ARES Nevada
Clean Energy Storage Project

ARES' Mission: To Enable Reliable Green Power

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What is ARES Nevada?

- A clean, quiet, environmentally sensitive project that uses the force of gravity to store power when it isn't needed and supply it when it is.
- A patented technology that employs electric locomotives slowly and quietly moving up and down a gentle grade to store and discharge electricity.
- A project that uses no fossil fuel and no water, produces no emissions or hazardous wastes, and sits lightly on the land.
  - Limited visual impact (much less than a wind or solar farm)
  - Easily decommissioned with no lasting impacts
  - A single railroad track, some maintenance buildings and wires to connect it to the grid are all that is needed
- A source of revenue for Nevada and employment for Nevada residents

The Advanced Rail Energy Storage (ARES) Team

James Kelly, Chief Executive Officer – Former Senior Vice President of Transmission & Distribution for Southern California Edison (SCE). 40-year utility veteran; led the planning, engineering, construction and operation of an electrical grid covering a 50,000-square-mile service area.

Steve Sullivan, Chief Operations Officer – Worked at Edison International for 35 years. Prior to his retirement he led the two largest Southern California Edison organizations dedicated to serving government customers; first as Director of Local Public Affairs, and then as Director of Government & Institutions of the Business Customer Division.

William Peitzke – Founder, Director of Technology Development and Board Member
29 years of experience in the energy business. Holder of many patents; founder of a strategic alliance and project conceptualization service company in the deregulated California utility marketplace.

Francesca Cava – Vice President of Operations and Board Member
Former Arctic Policy Project Manager, Aspen Institute Dialogue and Commission on Arctic Climate Change. Four years as a Commissioner on the California Coastal Commission. Former director of the U.S. National Marine Sanctuary and National Estuarine Research Reserve Programs with NOAA.

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ARES' History

Founded in **2010** in Santa Barbara, California

2010-2011

- Validated core technology
- Engaged core consultants and manufacturing partners
- Filed and received 3 fundamental patents in the US and internationally

2012

- Developed ancillary services technology and began development of 50MW ARES Nevada Project.

2013

- Completed ARES Demonstration Project in Tehachapi, CA.
- Initiated the process for the BLM Permit for ARES Nevada.

2014

- Achieved equity funding for Nevada project, filed Nevada BLM Plan of Development, CAISO Interconnection Request and initiated procurement process for Nevada shuttle vehicles, track construction, and other facilities

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ARES Tehachapi Demonstration Project

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ARES Nevada Project Overview

- ARES' first commercial gravity power installation
- 50MW ancillary services installation
  - Acts as a "shock absorber" for the electric grid to facilitate integration of wind and solar power
- Location – 3 Miles south of Pahrump, Nevada
- Host utility – Valley Electric Association
- Customer – California Independent System Operator
- Interconnection – VEA 230kV Mead-Desert View circuit at VEA Gamebird Switch

