



2026 & 2030 Final LCR Study Results Sierra Area

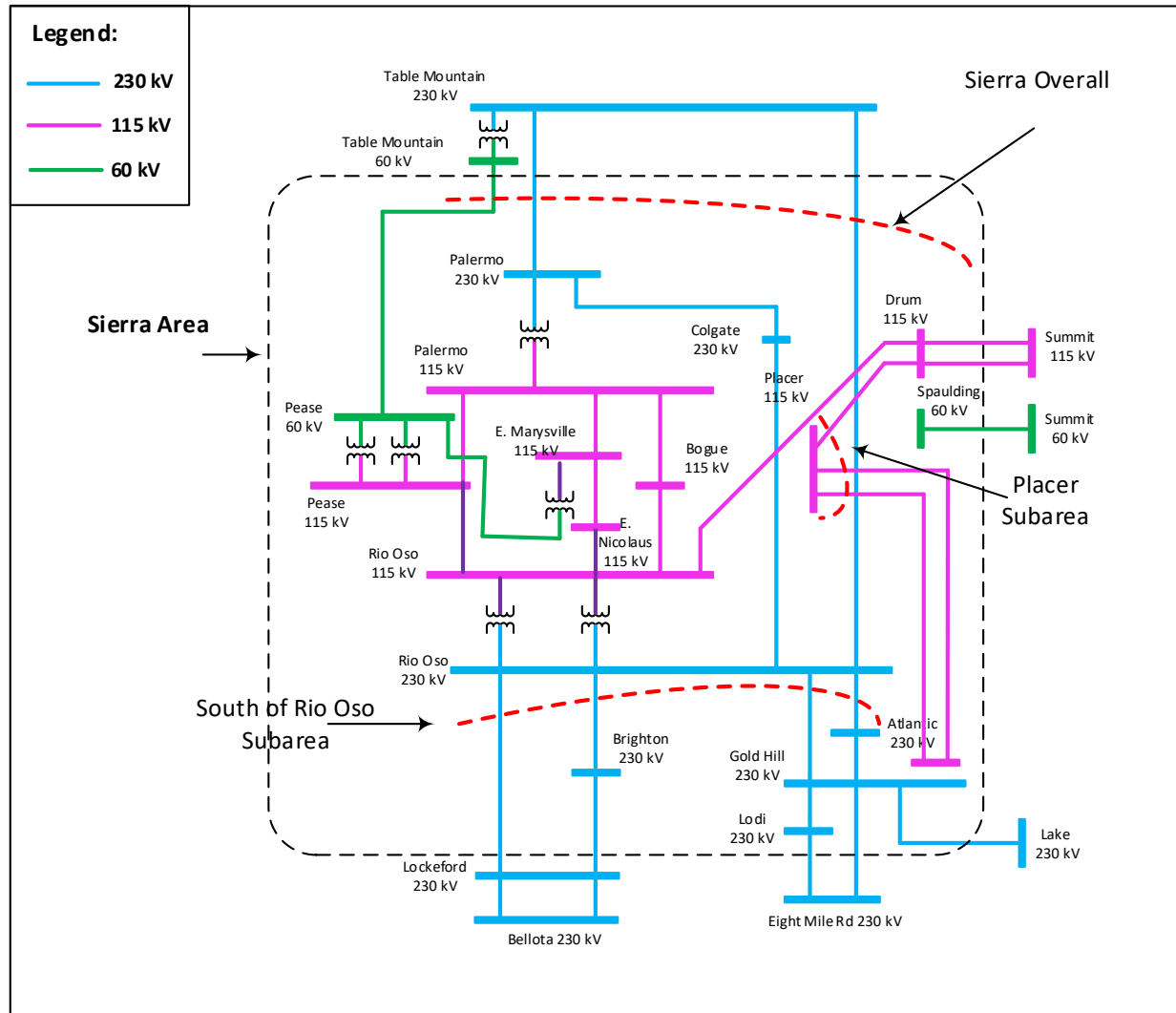
Subrina Sultana Noureen

Sr. Regional Transmission Engineer

Stakeholder Call

April 10, 2025

Sierra Area Transmission System & LCR Sub-areas



New major transmission projects

Project Name	Expected ISD
Rio Oso 230/115 kV Transformer Upgrades	May 2025
Rio Oso Area 230 kV Voltage Support	May 2026
East Marysville 115/60 kV	Jan 2028
Gold Hill 230/115 kV Transformer Addition	June 2029
Reconductor Rio Oso–SPI Jct–Lincoln 115 kV line	Dec 2028
Atlantic High Voltage Mitigation	Apr 2027

