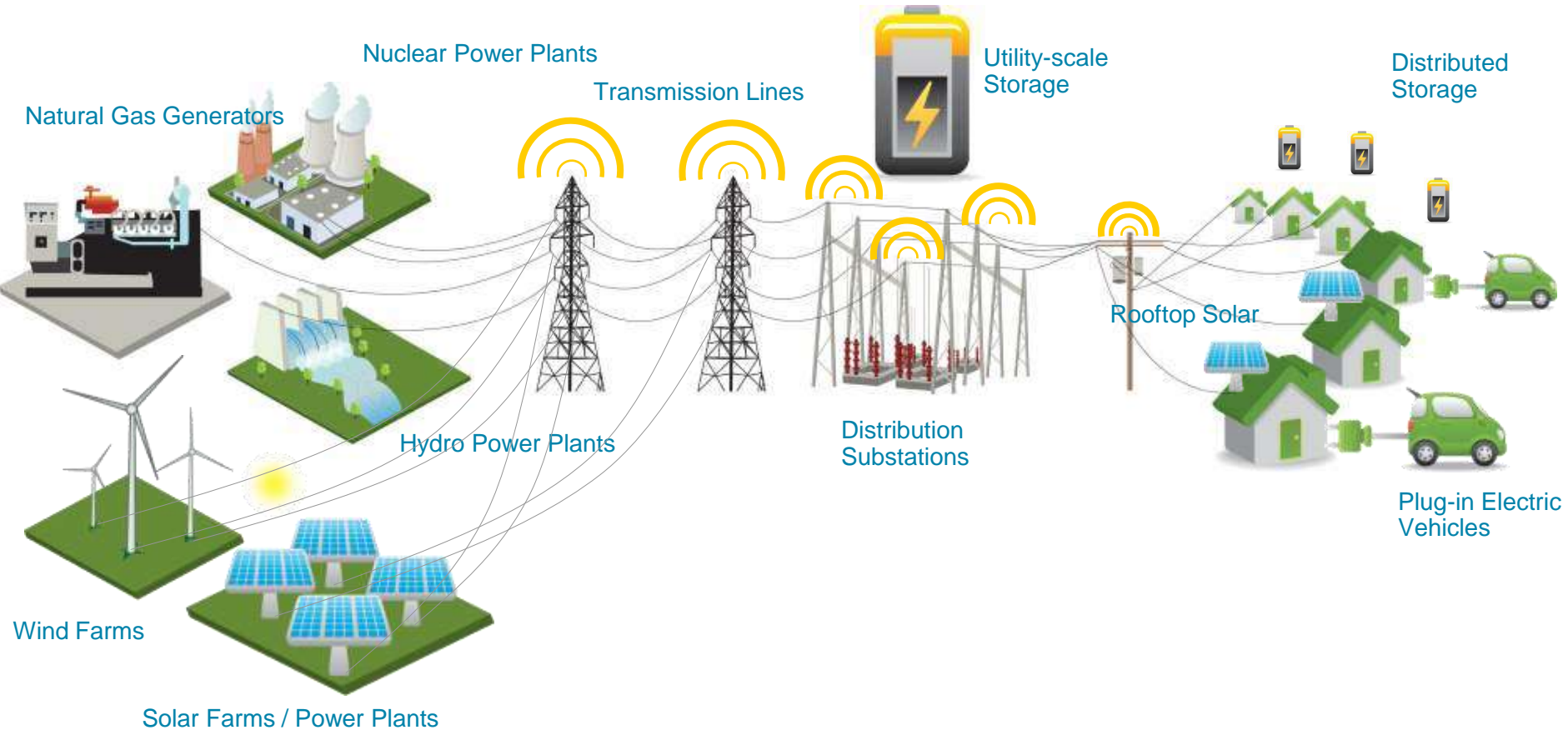
Electric Grid Evolution

The grid has operated by transporting electricity in one direction, from generation through transmission and distribution lines to customers. Times are changing.