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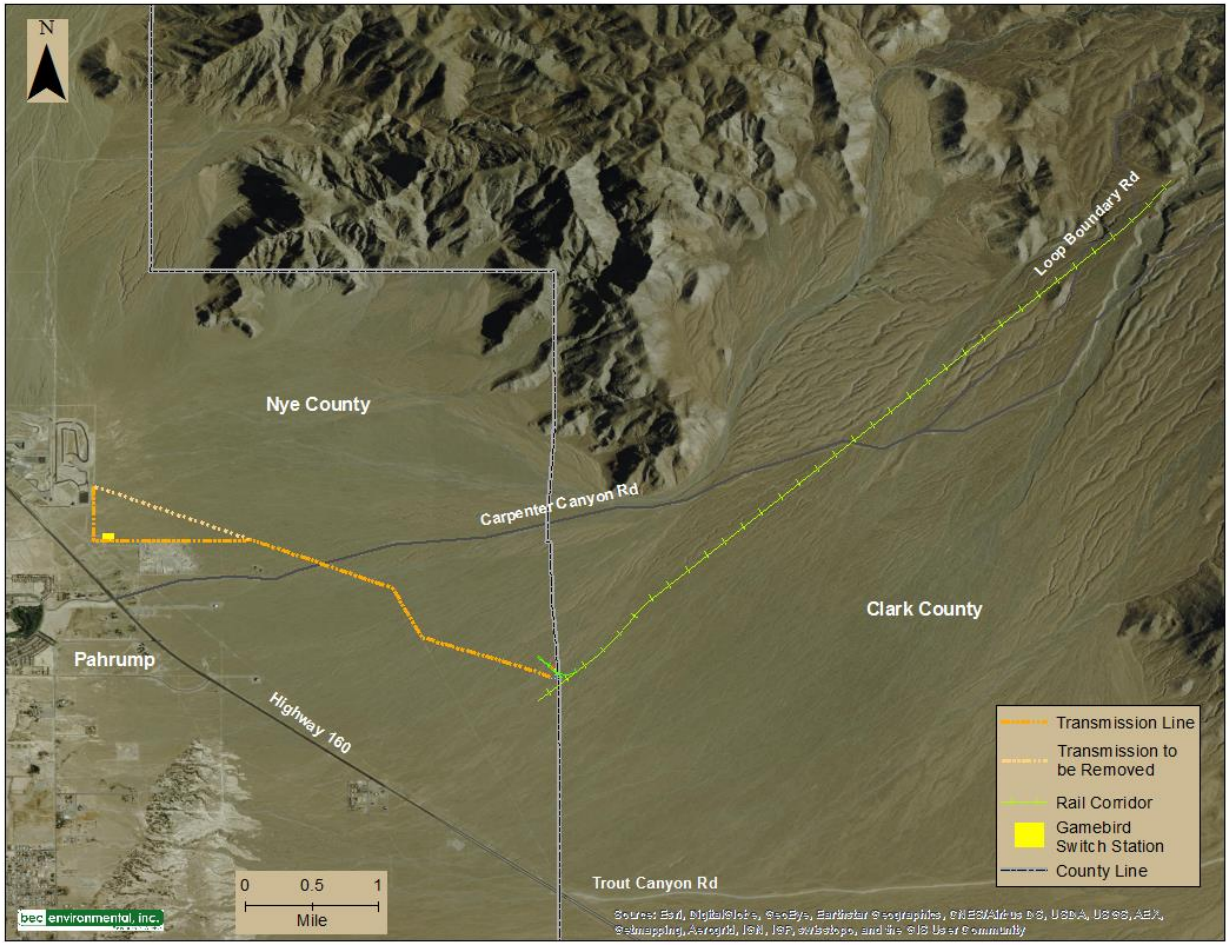
ARES Nevada Project Components



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What Will You See?

