NY DPS Energy Storage Workshop

May 26, 2016
TESSLA ENERGY PRODUCTS

POWERWALL
TESLA HOME BATTERY
6.4 kWh

POWERRPACK
TESLA COMMERCIAL BATTERY
100 kWh +
GREEN MOUNTAIN POWER RESIDENTIAL STORAGE PROGRAM
500 Powerwall deployments at customer homes
Utility value from system peak reduction; customer value from solar self-consumption and back-up power
40+ COMMERCIAL BUILDING DEPLOYMENTS IN THE US

demand response provision; demand charge reduction; time-of-use rate arbitrage

2 MW / 4 MWh
KAUAI ISLAND UTILITY COOPERATIVE PROJECT

13 MW / 52 MWh of energy storage paired with 13 MW of solar

20 year PPA at $0.145 / kWh for energy delivered between 4:00 and 8:00 pm

Project will be operational by Jan 1, 2017

13 MW / 52 MWh
In 2013, Southern California Edison solicited 2,000 MW of new generation capacity in its “Local Capacity Requirements” RFO.

Regulators required 50 MW of storage.

Edison procured 261 MW of storage:
- 26 MW behind-the-meter thermal storage
- 100 MW in-front-of-meter battery storage
- 135 MW behind-the-meter battery storage
SYSTEMIC CHANGE: REV, CES, & STORAGE

- Storage is a foundational asset that enables REV’s clean, affordable, resilient, and flexible system.
- Integrating storage into planning, as advocated in DSIP Guidance, is best for system development and customers.

REV

- CLEAN
  - 50x30
  - 40x30
  - CES
  - LMP+D+E

- AFFORDABLE
  - System & capital efficiency
  - Li assistance & inclusion
  - Enabling bill management

- RESILIENT & FLEXIBLE
  - NY PRIZE
  - DERs part of grid management

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Storage is economical now but utility processes and tariffs must be updated to contemplate storage:

- Planning
- Valuation
- Procurement
- Operations
- Rate design
- Interconnection

The first energy storage projects in a region have higher development costs because significant learning is required.
POLICY TO CATALYZE STORAGE DEPLOYMENT

• All utility planning, procurement, operations, and interconnection procedures should be updated to consider energy storage

• Policymakers should establish escalating near-term and medium-term storage procurement targets for the state’s utilities

• A cost-effectiveness provision can allow utilities to defer their storage procurement if somehow they cannot find cost-effective projects
  – In California, after 2.5 years and more than 500 MW of storage procured, none of the investor-owned utilities have deferred their storage procurement targets