

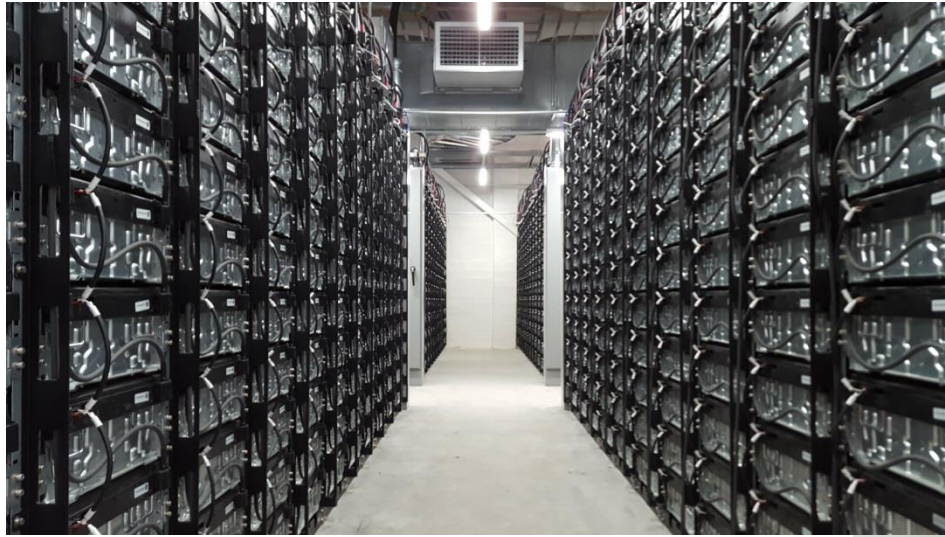
***AltaGas***

***Power  
Operations Inc.***

## NECPUC Storage Panel

LOCATION Dallas	DOCUMENT NUMBER AGP-PWR-101.01
REVISION / REVIEW DATE 06/02/2017	REVISION Rev01

# Pomona Energy Storage Facility



12,240 Li-ion Batteries  
1020 Battery Racks  
10 Inverters



# Pomona Energy Storage Project Overview

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- Size: 20 MW / 80 MWh Li-ion system
- 10 year RA based PPA with Southern California Edison
- 4 month construction cycle with 12/31/2016 COD
- Market Participation
  - Energy - Day Ahead, 15-minute, Real Time
  - Ancillary Services – Reg-Up, Reg-Down, Spin
  - REM
- Daily operation proven to be dynamic and unexpected

## Market Challenges

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- New technology, one of first large scale storage assets in CA
- Initial participation in A/S market delayed
- CAISO RTD not designed for energy storage resources
- REM preferred market for storage, market redesign required for optimal system management
- Difficult to maintain State of Charge (SOC) in energy market
- Settlement Issues
- Market design must recognize and reward total flexibility / value

# Flexibility Leads to Success

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- Storage assets proving to be key resource
  - High utilization = ratepayers seeing quick return
  - “Instant” reliability
  - “Infinite” peak utilization
  - Enhances value of renewable and distributed resources
- Near term equality with peakers
  - Capital investment compatibility
  - Lower ongoing OPEX
  - Greater flexibility
- Storage is a total value play
  - Rapidly declining prices
  - Markets realizing more advantages than planned (scale will only improve results)
  - Remove market barriers to allow for full benefit realization