

Appendix D: Examples of Real-World Storage Projects Suggested to Inform Use Cases

1. Distributed Storage

SDG&E Primary Distribution – Borrego Springs substation-level, 500 kW/1500 kWh

TAS Energy/Raleigh, NC – District cooling system using chilled water TES

2. Community Energy Storage

AEP Ohio GridSmart – 2 MW (80 units x 25 kW) for 2 MWh, li-Ion (installed this summer)

SMUD Solar Smart – Anatolia neighborhood, 15 x 8.7 kW/8.8 kWh + 3 x 30 kW/30 kWh, support local PV and explore other benefits.

SDG&E Secondary storage – 25 kW/50 MWh, relieve distribution circuit loading, ancillary services.

Detroit Edison/KEMA – (still in battery testing)

3. Peaker Displacement

Primus Power/Modesto Irrigation District – 25 MW/75 MWh, on-line Summer 2013?

4. VRE Sited Integration

AES Laurel Mountain – 32 MW battery to back up 98 MW wind farm; developer claims applications for regulation (PJM markets), ramping and VRE smoothing

BrightSource/Edison PPAs – Solar Tower w/storage – 3 x 200 MW, 6 hour storage w/molten salt.

5. Bulk Generation

TAS Energy “storage generation” turbine inlet cooling with TES, various US installations

Pumped Storage – various projects proposed

CAES – Alabama legacy project, PG&E in process.

6. Demand Side Management

Xtreme Power – integrated storage with digital power management

Santa Rita Jail – Microgrid application with 1 MW fuel cell, wind turbines and 2 MW battery storage

Tesla/Solar City – Various li-Ion backup for rooftop PV systems

Ice Energy/SCPPA – Thermal energy storage under utility ownership model.