Power Plants

Electric Grid

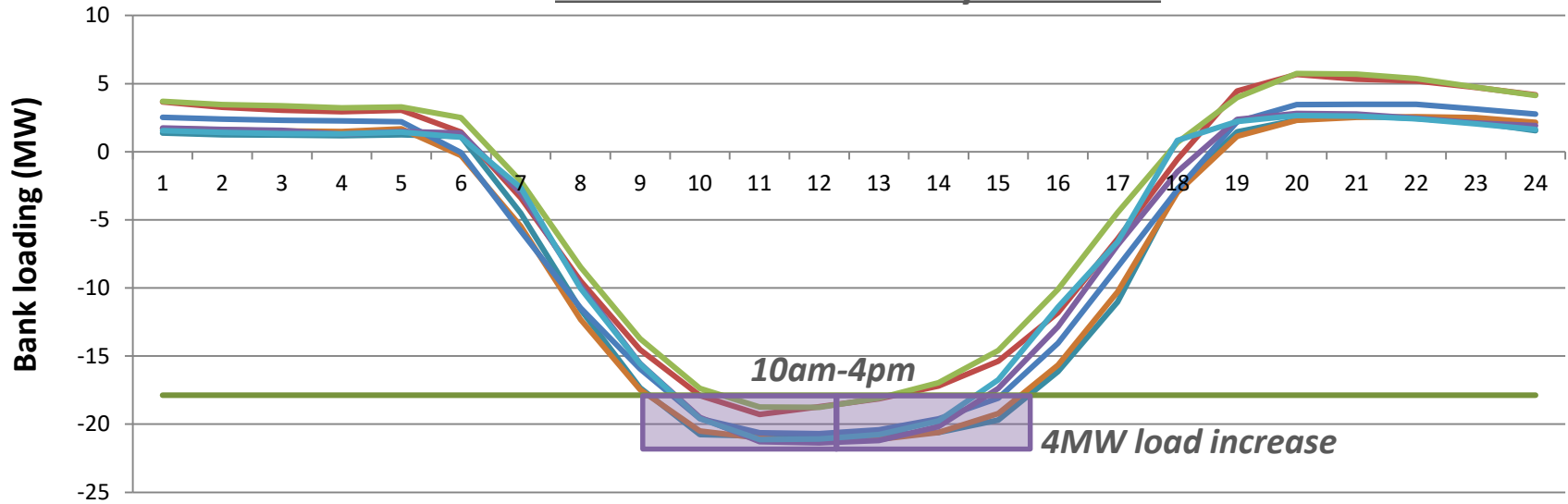
Customers



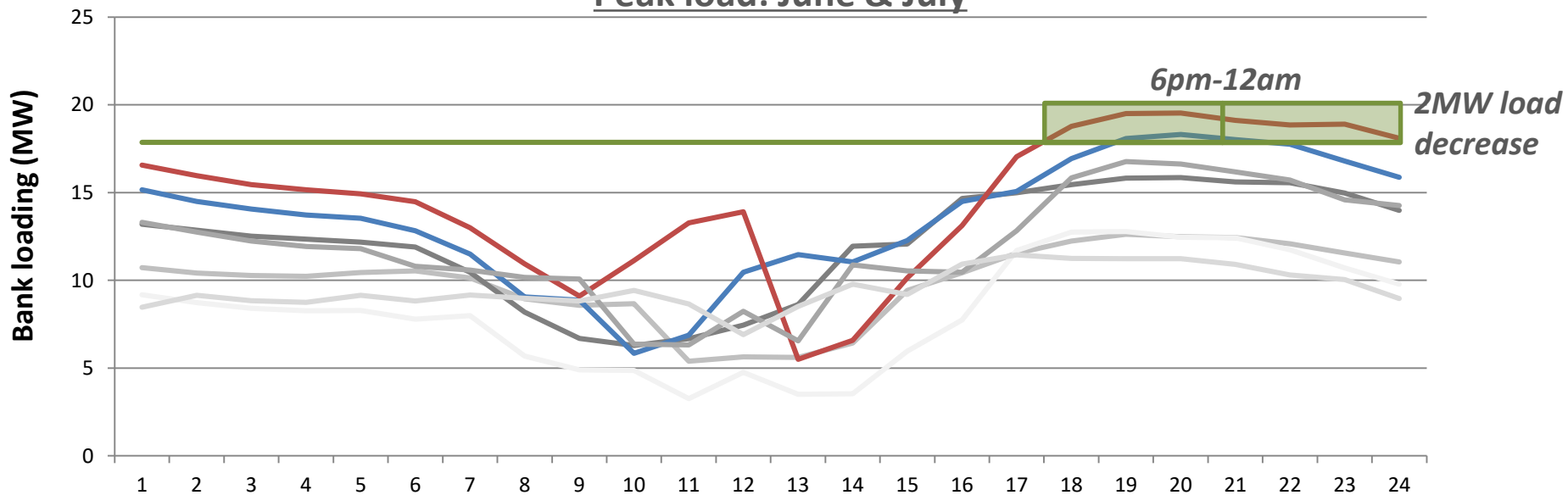


PG&E's Huron Substation

Reverse flow: February - October



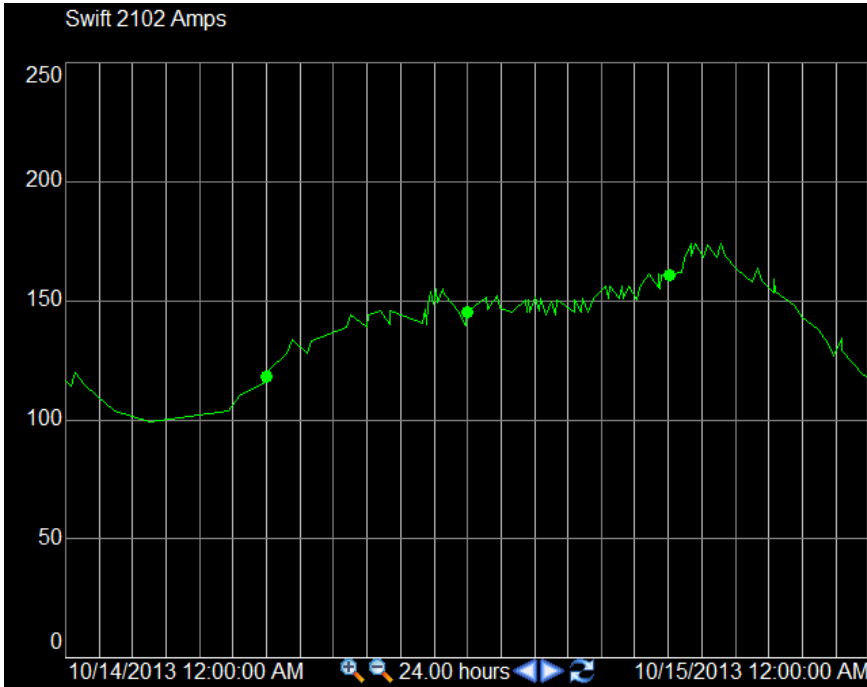
Peak load: June & July



