2025 & 2029 Draft LCR Study Results Sierra Area

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Stakeholder Call

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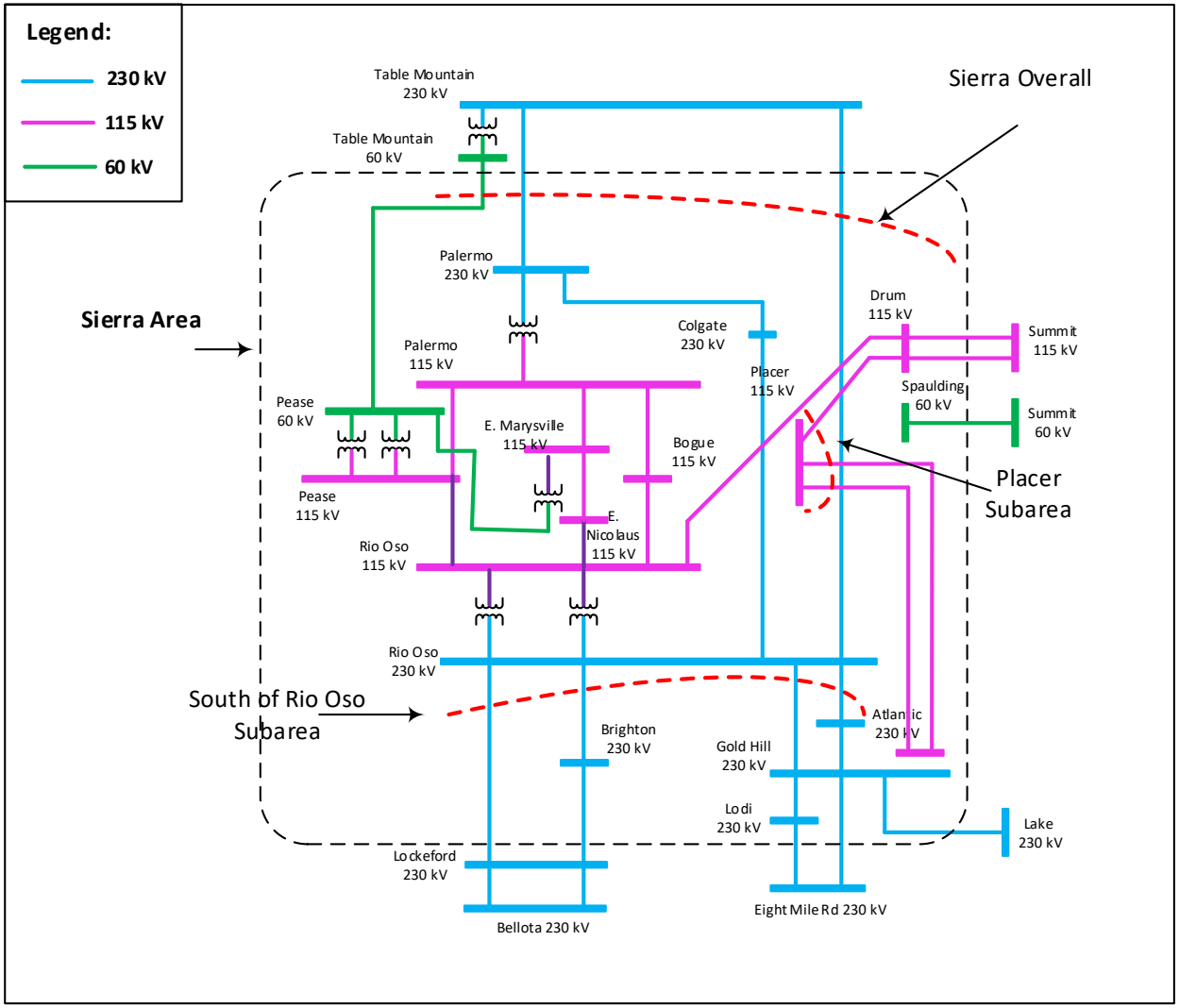
Sierra Area Transmission System & LCR Sub-areas