Sierra Area Overall: Load and Resources

Load (MW)	2026	Generation (MW)	Aug NQC	At Peak
Gross Load	1844	Market/Net Seller	702	702
AAEE	-25	Battery	5	5
Behind the meter DG	-40	MUNI/QF	1236	1236
Net Load	1779	Solar	0	0
Transmission Losses	74	Existing 20-minute Demand Response	0	0
Pumps	0	Mothballed	0	0
Load + Losses + Pumps	1853	Total	1943	1943

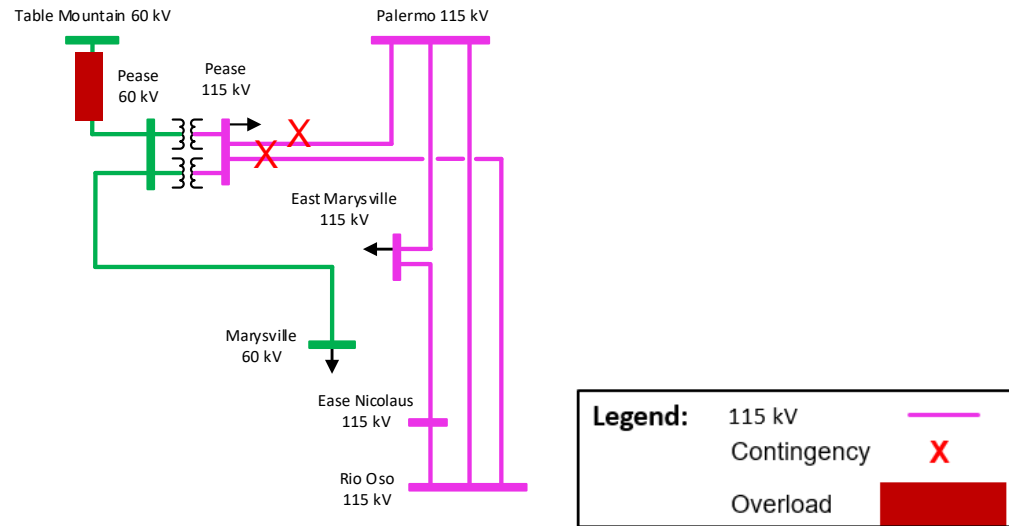
Sierra Area Overall: Load and Resources

Load (MW)	2030	Generation (MW)	Aug NQC	At Peak
Gross Load	2003	Market/Net Seller	702	702
AAEE	-42	Battery	5	5
Behind the meter DG	-50	MUNI/QF	1236	1236
Net Load	1911	Solar	0	0
Transmission Losses	70	Existing 20-minute Demand Response	0	0
Pumps	0	Mothballed	0	0
Load + Losses + Pumps	1981	Total	1943	1943

Pease Sub-Area: Load and Resources

Load (MW)	2026	Generation (MW)	Aug NQC	At Peak
Gross Load	160	Market/Net Seller	97	97
AAEE	-2	Battery	5	5
Behind the meter DG	-3	MUNI/QF	49	49
Net Load	155	Solar	0	0
Transmission Losses	3	Existing 20-minute Demand Response	0	0
Pumps	0	Mothballed	0	0
Load + Losses + Pumps	158	Total	151	151

