



GridLiance West Project Proposal for the 2021-2022 TPP Reliability Request Window

September 27-28, 2021

GLW Upgrade

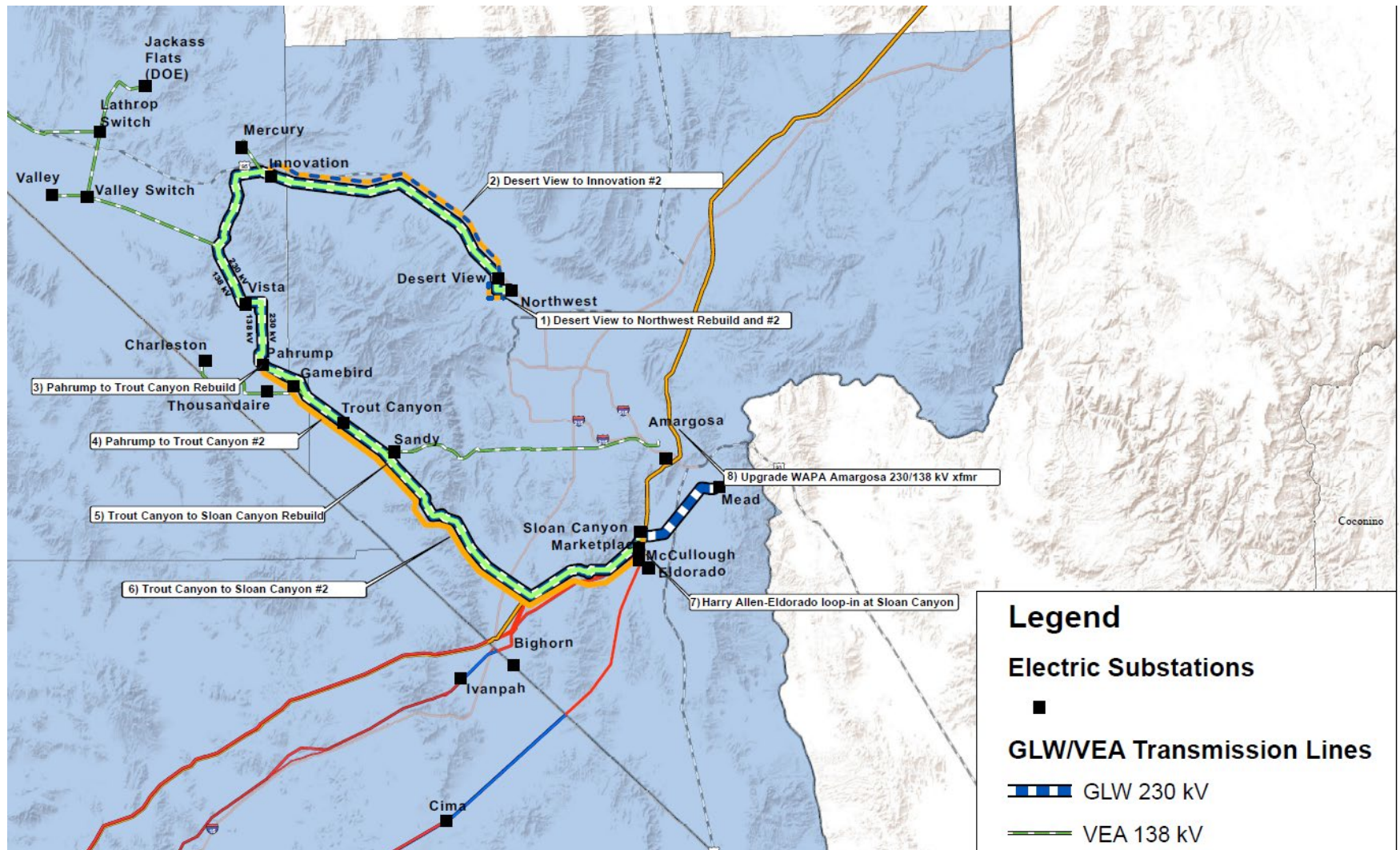
- **Issues:** CAISO's preliminary 2021-2022 TPP assessment showed overloading throughout the GLW and surrounding transmission system. The GLW Upgrade is being proposed to address a combination of reliability, economic, and policy needs.
- **Proposed Project:**
 - Rebuild to 230 kV double circuit from Desert View to Northwest.
 - Add a second 230 kV circuit from Innovation to Desert View.
 - Rebuild to 230 kV double circuit from Pahrump to Gamebird to Trout Canyon.
 - Rebuild to 230 kV double circuit from Trout Canyon to Sloan Canyon.
 - Add a 500/230 kV transformer at Sloan Canyon and loop-in the Harry Allen to Eldorado 500 kV line at Sloan Canyon.
 - Additional planned upgrades on the NVE system were included to alleviate known constraints.
 - Coordinate with WAPA to alleviate Amargosa 230/138 kV transformer constraint.

GLW Upgrade

- **Proposed In-Service Date: 12/31/2025**
- **Estimated Cost Range: \$213 million***
- **Benefits (Reliability + Economic + Policy):**
 - The GLW Upgrade addresses a variety of overloads observed in the 2031 Spring Off-Peak and will see more upon completion of the policy study when modeling the full GLW area renewable portfolio.
 - The rebuild and addition of a second 230 kV circuit from Pahrump-Gamebird-Trout Canyon-Sloan Canyon also eliminates P6 overloading on Amargosa-Sandy 138 kV line, Gamebird 230/138 kV transformer, and Gamebird-Pahrump 138 kV line.
 - Interconnecting the Harry Allen to Eldorado 500 kV line at Sloan Canyon increases the GLW-CAISO capacity to allow for CPUC 2,024 MW portfolio.
 - GLW conducted GridView analysis using the CPUC 2,024 MW portfolio. These upgrades will generate CAISO Net Payment benefits of \$67M annually with a benefit-to-cost ratio (BCR) of 3.47.

*Cost estimate is based on 2021 GLW Per Unit Cost Guide

GLW Upgrade Map



Legend

Electric Substations



GLW/VEA Transmission Lines

GLW 230 kV

VEA 138 kV