New major transmission projects

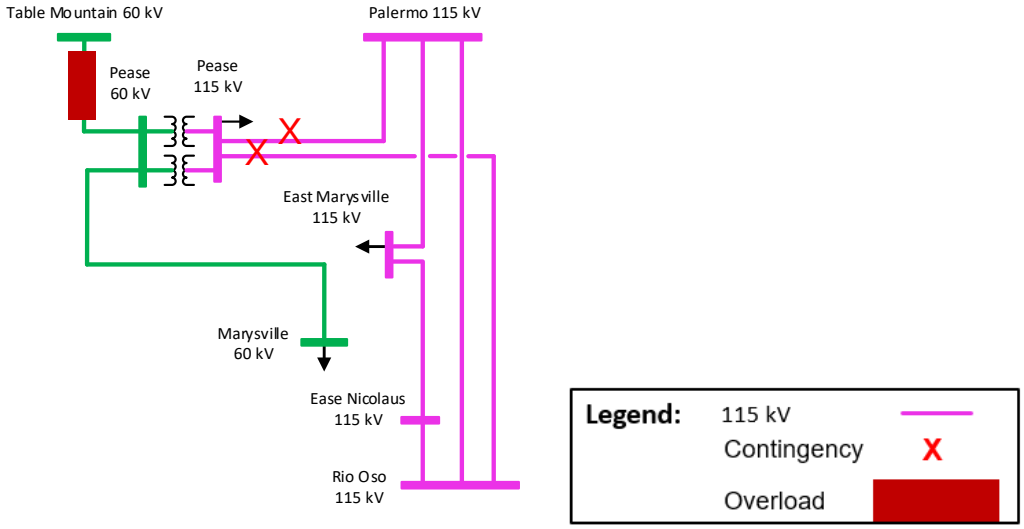
Project Name	Expected ISD
Rio Oso 230/115 kV Transformer Upgrades	June 2025
Rio Oso Area 230 kV Voltage Support	June 2025
East Marysville 115/60 kV	Jan 2028
Gold Hill 230/115 kV Transformer Addition	June 2029
Reconductor Rio Oso–SPI Jct–Lincoln 115kV line	December 2029
Atlantic 230/60 kV transformer voltage regulator	May 2026

Based on Transmission Development Forum October 2023 Meeting Update

Sierra Area Overall: Load and Resources

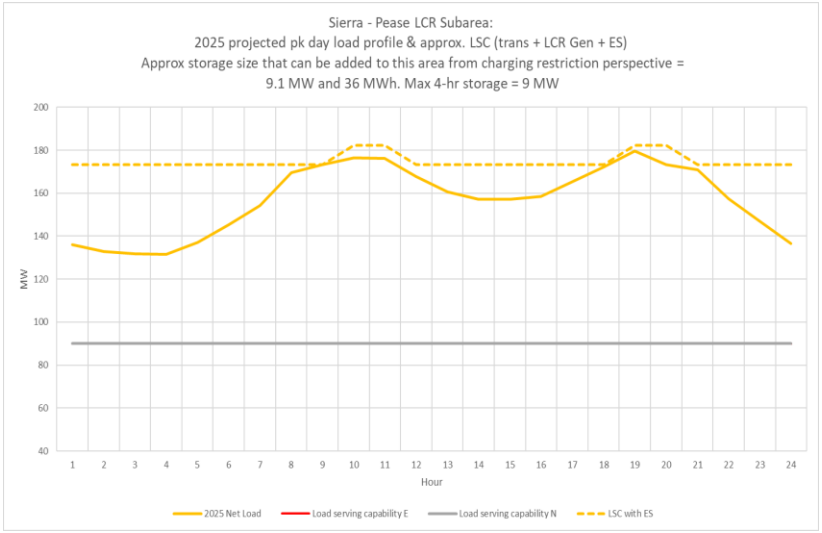
Load (MW)	2025	2029	Generation (MW)	2025	2029
Gross Load	1941	1939	Market/Net Seller	505	505
AAEE	-17	-32	Battery	5	5
Behind the meter DG	0	0	MUNI/QF	1150	1150
Net Load	**1924**	**1907**	Solar	0	0
Transmission Losses	76	71	Existing 20-minute Demand Response	0	0
Pumps	0	0	Mothballed	0	0
Load + Losses + Pumps	**2000**	**1978**	**Total**	**1660**	**1660**