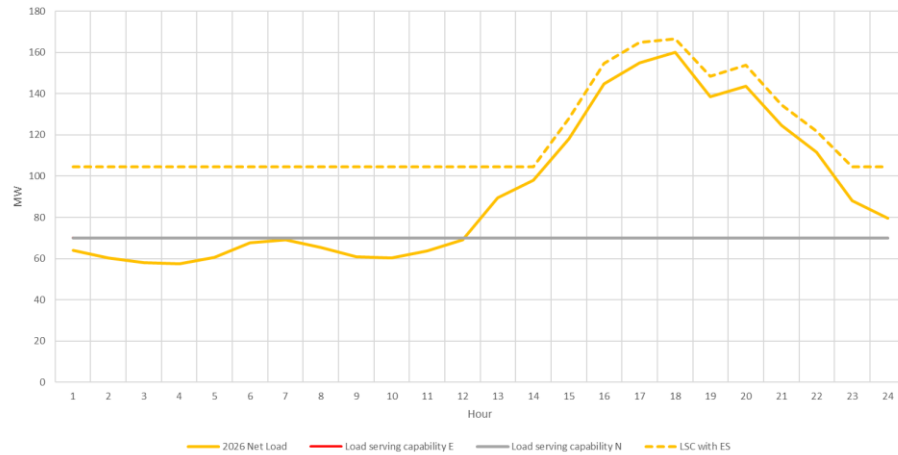
Pease Sub-Area: Requirements



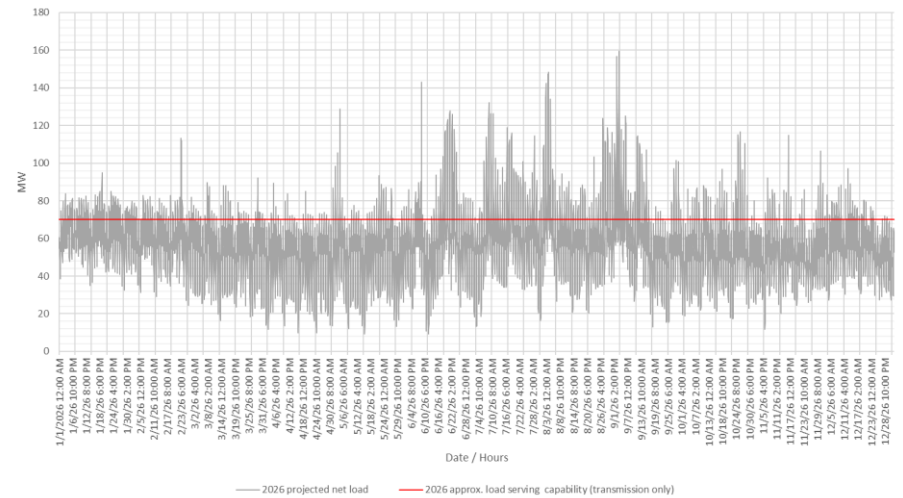
Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2026	P6, P7	Table Mountain – Pease 60 kV line	Palermo – Pease 115 kV and Pease – Rio Oso 115 kV	53
2030	No LCR due to implementation of East Marysville 115/60 kV Project Implementation			N/A

Pease Sub-area: Load Profiles

Sierra - Pease LCR Subarea:
2026 projected pk day load profile & approx. LSC (trans + LCR Gen + ES)
Approx storage size that can be added to this area from charging restriction perspective =
52 MW and 337 MWh. Max 4-hr storage = 30 MW



Sierra - Pease LCR Subarea:
2026 projected load profile & approx. load serving capability (transmission only)



