



# Magnum's Western Energy Hub

## Utah Governors Energy Conference

May 21<sup>st</sup>, 2015



# Salt Cavern Storage - An Extremely Rare Asset in a Perfect Location

## Salt is the Ideal Storage Medium

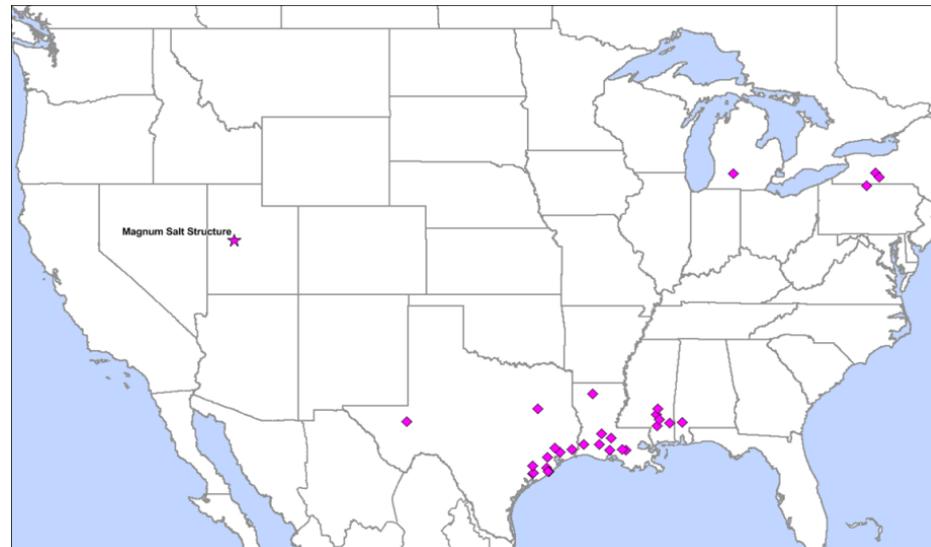
- Recognized by the U.S. Government (Strategic Petroleum Reserve)
- Broadly Utilized by the Energy Industry
- 23 Facilities with Hundreds of Solution Mined Storage Mined Caverns

## Magnum Salt Dome is One-of-a-Kind

- Only "Gulf Style" Salt Dome in the Western U.S.
- At the Crossroads of Energy and Transportation Infrastructure
- Strategic Asset for the State of Utah and the West

**Salt Domes like Magnum's Are the Foundation for Significant Industrial Development. Billions of dollars in investment have been made at similar sites such as:**

- Mont Belvieu, Texas
- McIntosh, Alabama



# Western Energy Hub - A Foundation for Numerous Businesses

- **Natural Gas Liquids Storage – Commercialized**
- **Compressed Air Energy Storage (CAES)**
- **Natural Gas Fired Generation**
- **Natural Gas Storage**
- **Petroleum and Refined Products Storage**
- **Other Support Businesses and Businesses that use Available Feedstocks**



# Magnum CAES - Preliminary Development Complete

## Compressed Air Energy Storage

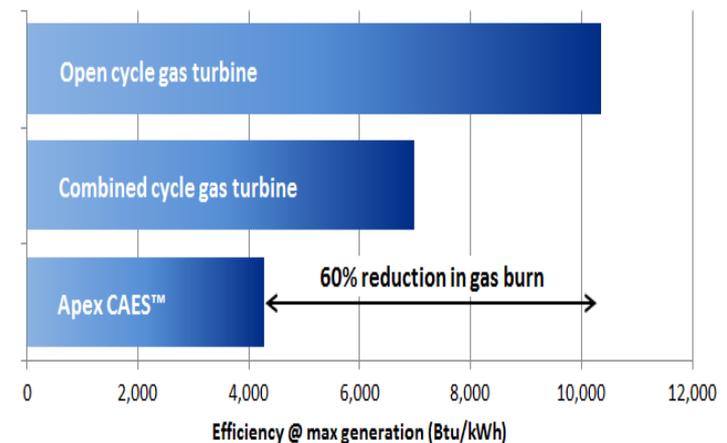
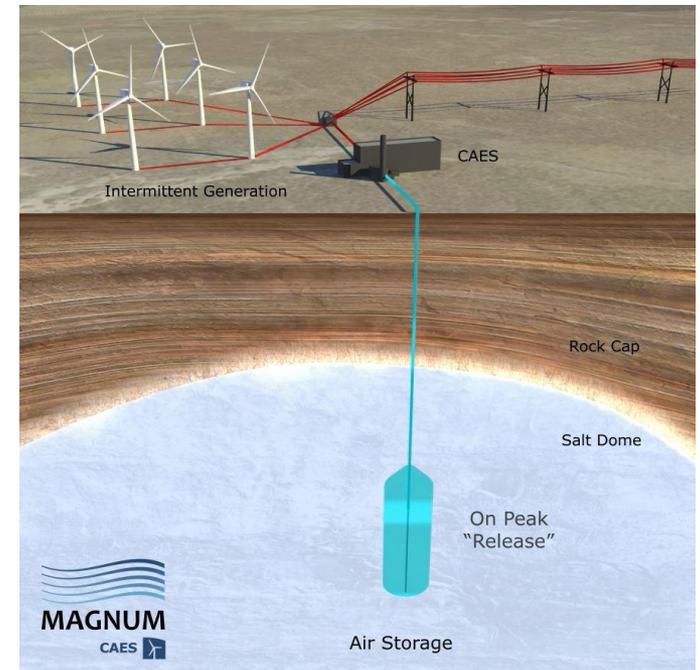
- Demonstrated bulk storage technology
- Utilizes off-peak renewable power to compress air into an underground salt cavern
- Compressed air stored and then released during periods of high demand as a reliably firmed and shaped electric product