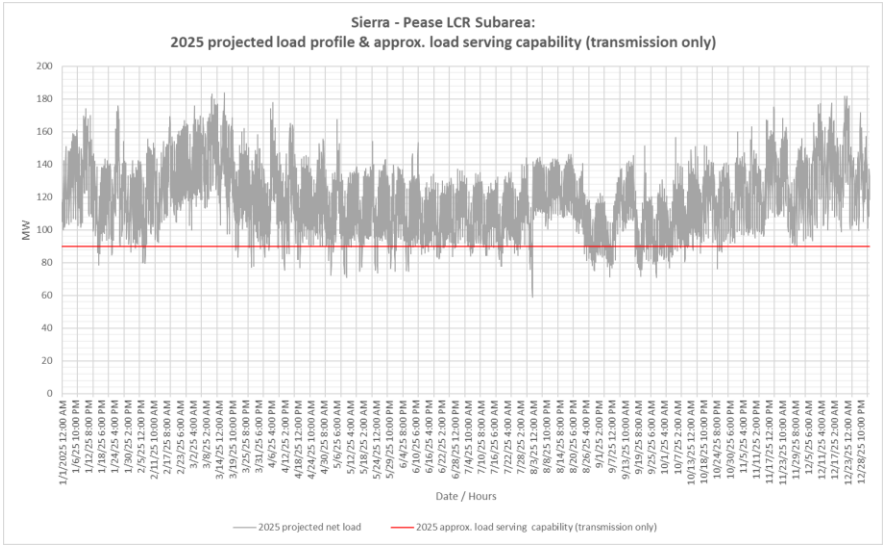
Pease Sub-Area: Requirements



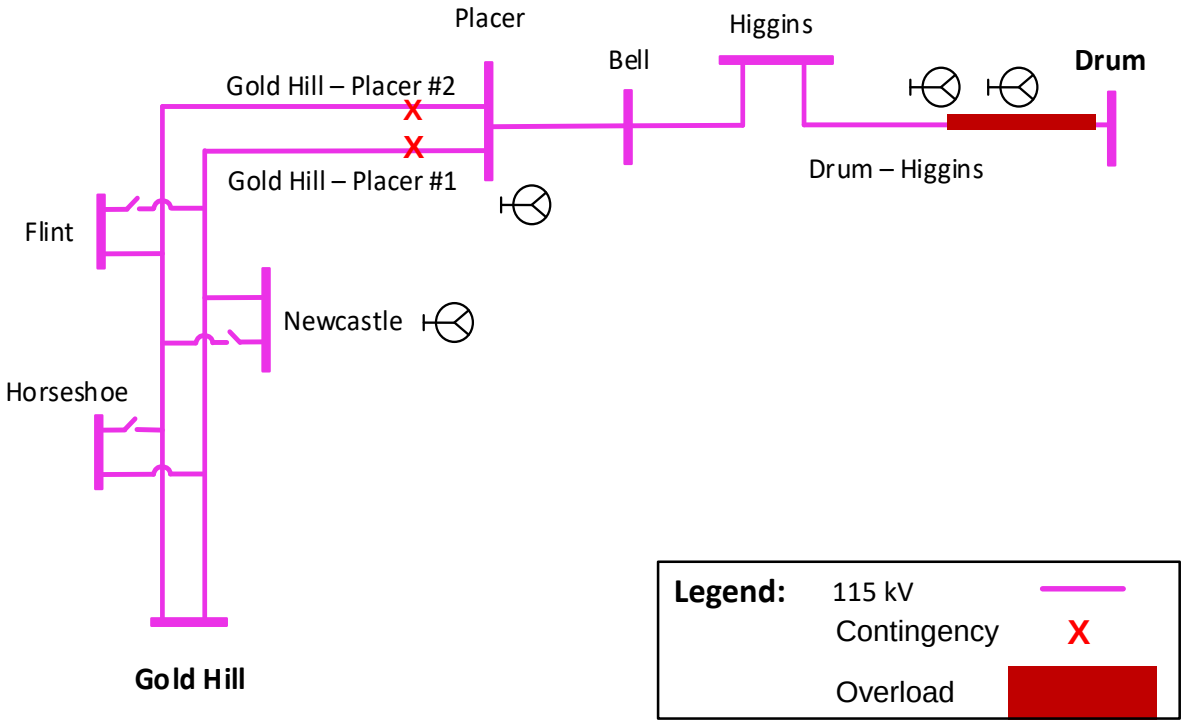
Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2025	P6, P7	Table Mountain – Pease 60 kV line	Palermo – Pease 115 kV and Pease – Rio Oso 115 kV	109
2029	No LCR due to implementation of East Marysville 115/60 kV Project			No requirements

