Laguna Bell Substation

Phase 1 Scope: Replace (2) 220 kV disconnects.

220 kV Switchrack Pos. 5 Rio Hondo Line (future Mesa No. 2 Line):

1. Remove (2) existing sets of disconnect switches.
2. Install (2) new sets of group operated disconnect switches, rated 4000 amps. One set shall have a grounding switch attachment.
3. Reconductor the jumpers and risers.
4. Install (3) transient recovery voltage capacitors (TRVs).
5. Replace existing disconnect switch foundations.
6. Install (1) CB Operator Interface Cabinet (OIC) and run new homerun cables to the future location of the Pos. 5 Line Protection Relay Rack.
7. Install additional switchrack lighting.

220 kV Switchrack Pos. 11 Goodrich Line (future Mesa No. 1 Line):

1. Install (1) CB Operator Interface Cabinet (OIC) and run new homerun cables to the future location of the Pos. 11 Line Protection Relay Rack.

Phase 1 Construction Information:

Duration: 4 weeks
Maximum 20 vehicle trips per day (100 trips per week). Total of 400 vehicle trips.

Please Note: There will be no disturbances associated with the proposed upgrades to protection relays and telecomm equipment.

Phase 2 Scope: Upgrade line protection for the new 220 kV Mesa No. 1 and 2 Lines. Upgrade line protection for the existing 66 kV Newmark-Vail Line.

220 kV Switchrack Pos. 5:

Run new homerun cables from the CCVT pull boxes going to the MEER. Connect homerun cables from the OIC to the Pos. 5 Line Protection Relay Rack.

220 kV Switchrack Pos. 11:

1. Remove the existing wave trap, line tuner, and associates accessories on the C phase. Reconfigure the line riser.
2. Run new homerun cables from the CCVT pull boxes going to the MEER. Connect homerun cables from the OIC to the Pos. 11 Line Protection Relay Rack.

66 kV Switchrack

1. Replace (1) existing potential transformer (PT) with (2) 66 kV Line PT's to provide potentials to the new relays.
2. Provide all new homerun cables to the MEER.
3. Replace existing PT foundations.

MEER:

1. Remove existing electromechanical line protection relays.
2. For the new 220kV Mesa No. 1 Line, install (1) new 19" rack with (1) GE L90 relay, (1) SEL-311L relay, and all associated switches and accessories. Install 19" racks per attached MEER layout.
3. For the new 220kV Mesa No. 2 Line, install (1) new 19" rack with (1) GE L90 relay, (1) SEL-311L relay, and all associated switches and accessories. Install 19" racks per attached MEER layout.
4. For the 66kV Newmark-Vail Line, install (1) new 19" rack with (1) SEL-311L relay, (1) GE F35, and all associated switches and accessories.

RTU/PLC

1. Provide control and monitoring points for the new relays.
2. Power System Controls Group to revise/add control and status points per PLC point list.
3. Remove old points.

Annunciator

Revise existing alarm points for the new relays.

DFR

Revise existing alarm points for the new relays.

Telecomm

1. Reconfigure existing circuit to Mesa from Goodrich and add a diverse C37.94 to Mesa for the SEL-311L. Install lightwave and channel equipment.
2. Reconfigure LPS channel for the GE L90 (C37.94). Add new C37.94 for the SEL-311L relay.
3. Install lightwave and channel equipment. Reconfigure HCB communication circuits (C37.94).

Phase 2 Construction Information:

Duration: 3 weeks
Maximum 5 vehicle trips per day (25 trips per week). Total of 75 vehicle trips.

Please Note: There will be no disturbances associated with the proposed upgrades to protection relays and telecomm equipment.