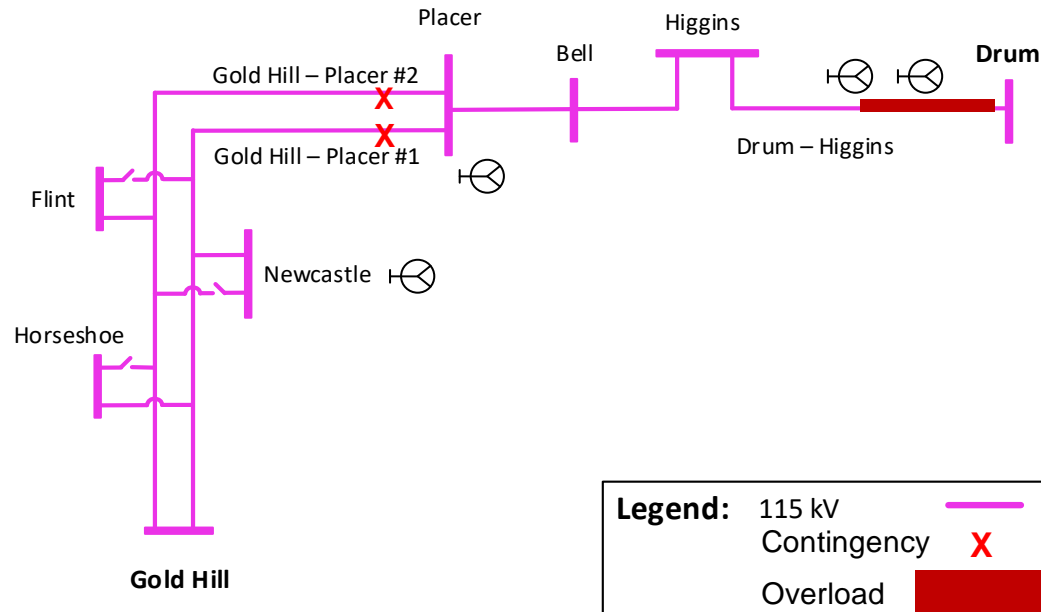
Placer Sub-Area: Load and Resources

Load (MW)	2026	Generation (MW)	Aug NQC	At Peak
Gross Load	210	Market/Net Seller	34	34
AAEE	-3	Battery	0	0
Behind the meter DG	-5	MUNI/QF	28	28
Net Load	202	Solar	0	0
Transmission Losses	4	Existing 20-minute Demand Response	0	0
Pumps	0	Mothballed	0	0
Load + Losses + Pumps	206	Total	62	62