Pease Sub-area: Load Profiles



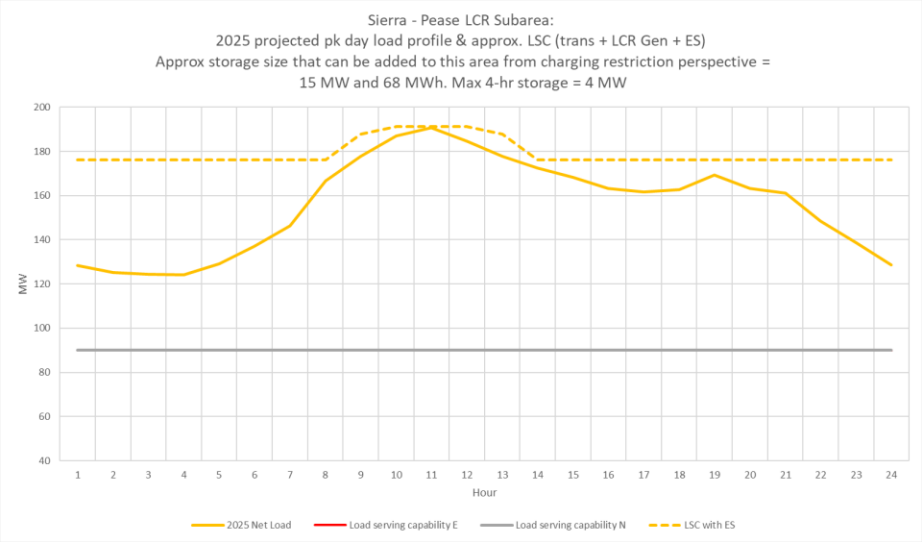


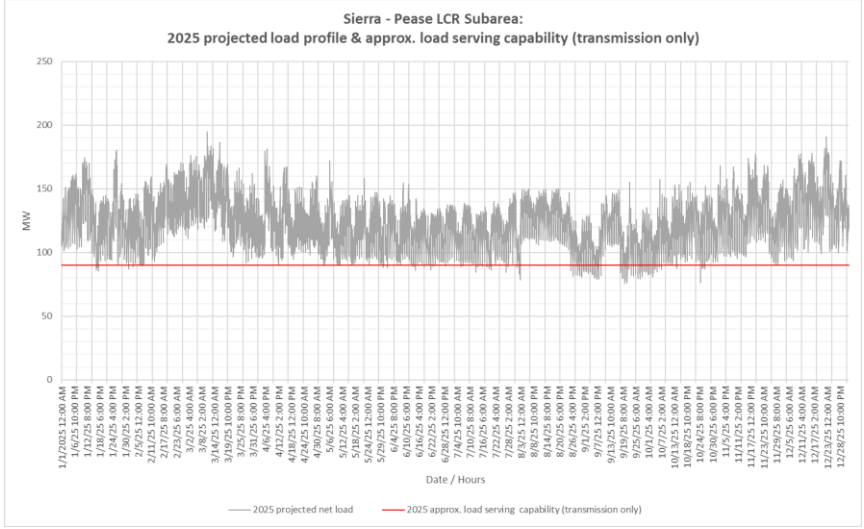
Placer Sub-Area: Requirements



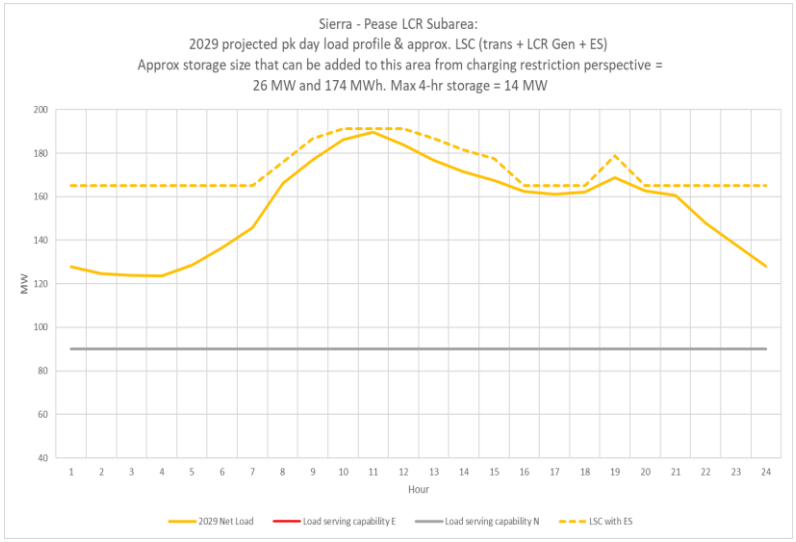
Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2025	P6, P7	Drum – Higgins 115 kV line	Gold Hill – Placer #1 and #2 115 kV lines	125 (61)
2029	P6, P7	Drum – Higgins 115 kV line	Gold Hill – Placer #1 and #2 115 kV lines	115 (51)