## Magnum CAES Site Benefits

- Proven salt storage
- Location is ideal – adjacent interconnection
- Utility-scale storage and generation capability
- One-of-a-kind in the region
- Cost-effective solution

## Technology Benefits

- Strategic asset
  - Stabilizes grid during low usage
  - Allows integration of intermittent generation without impact to baseload assets
  - Provides operational flexibility
- Low cost and efficient
  - Lower generation and dispatch costs by shifting off-peak power to on-peak
  - Optimizes existing transmission line capacity
- Environmentally friendly
  - Enhances integration, development, and utilization of renewables
  - Minor source permitting and minimal footprint



APEX CAES © 2015



# Magnum Generation – Preliminary Development Complete

## Natural Gas Fired Electric Generation

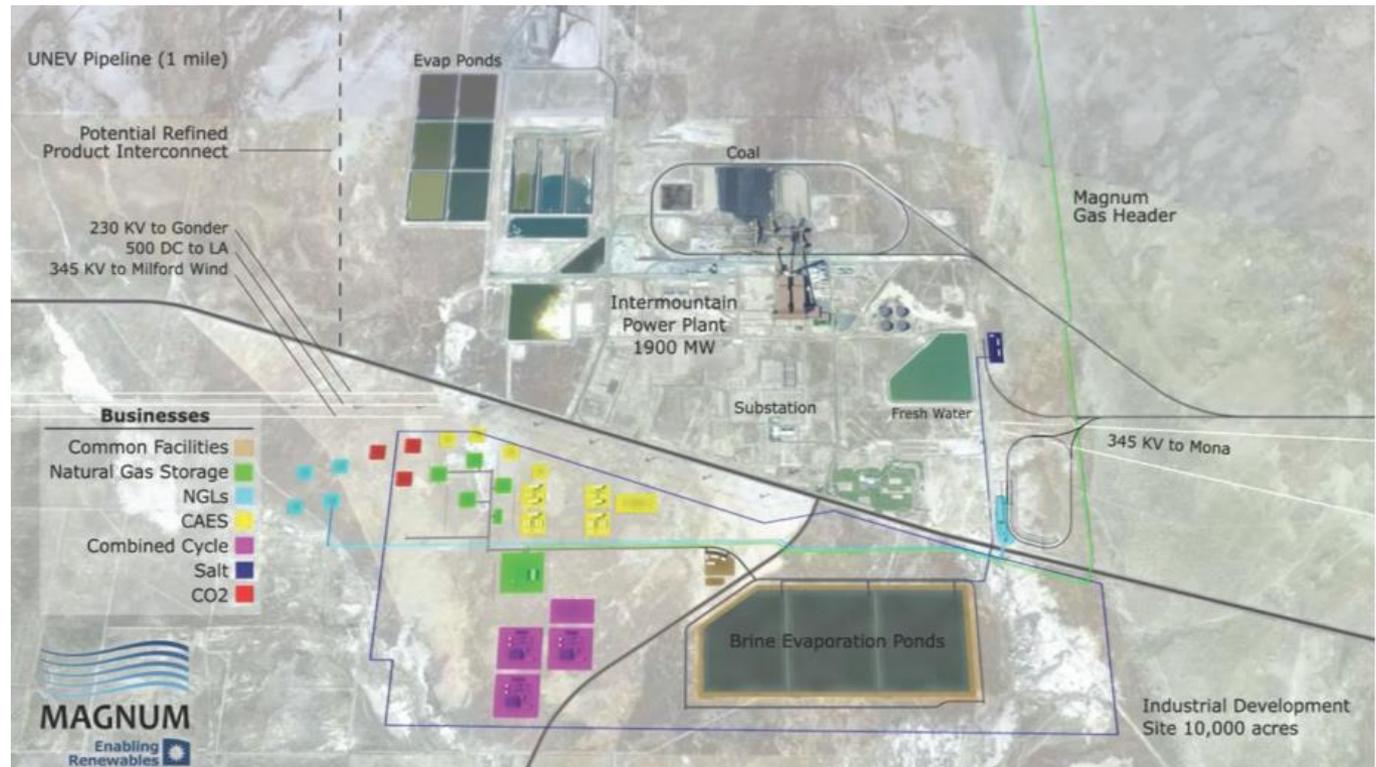
- Flexible equipment selection and development options

## Technology Benefits

- Known and proven technology
- Cost-effective and scalable
- Meets increasingly restrictive regulatory requirements

## Magnum Generation Benefits

- Ideal location - meets Five-Finger test
  - Development site can accommodate multiple units
  - In an attainment area
  - Ready interconnection to interstate electric and gas systems
- Ready integration into electric system
- Access to high-deliverability storage





# Thank You

[www.westernenergyhub.com](http://www.westernenergyhub.com)

Robert Webster, COO  
3165 East Millrock Drive, Suite 330  
Holladay, Utah 84121  
801-993-7001