Placer Sub-Area: Load and Resources

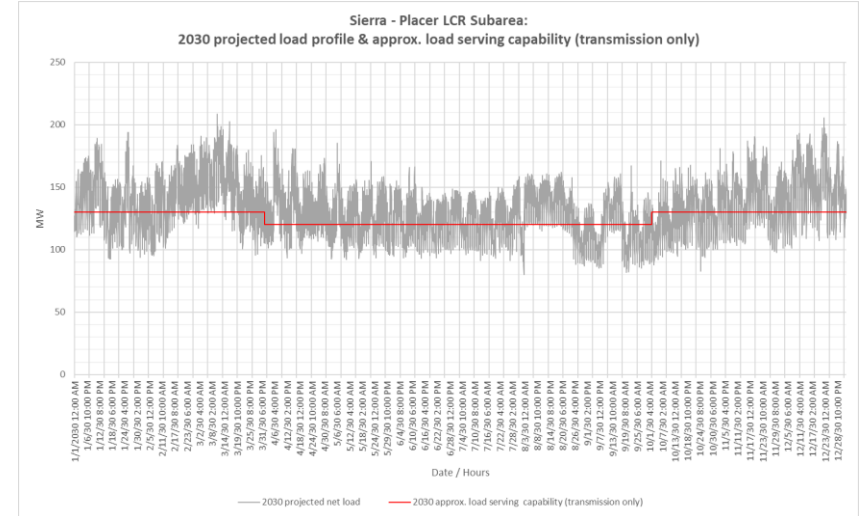
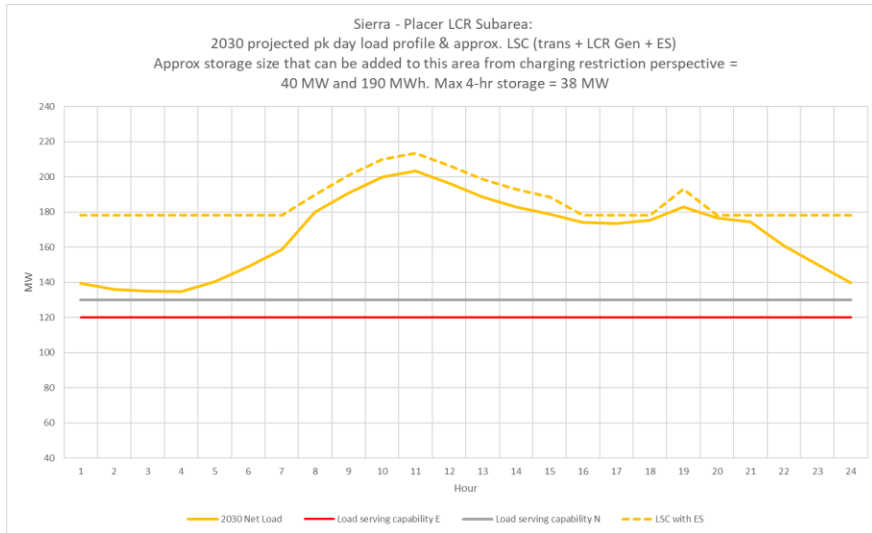
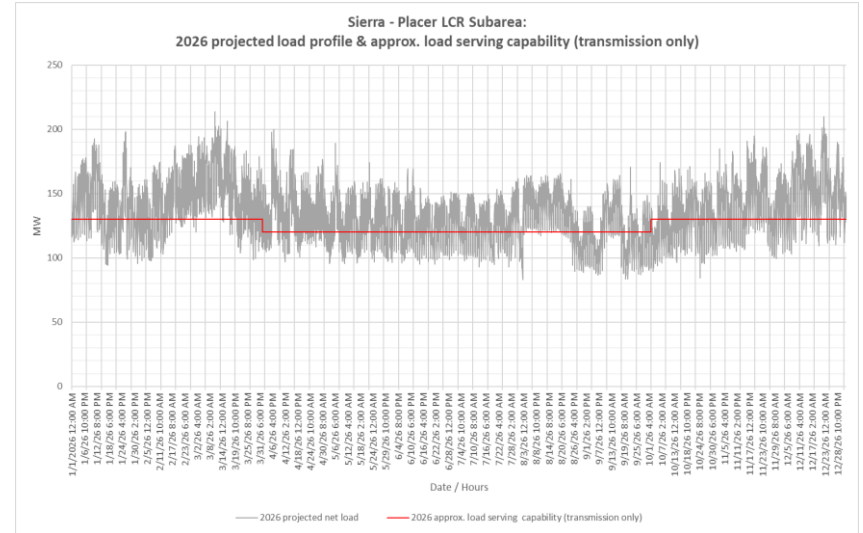
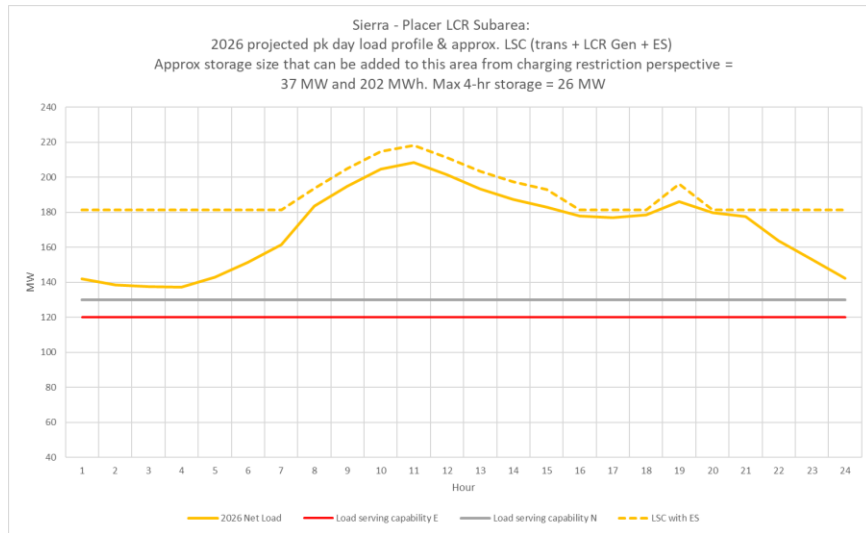
Load (MW)	2030	Generation (MW)	Aug NQC	At Peak
Gross Load	222	Market/Net Seller	34	34
AAEE	-4	Battery	0	0
Behind the meter DG	-6	MUNI/QF	28	28
Net Load	212	Solar	0	0
Transmission Losses	3	Existing 20-minute Demand Response	0	0
Pumps	0	Mothballed	0	0
Load + Losses + Pumps	215	Total	62	62

Placer Sub-Area: Requirements



Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2026	P6, P7	Drum – Higgins 115 kV line	Gold Hill – Placer #1 and #2 115 kV lines	144 (82)
2030	P6, P7	Drum – Higgins 115 kV line	Gold Hill – Placer #1 and #2 115 kV lines	157 (95)