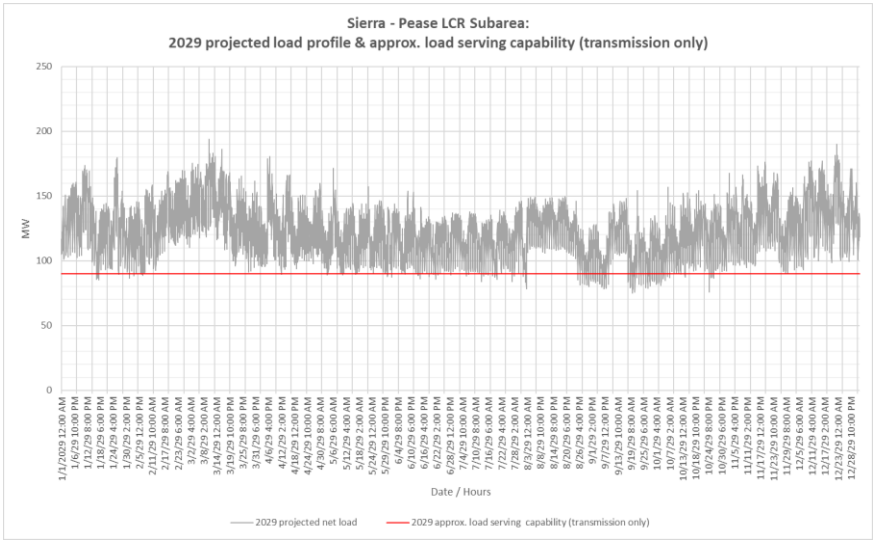
Placer Sub-area: Load Profiles



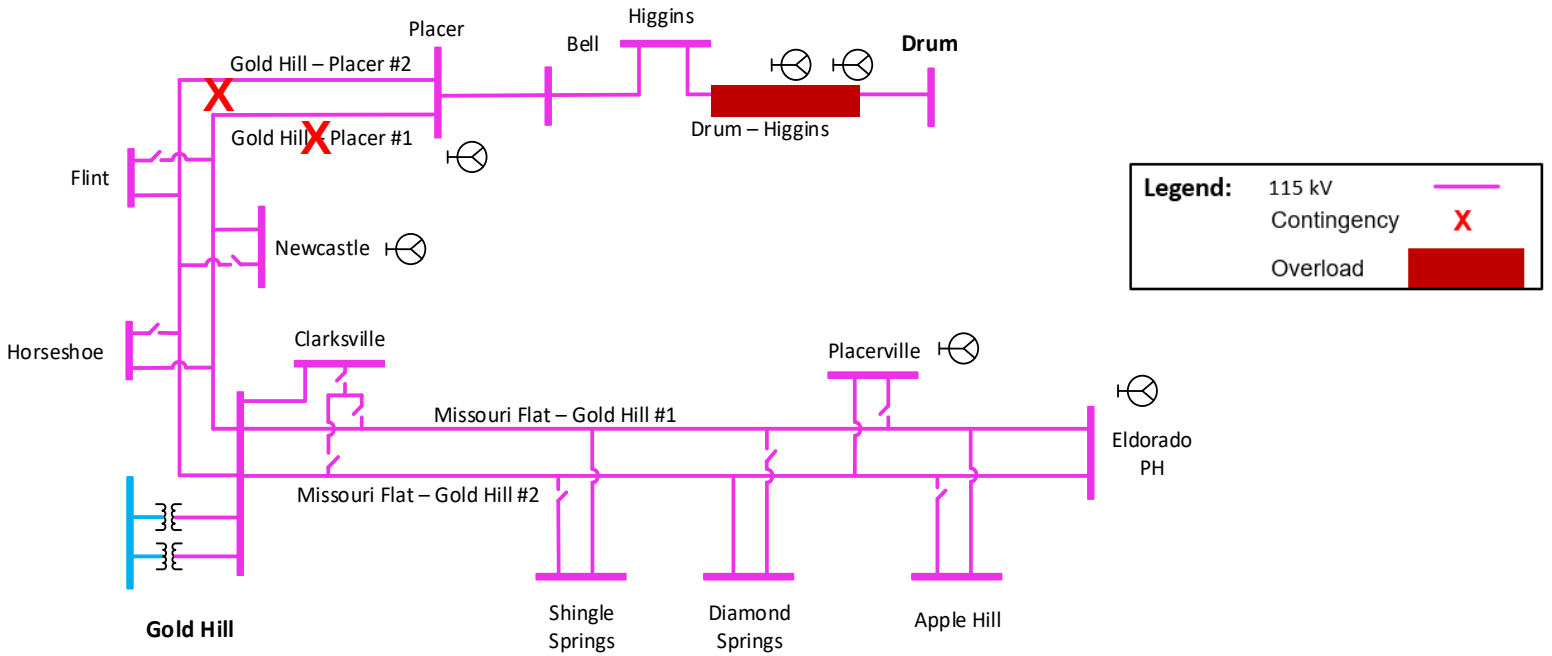


Placer Sub-area: Load Profiles





Gold Hill - Drum Sub-Area: Requirements

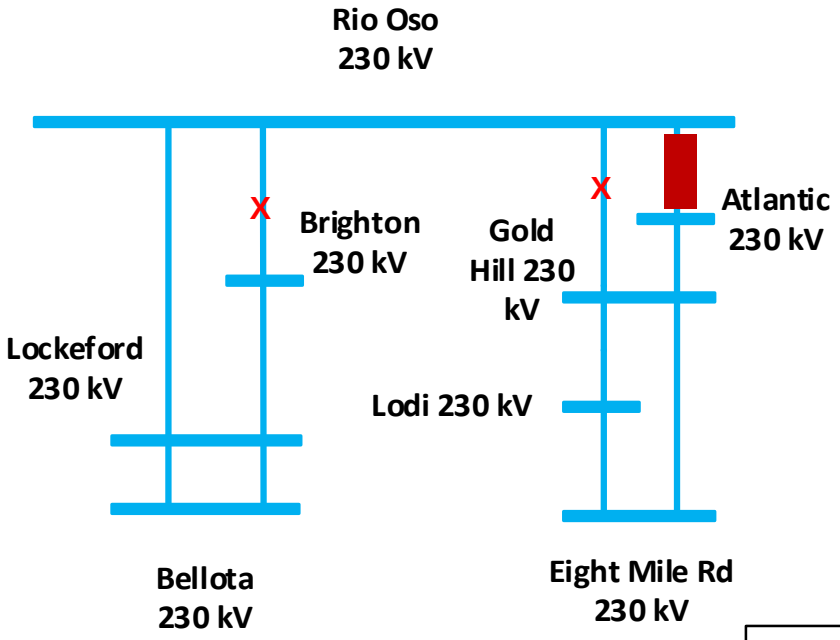


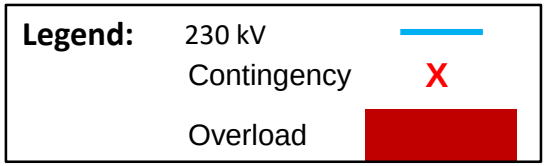
Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2025	P6	Drum – Higgins 115 kV	Gold Hill 230/115 kV #1 and Gold Hill 230/115 kV #2 Transformers	461 (386)
2029	No LCR due to implementation of Gold Hill 230/115 kV Transformer Addition Project			No requirements

Gold Hill - Drum Sub-area: Load Profiles

In progress and will be provided with final LCR results.