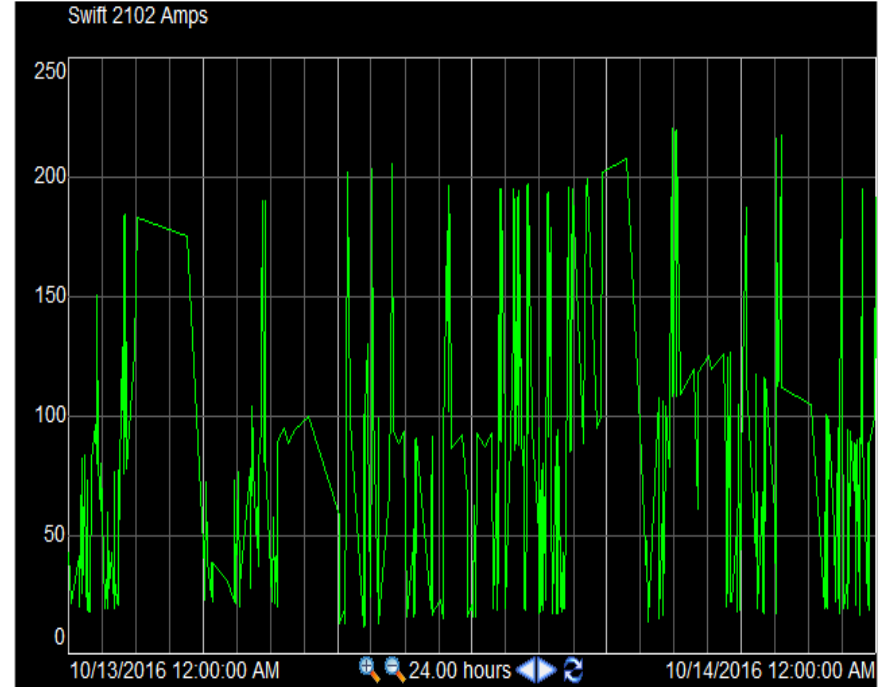


Distributed Energy Resources are Changing Grid Operations

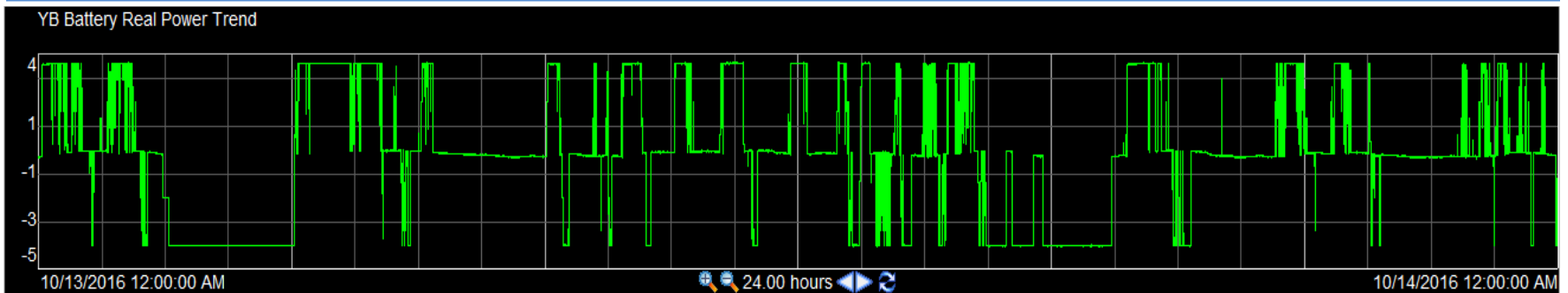
October 2013



October 2016



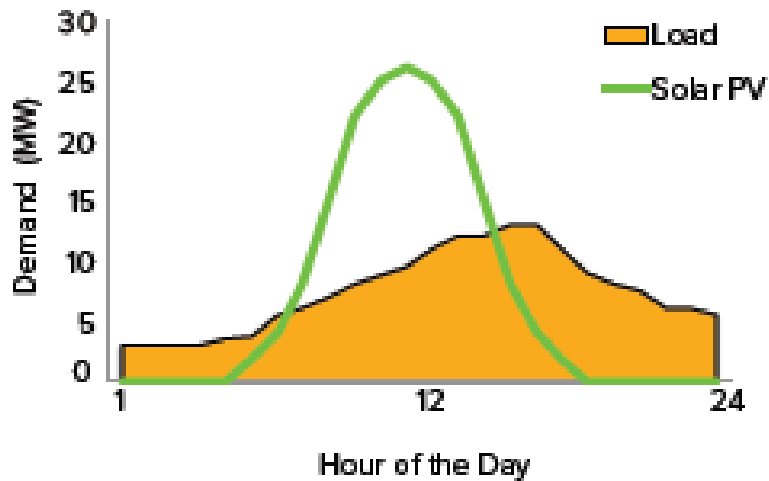
4MW Battery Output October 2016