Placer Sub-area: Load Profiles



Drum – Rio Oso Sub-area

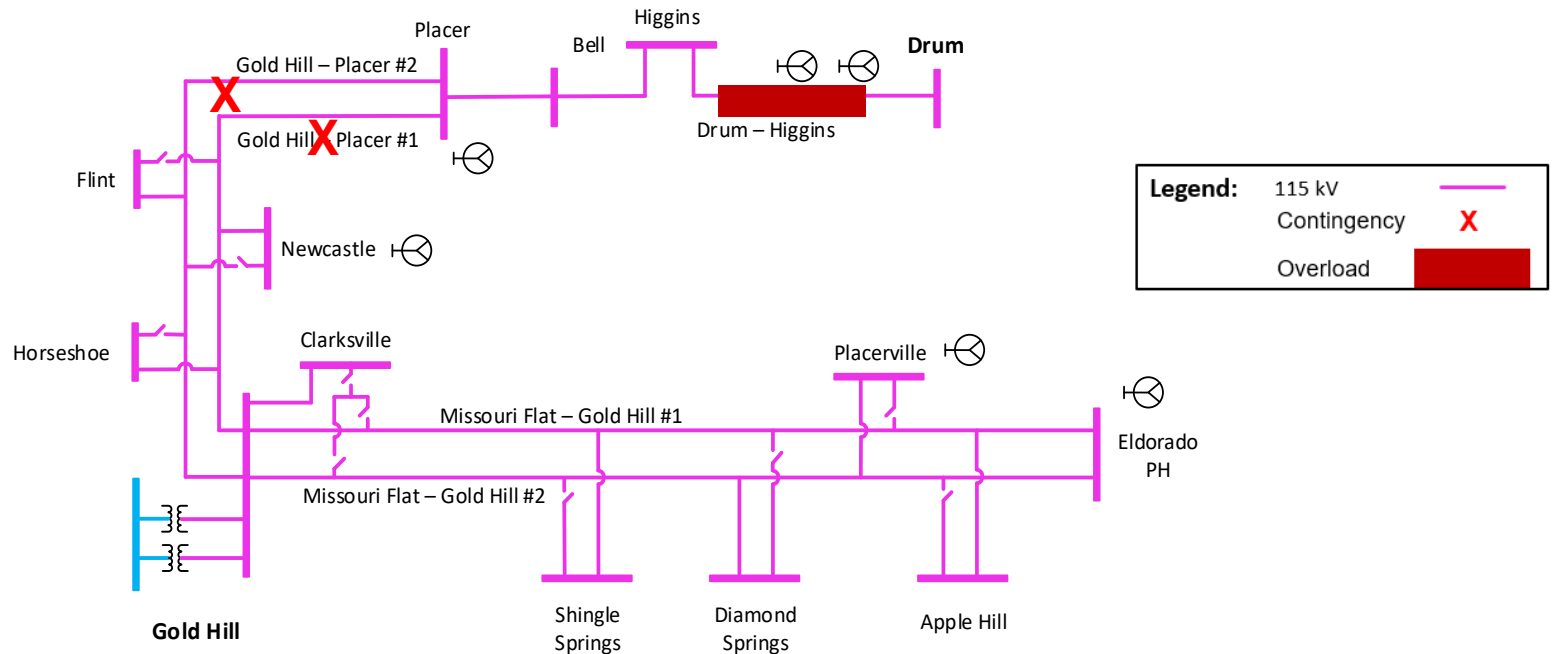
No requirement for either 2026 or 2030 due to the Rio Oso 230/115 kV Transformer Upgrade project.

If the project is delayed all resources in the Drum-Rio Oso sub-area (570 MWs) are required in order to meet the LCR needs, else the sub-area is deficient as previous years.