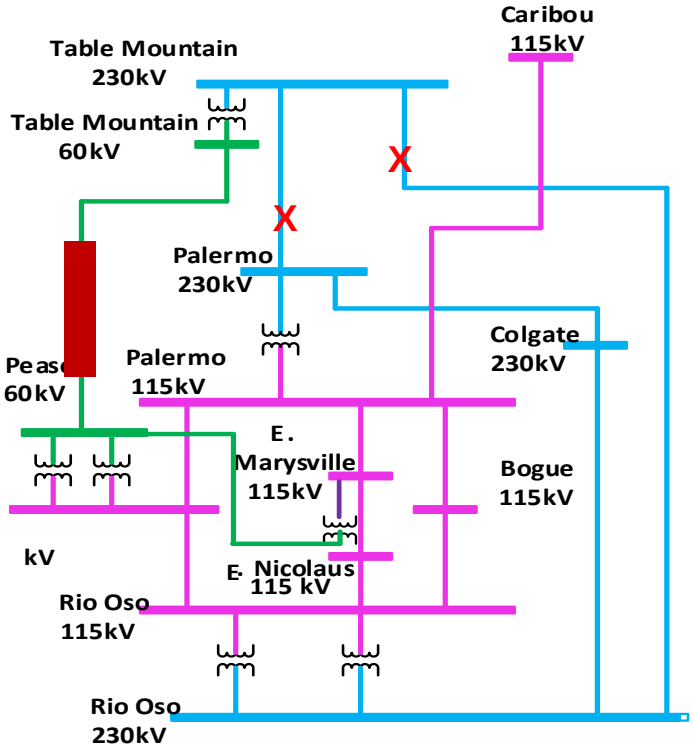
South of Rio Oso Sub-Area: Requirements

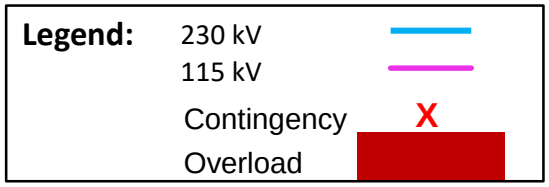




Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2025	P6	Rio Oso – Atlantic 230 kV Line	Rio Oso – Gold Hill 230 kV Rio Oso – Brighton 230 kV	453
2029	P6	Rio Oso – Atlantic 230 kV Line	Rio Oso – Gold Hill 230 kV Rio Oso – Brighton 230 kV	471

Sierra Overall: Requirements





Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2025	P6, P7	Table Mountain – Pease 60 kV Line	DCTL of Table Mtn. – Palermo and Table Mtn. Rio Oso 230 kV lines	1532
2029	P6, P7	Table Mountain – Pease 60 kV Line	DCTL of Table Mtn. – Palermo and Table Mtn. Rio Oso 230 kV lines	1885 (225)

Changes from 2024 to 2025

Sub-area	2024		2025	
	Load	LCR	Load	LCR
Pease	150	86	182	108
Placer	168	90 (30)	193	125 (61)
Gold Hill - Drum	474	377 (307)	556	461 (386)
South of Rio Oso	N/A	375	N/A	453
Sierra Overall	N/A	1212	N/A	1532
Total	1758	1519 (307)	2000	1979 (447)

The load forecast for the overall area has increased between years 2024 and 2025 and the overall LCR requirement has increased due to load forecast increase, change in resources NQC values and due to the flow-through nature of the area.

N/A=Flow-through area. No defined load pocket.

Changes from 2028 to 2029

Sub-area	2028		2029	
	Load	LCR	Load	LCR
Pease	N/A	N/A	N/A	N/A
Placer	175	107 (47)	190	115 (51)
Gold Hill - Drum	491	397 (327)	N/A	N/A
South of Rio Oso	N/A	369	N/A	471
Sierra Overall	N/A	1415	N/A	1885 (225)
Total	1843	1742 (327)	1978	1885 (225)

The load forecast for the overall area has increased between years 2028 and 2029 and the overall LCR requirement has increased as well due to load increase.

No LCR for Gold Hill-Drum sub-area, due to implementation of Gold Hill 230/115 kV Transformer Addition Project.

N/A=Flow-through area. No defined load pocket.

Sierra Area Total LCR Need

Study Year	Existing Generation Capacity Needed (MW)	Deficiency (MW)	Total MW Need
2025	1532	447	1979
2029	1660	225	1885