

Energy Storage Policy Background
Nevada New Energy Industry Task Force

September 2016

STORAGE SUPPORTS THE TASK FORCE'S GOALS

1. Encourage development of clean energy sources and integrate renewable technologies into Nevada's energy sector
2. Foster the creation of a modern, resilient, and cost-effective energy grid
3. Support distributed generation and storage, with a specific focus on rooftop solar and net metering

ENERGY STORAGE USES



PEAK SHAVING



CAPACITY FIRING



LOAD SHIFTING

TRANSMISSION
& DISTRIBUTION SUPPORT

DEMAND RESPONSE



SELF CONSUMPTION



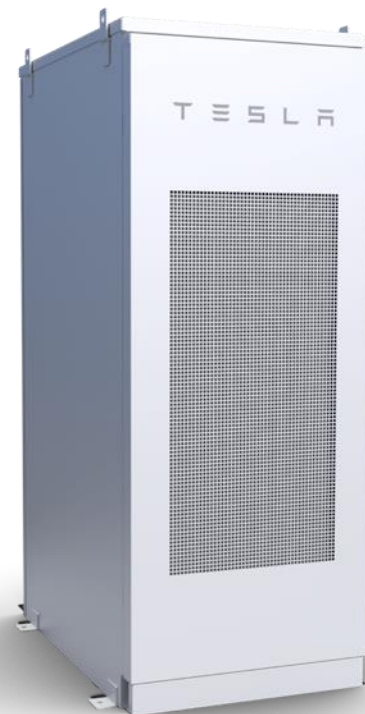
EMERGENCY BACKUP



MICROGRID



ANCILLARY SERVICES



RESIDENTIAL STORAGE



3.3 kW / 6.4 kWh

COMMERCIAL / INDUSTRIAL STORAGE



2 MW / 4 MWh

STORAGE PEAKER PLANT



13 MW / 52 MWh

GIGAFACTORY

50 GWh in annual battery production by 2020*
Enough for 500,000 Tesla cars
Powered by renewable energy
Net zero energy factory



* Projected

BARRIERS TO STORAGE DEPLOYMENT

Many utility processes and tariffs must be updated to accommodate storage:

- Planning (Generation, Transmission, & Distribution)
- Valuation
- Procurement
- Operations
- Rate design
- Interconnection

The first energy storage projects in a region have higher development costs because significant utility learning is required

LEARN BY DOING

The best way to uncover which detailed processes and tariff language must be updated is to proactively deploy commercial energy storage projects at all points of the grid:

- Customer-connected
- Distribution-connected
- Transmission-connected



POLICY TO CATALYZE STORAGE DEPLOYMENT

- All utility planning, procurement, 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

Existing storage
procurement
legislation

- California's AB 2514 (2010)
- Oregon's HB 2193 (2015)
- Massachusetts' H 4568 (2016)
- Maryland's HB 787 and HB 821 (2016) (proposed)
- New York's SB 7533 (2016) (proposed)

QUESTIONS / DISCUSSION