Gold Hill - Drum Sub-Area : Load and Resources

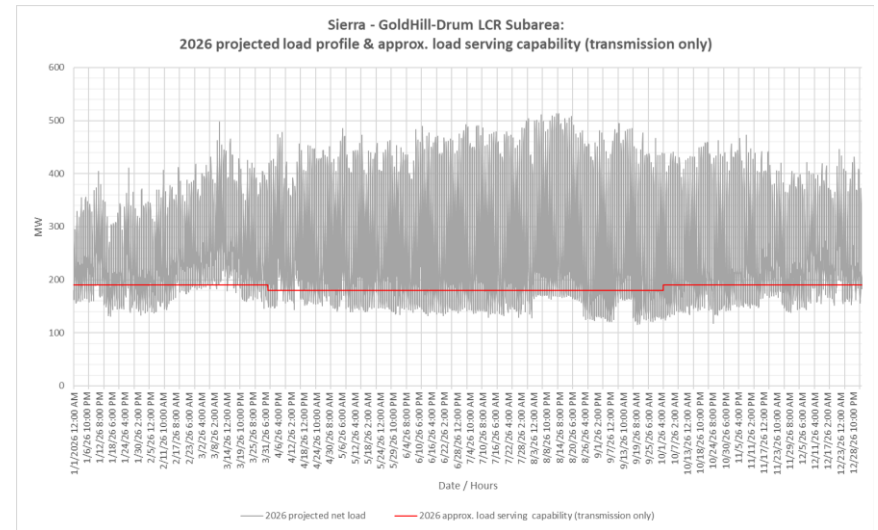
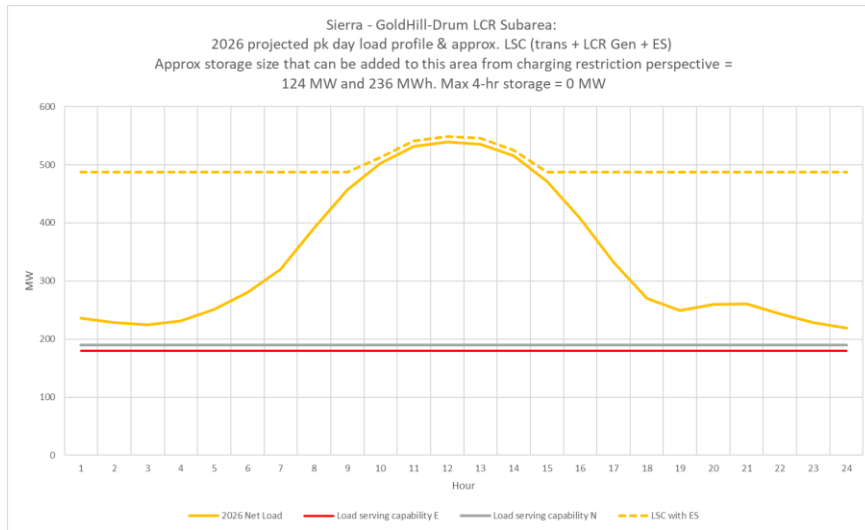
Load (MW)	2026	Generation (MW)	Aug NQC	At Peak
Gross Load	549	Market/Net Seller	49	49
AAEE	-8	Battery	0	0
Behind the meter DG	-13	MUNI/QF	28	28
Net Load	528	Solar	0	0
Transmission Losses	10	Existing 20-minute Demand Response	0	0
Pumps	0	Mothballed	0	0
Load + Losses + Pumps	538	Total	77	77

