national**grid** ventures

Rye Development

Swan Lake Pumped Storage Project

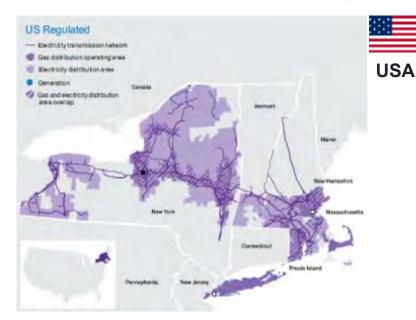


Supporting a carbon free future through proven, affordable grid-scale storage

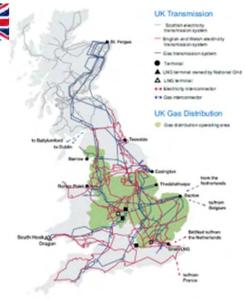


National Grid - Overview

Fortune 500 company and one of the largest investor-owned energy companies in the world with a market capitalization just under \$50B with utility operations in US and UK







Over 3.4 million electricity customers

Largest transmission network in the Northeast

2,000 MW HVDC interconnection with Canadian Hydro ~ 270 circuit miles (450 kV DC)

~ 9,000 circuit miles of transmission & 520 substations

Electric Transmission Operator (TO) across England & Wales

Gas TO across all of Great Britain

Four Gas distribution networks

System Operator (SO), managing Gas and Electric Transmission for all of Great Britain



Rye Development – Overview

Rye Development is the leading Developer of New Hydro on existing dams in the US

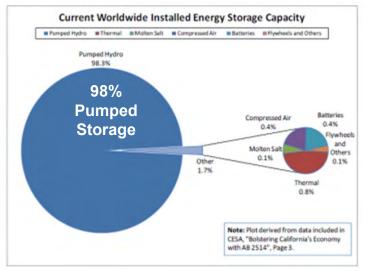


Pumped storage is only proven, costeffective storage technology at scale

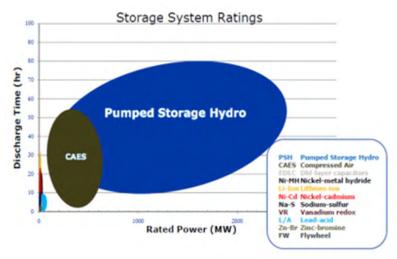


- Pumped storage is the only proven, cost-effective storage at scale
- Consists of pumping or generating by moving energy in the form of water through a powerhouse between an upper and lower reservoir
- Pumped storage is prolific in the US there are 39 pumped storage plants in operation with a total installed capacity of about 22,000 MW
- Globally, there is nearly 131,000
 MW of pumped storage capacity currently in operation

Current Worldwide Installed Energy Storage Facility Capacity

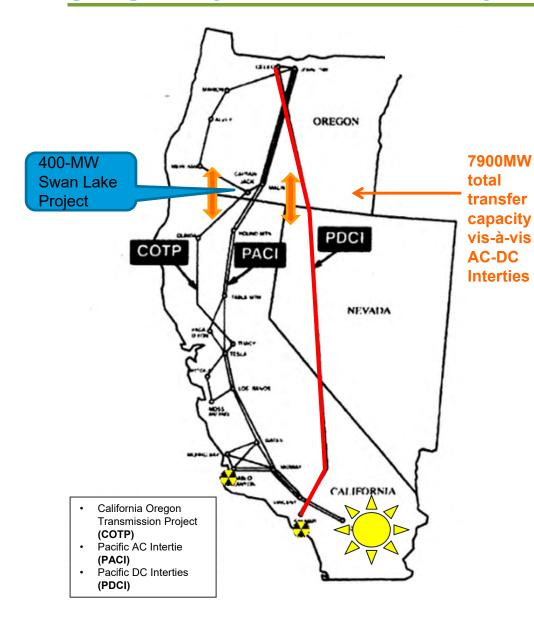


Current Energy Storage Technology Capabilities in Real Time



Klamath County strategically located in grid for renewable integration and blessed with the geography to support this type of facility