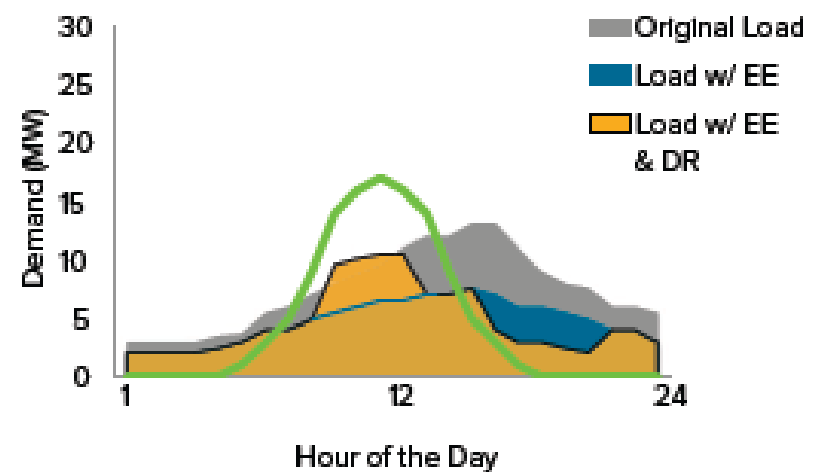
A Tale of 2 Buildings



Solar PV



Energy Efficiency, Demand Response, then Solar PV

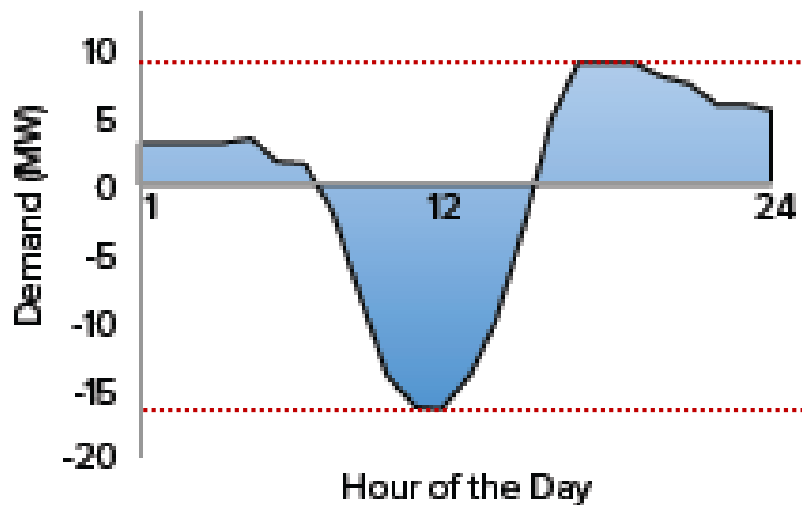




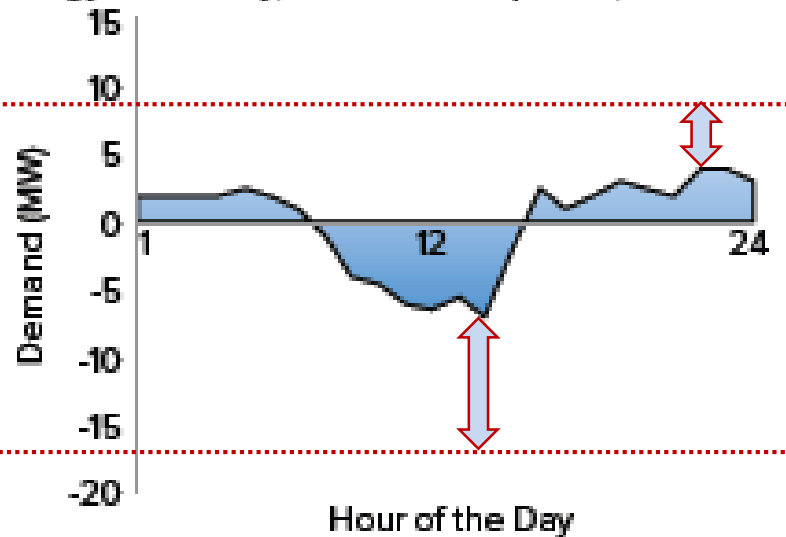
A Tale of 2 Buildings



Solar PV



Energy Efficiency, Demand Response, then Solar PV



PG&E's Grid Integration and Innovation Mission
Design, test, and integrate innovative solutions to accelerate PG&E's transition to the sustainable grid of the future

