



| Overloaded Facility | Contingency (All and Worst P6) | Category | Category Description | Loading % (Baseline Scenarios) | | | | | Loading % (Sensitivity Scenarios) | | | Project & Potential Mitigation Solutions |
|-----------------------------------|-------------------------------------|----------|-------------------------|--------------------------------|------------------|------------------|----------------------|----------------------|-----------------------------------|----------------------------------|---------------------------------------|--|
| | | | | 2020 Summer Peak | 2023 Summer Peak | 2028 Summer Peak | 2020 Spring Off-Peak | 2023 Spring Off-Peak | 2023 SP High CEC Forecast | 2023 SpOP Hi Renew & Min Gas Gen | 2020 SP Heavy Renewable & Min Gas Gen | |
| Bob SS-Mead 230kV Line | Eldorado 500/230kV Transformer No.5 | P1 | Single outage | <100 | <100 | <100 | 185 | <100 | <100 | 196 | 183 | Bob-Mead upgrade. Interium solution utilizes Ivanpah RAS |
| Eldorado-Merchant 230kV No.2 Line | Eldorado-Merchant 230kV No.1 Line | P1 | Single outage | <100 | <100 | <100 | <100 | <100 | <100 | 102 | <100 | Reduce generation output at Merchant |
| System Diverge | Eldorado-Mohave & Lugo-Mohave 500kV | P6 | Two overlapping singles | Nconv | Nconv | Nconv | Nconv | Nconv | Nconv | Nconv | Nconv | NVEnergy protection scheme to radialize Laughlin 69kV system |

Study Area: SCE East of Lugo

High/Low Voltages



| Substation | Contingency (All and Worst P6) | Category | Category Description | Post Cont. Voltage Deviation % (Baseline Scenarios) | | | | | Post Cont. Voltage Deviation % (Sensitivity Scenarios) | | | Project & Potential Mitigation Solutions |
|------------|--------------------------------|----------|----------------------|---|------------------|------------------|----------------------|----------------------|--|------------------------------------|---------------------------------------|--|
| | | | | 2020 Summer Peak | 2023 Summer Peak | 2028 Summer Peak | 2020 Spring Off-Peak | 2023 Spring Off-Peak | 2023 SP High CEC Forecast | 2023 SpOP High Renew & Min Gas Gen | 2020 SP Heavy Renewable & Min Gas Gen | |
| None | | | | | | | | | | | | |

Study Area: SCE East of Lugo

Voltage Deviation



| Substation | Contingency (All and Worst P6) | Category | Category Description | Voltage PU (Baseline Scenarios) | | | | | Voltage PU (Sensitivity Scenarios) | | | Project & Potential Mitigation Solutions |
|------------|--------------------------------|----------|----------------------|---------------------------------|------------------|------------------|----------------------|----------------------|------------------------------------|----------------------------------|---------------------------------------|--|
| | | | | 2020 Summer Peak | 2023 Summer Peak | 2028 Summer Peak | 2020 Spring Off-Peak | 2023 Spring Off-Peak | 2023 SP High CEC Forecast | 2023 SpOP Hi Renew & Min Gas Gen | 2020 SP Heavy Renewable & Min Gas Gen | |
| None | | | | | | | | | | | | |

Study Area: SCE East of Lugo

Transient Stability



| Contingency | Category | Category Description | Transient Stability Performance (Number of voltage and frequency violations) | | | | | | | | Potential Mitigation Solutions |
|---------------------------------------|----------|----------------------|--|------------------|------------------|----------------------|----------------------|---------------------------|----------------------------------|---------------------------------------|--------------------------------|
| | | | 2020 Summer Peak | 2023 Summer Peak | 2028 Summer Peak | 2020 Spring Off-Peak | 2023 Spring Off-Peak | 2023 SP High CEC Forecast | 2023 SpOP Hi Renew & Min Gas Gen | 2020 SP Heavy Renewable & Min Gas Gen | |
| EIDorado_5AA_RAS | P1 | Normal clearing | Stable | NA | Stable | NA | Stable | NA | Stable | Stable | |
| EIDorado_5AA_noRAS | P1 | Normal clearing | Stable | NA | Stable | NA | Stable | NA | Stable | Stable | |
| Eldorado-Mohave & Lugo-Mohave 500kV | P6 | Normal clearing | Stable | NA | Stable | NA | Stable | NA | Stable | Stable | |
| Eldorado-Lugo & Eldorado-Mohave 500kV | P6 | Normal clearing | Stable | NA | Stable | NA | Stable | NA | Stable | Stable | |

Study Area: SCE East of Lugo



Single Contingency Load Drop

| Worst Contingency | Category | Category Description | Amount of Load Drop (MW) | | | | | | | | | | Potential Mitigation Solutions |
|-------------------|----------|----------------------|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------------------|
| | | | Select.. | Select.. | Select.. | Select.. | Select.. | Select.. | Select.. | Select.. | Select.. | Select.. | |
| | | | | | | | | | | | | | |

None

Study Area: SCE East of Lugo

Single Source Substation with more than 100 MW Load



| Substation | Load Served (MW) | | | | | | | | | | Potential Mitigation Solutions |
|------------|------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------------------|
| | Select.. | Select.. | Select.. | Select.. | Select.. | Select.. | Select.. | Select.. | Select.. | Select.. | |
| | | | | | | | | | | | |

None