- Viable/constructable "closed-loop" project interconnecting into existing high-voltage transmission that leverages major import/export path to California
- Proven storage solution strategically located in grid to support regional decarbonization goals affordably and reliably
- Secure water rights;
- Projects support continued history of beneficial regional bulk power exchanges between California and the Pacific Northwest
- Hundreds of millions of annually potential cost-saving/revenue based on E3 economic modeling (in addition to staggering economic development/jobs)

KEY IMPACTS

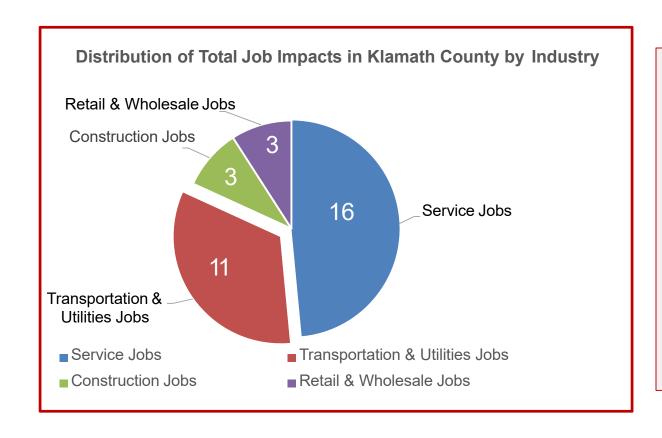


ENVIRONMENTAL IMPACTS

VISUAL IMPACTS

- 3,363 FYE jobs during a ~9 year development & 5 year construction period (up to 14 years total)
- 30+ jobs supported annually during initial 45 year operation
- ~\$2.1MM per year increase in Klamath county tax revenue
- Few due to closed loop system. The Oregon Water Resource Department concluded the project would not impact existing water ways. ODEQ determined a 401 Water Quality Certificate was unnecessary
- Virtually none, due to the scale of landscape project is relatively small
- Project facility size has been reduced to 1/3 of previous design

CREATING JOBS: EMPLOYMENT MULTIPLIER EFFECT (DURING OPERATIONS PERIOD)



Employment Multiplier Effect = 3.2

The spending and income associated with 11 directly employed workers in Transportation & Utilities Industry will support an additional 24 jobs in Klamath County in other industry sectors.

Economic and Fiscal Impact Analysis conducted by ECONorthwest, January 2015

EXPECTED WATER USE

INITIAL FILL | ONE TIME

~2,600 acre-feet
Estimated to take about 8 months

2 AUGMENTATION FILL | ANNUALLY

~400 acre-feet As needed for evaporation losses

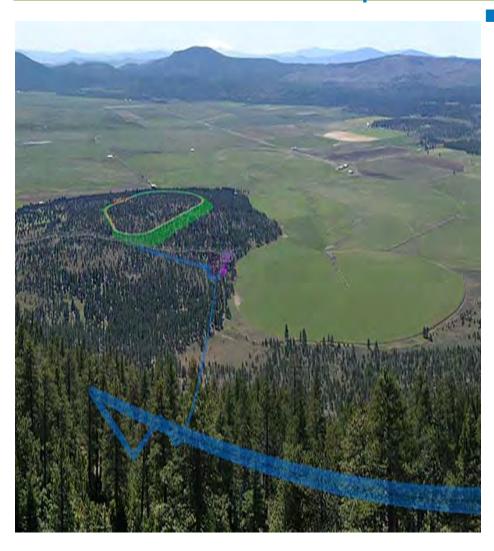
WATER SOURCE:



- Private water rights composed of 3 irrigation wells/pumps; wells in use for decades.
- Water drawn will not exceed the past known performance of the wells; well capacity testing has confirmed.
- Groundwater interference tests indicate no impact on neighboring wells.

Swan Lake Pumped Storage Project Cost and Schedule Update





Schedule Update

- 2010-2015 Public Meetings, Environmental Studies, Project Alternative Analysis, Preparation of a FERC Application
- 2016-2018 FERC Complete
 National Environmental Policy
 Act Review
 - EIS Issued on August 22, 2018
 - FERC hosts public hearing on September 26, 2018
 - EIS comments are due on October 8, 2018
- 2020-2024 Project Construction
- COD 2024/2025
- Mature Design & 2018 Cost Estimate; \$750-Million USD