

Punkin Center Battery Energy Storage System

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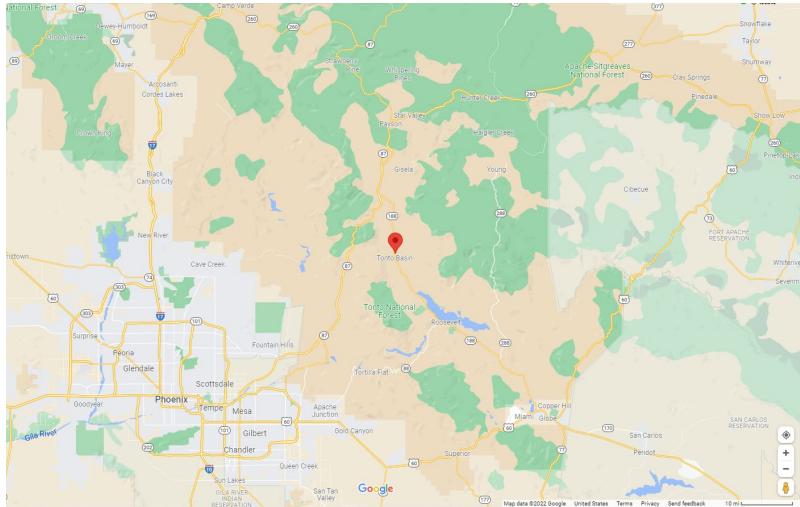
Introduction

- Originally commissioned in Q1 2018
- Distribution line upgrade deferral business case
- On stand-by and disconnected from the grid in Q2 2019 following the McMicken BESS incident
- Kept O&M activities with BESS Integrator (Fluence Energy)



- APS is looking for interested buyers for the BESS as a complete system or individual components

Punkin Center Location



Punkin Center, AZ (88 mi NE from Phoenix)



Two BESS Containers (1MW/4MWh each)

BESS Component Pictures



14 Battery Modules Per Rack



String Inverters

BESS Component Summary

- **Address:** 146 East Purtill Trail, Tonto Basin, AZ 85553
- **Coordinates:** 33.876133, -111.313747
- **Inverters:** Parker 890GT-R (string, 88.6 kVA, Qty. 28)
- **Enclosures:** Intermountain Electronics (12 ft x 12 ft x 48 ft, Qty. 2)
- **HVAC:** Carrier (6 ton each, Qty. 4)
- **Fire Protection System:** VESDA plus DuPont FM-200
- **Chemistry:** Lithium Nickel Manganese Cobalt Ox
- **Cell/Module/Rack Manufacturer:** LG Chem
- **Battery Modules:** JH3 4P (Qty. 728 installed on racks plus eight spares)
- **Number of Cells Available:** 40,768
- **Average SOC:** ~20% (left at 25% SOC after coming offline in Q2 2019)
- **Contact information:** Jim Piotrowski, james.piotrowski@aps.com