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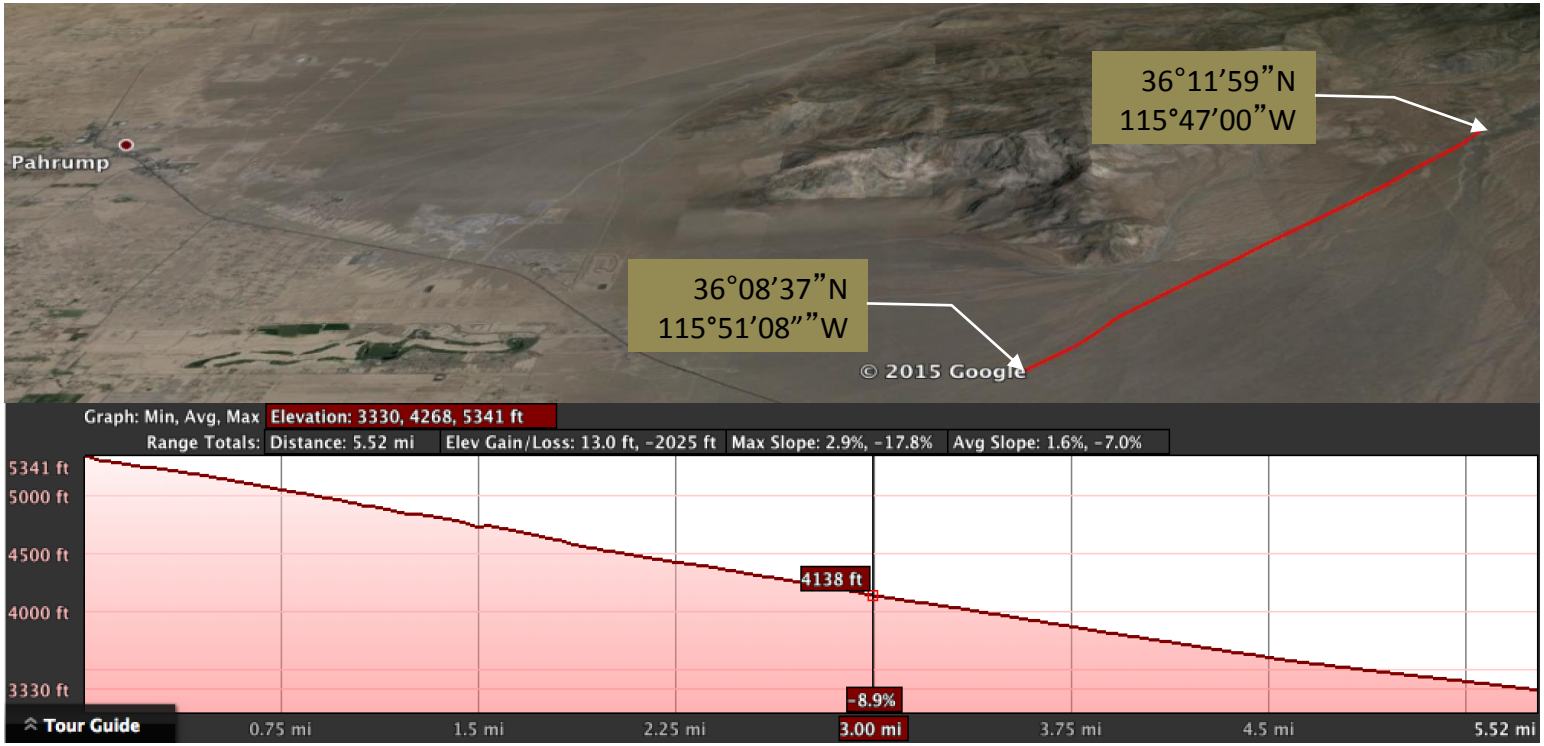
Why ARES Selected This Site



- Isolated location with minimal traffic interference
- Nearly constant grade with 2000' elevation change requiring minimum cut and fill
- Short distance to Valley Electric Gamebird Switch
- Interconnection into CAISO Via VEA 230kV transmission line
- Entire site located on BLM managed property

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What Measures Will be Taken to Mitigate Environmental Impacts?

- Coordinate tortoise crossing feature designs and movement monitoring with the USFWS and BLM.
- Install video cameras for 24 hour surveillance of operations. Walk the track daily; staff will monitor operations 24 hours a day/7 days a week.
- Install overhead catenary transmission to prevent electrical contact and allow easy passage by horses, burros, deer, general public, etc.
- Install perch deterrent devices on the transmission poles
- Operate at an average speed of less than 19 miles per hour.
- Use low-level, downward-facing lights necessary for safe operations and security.
- Use BLM approved paints on all equipment to minimize the visual impact of the project.
- Public access to BLM land, Forest Service land, Carpenter Canyon Road and Loop Boundary Road will not be blocked.
- Drainage features will be installed to maintain existing flow patterns.

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Employment Statistics

- **Construction**
  - 100 to 125 full-time employees at the height of construction
  - Construction will be hired locally whenever possible based on available staffing and technical expertise (rail construction)
  - Construction monitoring staff will be hired locally as available

- **Operations**
  - 15 to 16 full time operations staff
  - Three shifts will have up to five people for operations, security, and maintenance
  - Additional office space with administrative staff will be leased in the Pahrump

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