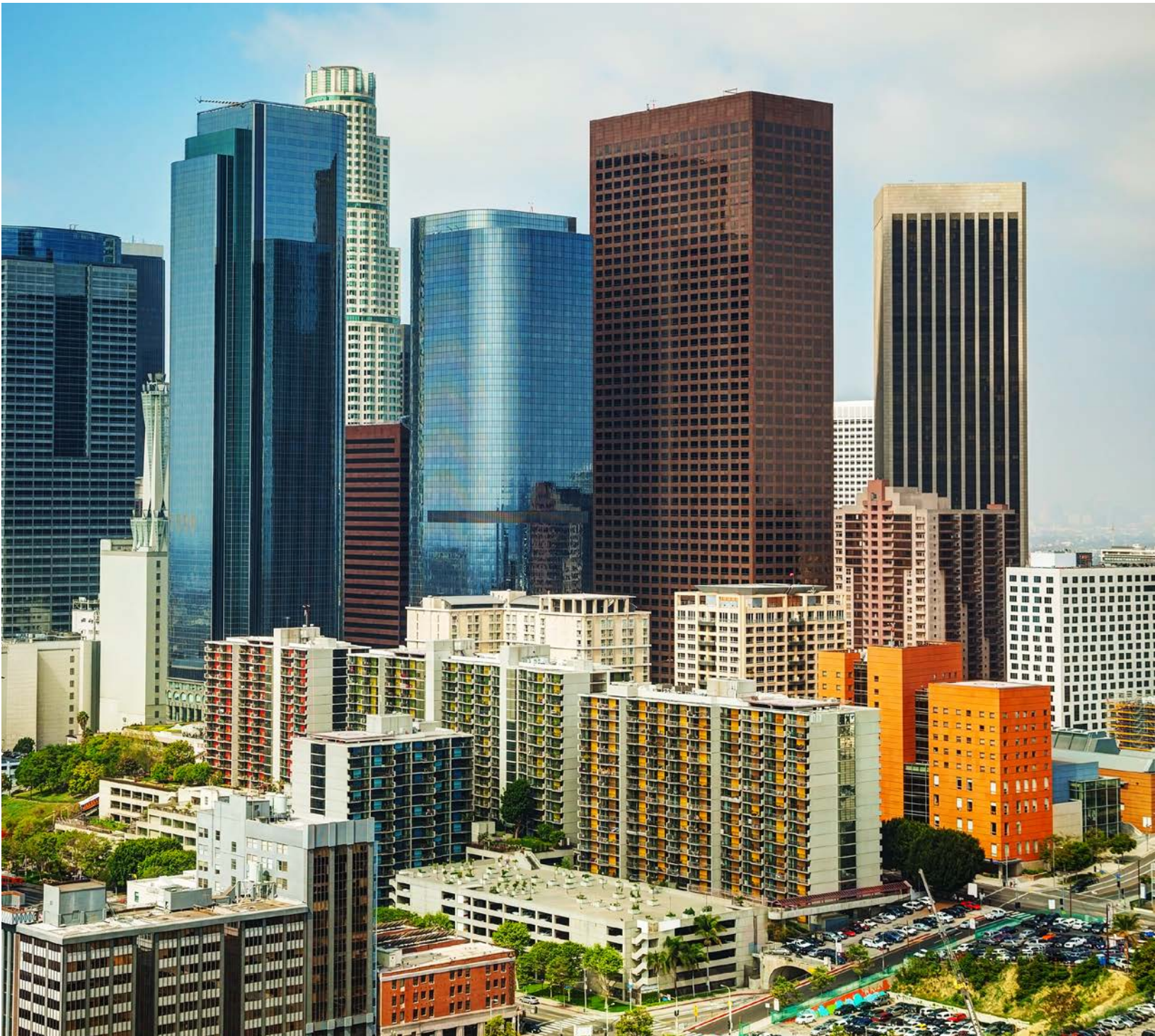
BATTERY ENERGY STORAGE

Intelligent energy storage for the modern grid



The Landis+Gyr difference

Implementing successful energy storage solutions requires a partner with know-how, technology independence and strong financial backing. Landis+Gyr is a partner that delivers a:

- Comprehensive solution suite that enables the best solution for any given problem
- Bankable warranty
- “Cradle-to-grave” support built on 100+ years of utility service experience
- Expert integration of low total cost of ownership solutions

Landis+Gyr

Fingrid BESS
Helen Electricity Network
Helsinki, Finland

Commission Date: August 2016

Deployment configuration:

1 Container of batteries , 2 Inverters
1 Transformer, Master Control System

A turnkey AC battery storage system with 4-year service agreement is helping Helen Electricity Network and Fingrid to optimally dispatch PV energy to the grid on a daily basis.

Energy Storage Battery Specification

Discharge Power: 1.2 MW
Capacity: 677 kWH
Technology: Lithium Ion

Energy Storage Functions

Frequency Control, PV Support
Voltage Regulation, PV Support
Peak Shaving, Energy & Power

Landis+Gyr/Toshiba Role

Turnkey AC Storage Provider
4-Year Service Agreement

About Helen Ltd.

Helen Ltd is one of the largest utility companies in Finland. Its energy production has been awarded as the most efficient in the world. Helen has around 400,000 customers throughout Finland. Helen develops increasingly eco-friendly and innovative solutions and aim to achieve 100% carbon neutrality in their energy production.to seek out solutions to explore renewable energy options for military facilities.

Landis+Gyr

Learn more at landisgyr.com | energystorage@landisgyr.com | 678-258-1500

Fort Sam Houston Microgrid
CPS Energy
San Antonio, Texas

Commission Date: January 2017

Deployment configuration:

1 Container of batteries , 1 Inverters
Battery Control System

A turnkey AC battery storage system with 5-year performance warranty. The storage system is integrated into a utility-owned microgrid for testing the interoperability of multiple technologies at Fort Sam Houston.

Energy Storage Battery Specification

Discharge Power: 75 kW
Capacity: 42 kWH
Technology: Lithium Ion

Energy Storage Functions

Interoperable Microgrid

Landis+Gyr/Toshiba Role

Turnkey AC Storage Provider
5-Year Performance Warranty

About the Fort Sam Houston Microgrid

This site has three banks of solar panels and a facility storing75-Kilowatts of Lithium-Ion batteries and a control station which can provide power to the post's library. Funded by CPS Energy through a grant from the National Renewable Energy Laboratory, this site is being used as a test bed for CPS Energy, as well as, the Department of Defense to seek out solutions to explore renewable energy options for military facilities.

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Iron Horse Battery Storage
Tucson Electric Power
Tucson, Arizona

Commission Date: April 2017

Deployment configuration:

1 x 30’ Container of Batteries
2 x 50’ Containers of Batteries

A DC battery block with 10-year performance warranty provided to E.ON supports Tucson Electric Power (TEP) in managing grid stability for high penetration PV.

Energy Storage Battery Specification

Discharge Power: 10 MW
Capacity: 3.7 MWh
Technology: Lithium Ion

Energy Storage Functions

Frequency Response, PV Support

Landis+Gyr/Toshiba Role

DC Energy Storage Solution
10-Year Performance Warranty

About TEP & Energy Storage

This storage system will help TEP study how to integrate a growing portfolio of renewable generating resources. The utility has a goal of generating 30 percent of its power from renewable resources by 2030, which amounts to about 1,200 MW. In the case of solar generation, storage systems can rapidly replace sudden losses of generation that occur throughout the day without overstressing slower ramping conventional generation.

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