

Longview Energy Exchange, LLC

Longview Transmission Plan

**Presented to SWAT and WestConnect
November 18 and 19, 2013**

by

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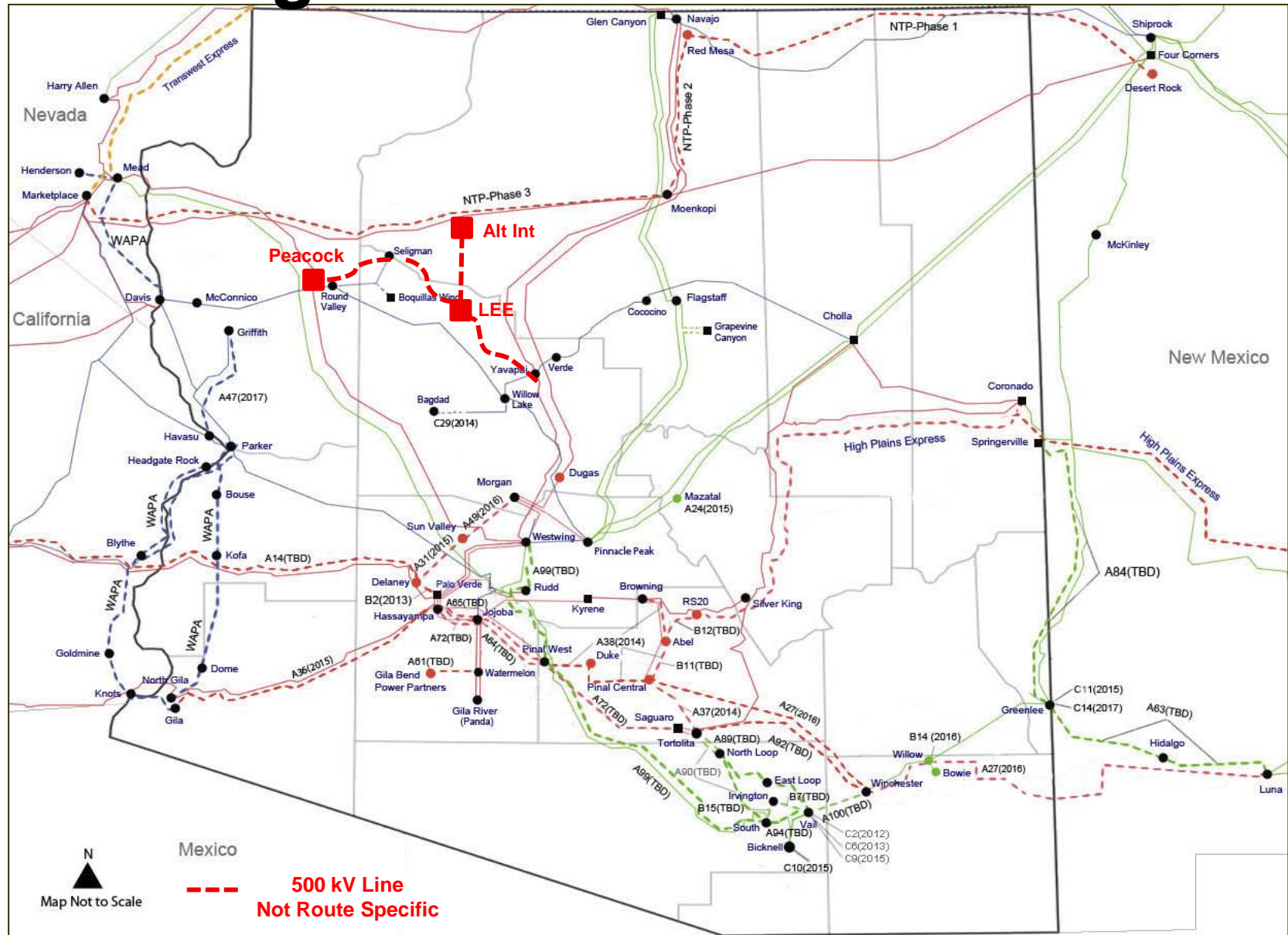
Longview Transmission Plan

Longview Energy Exchange plans to construct the following **500 kV** transmission lines to interconnect its **2000 MW** hydroelectric pumped storage project to the Arizona EHV grid by **2021**:

- **LEE to Peacock** interconnecting with Mead to Perkins 500 kV (~ 50 mi.) and
- **LEE to Yavapai** interconnecting with the Navajo Transmission System (~ 40 mi.) or
- **Lee to interconnect with a new Moenkopi to Eldorado line Switchyard** (~ 30 mi.)

Longview Transmission Plan

Longview Energy Exchange



LEE November 2013 SWAT/WestConnect Update

Recently Completed Studies



PC26-28 Firmed Resource Studies July 25, 2013

This document is for technical review purposes only. It has not been endorsed or approved by the WECC Board of Directors, its Transmission Expansion Planning Policy Committee (TEPPC), the TEPPC Scenario Planning Steering Group (SPPSG), or WECC Management.

Introduction

The PC26, PC27 and PC28 Firmed Resource Option Cases studied the capabilities and effects of different firming measures on overall variable costs of the Interconnection. These studies are Option studies, meaning the assumptions for the Firmed Resource Option Cases was to investigate the impacts of resources to assist in shaping a large penetration of renewable resources geographically diverse in that each firming technology is different as three types of studies investigated the capabilities (combined cycle), hydro generation, and pumped storage in the Western Interconnection. This is a first-of-its-kind study to be studied using unique modeling methods:

Wyoming Thermal Firming – EC26 cases

- Allow 1,000 MW of added gas combined cycle based on economics relative to southern California
- Using a nomogram, schedule their output down throughout the Western Interconnection
- Incremental renewable generation is also scheduled

BC Hydro Firming – PC27 cases

- Compare the impact of different hydro modeling production costs
- Investigate the commercial application of firming British Columbia (BC) hydro resources

Southwest Pumped Storage Firming – PC28 cases

- Compare the impact of different pumped storage variable production costs
- Pumped storage modeling was consistent with

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Transmission Feasibility Study Longview Energy Exchange (LEE) Hydroelectric Pumped Storage Project

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July 17, 2013

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Version 2.0
May 24, 2013

Market Assessment Longview Energy Exchange Hydroelectric Pumped Storage Project

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Confidential

Longview
Feasibility
Study

Highlights of Study Reports

- WECC 2023 Firmed Resource Study:
http://www.wecc.biz/committees/BOD/TEPPC/External/TEPPC_2022_StudyReport_PC26-28_Firming.docx
Longview is effective and competitive with gas-fired Wyoming units and BC Hydro units in firming additional 12,000 GWh of renewables in WECC
- Longview Market Assessment: proprietary report
Market is sufficiently robust to generate Longview revenue that yields a financially viable project IRR
- Longview Transmission Feasibility: <http://longviewee.com/>
Planned Transmission Alternatives are financially viable with technically comparable performance

LEE Next Steps

- Revise spatial relationship of power house and three reservoirs – shortens penstocks & reduces head by ~ 400 ft.
- Revisit incumbent utilities (generation and transmission sectors)
- Initiate discussions with potential strategic partners and industry alliances
- Initiate transmission interconnection requests

Longview Energy Exchange, LLC

The Longview Pumped Storage Project

**Meeting future energy needs
for the West**