Gold Hill - Drum Sub-Area: Requirements

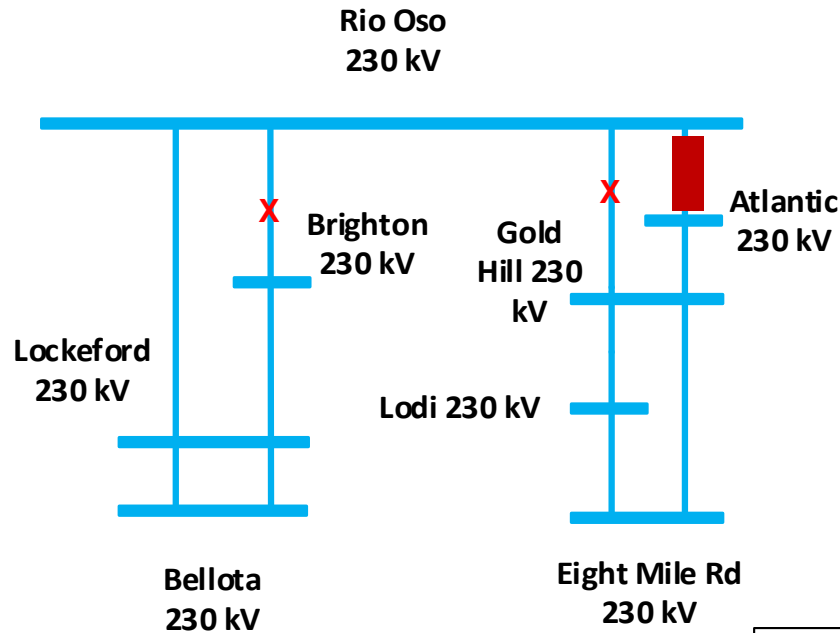





Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2026	P6	Drum – Higgins 115 kV	Gold Hill 230/115 kV #1 and Gold Hill 230/115 kV #2 Transformers	428 (351)
2030	No LCR due to implementation of Gold Hill 230/115 kV Transformer Addition Project			No requirements

Gold Hill - Drum Sub-area: Load Profiles



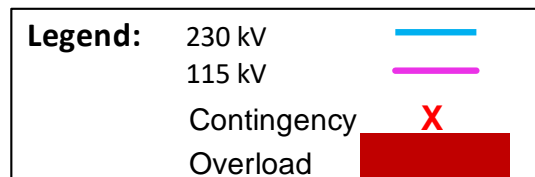
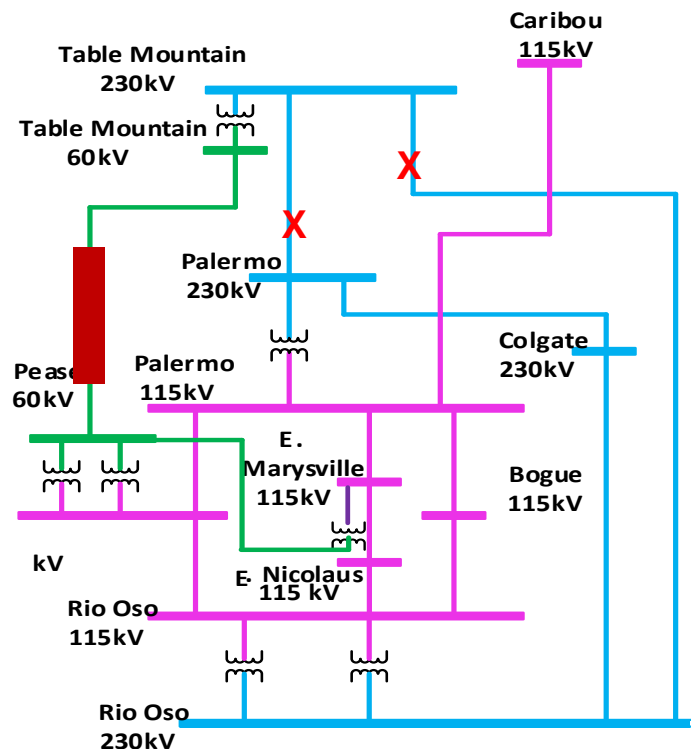
South of Rio Oso Sub-Area: Requirements



Legend:	230 kV	
	Contingency	
	Overload	

Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2026	P6	Rio Oso – Atlantic 230 kV Line	Rio Oso – Gold Hill 230 kV Rio Oso – Brighton 230 kV	502
2030	P6	Rio Oso – Atlantic 230 kV Line	Rio Oso – Gold Hill 230 kV Rio Oso – Brighton 230 kV	521

Sierra Overall: Requirements



Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2026	P6, P7	Table Mountain – Pease 60 kV Line	DCTL of Table Mtn. – Palermo and Table Mtn. Rio Oso 230 kV lines	1354
2030	P6, P7	Table Mountain – Pease 60 kV Line	DCTL of Table Mtn. – Palermo and Table Mtn. Rio Oso 230 kV lines	1911

Changes from 2025 to 2026

Sub-area	2025		2026	
	Load	LCR	Load	LCR
Pease	186	108	158	53
Placer	197	125 (61)	206	144 (82)
Gold Hill - Drum	566	461 (386)	538	428 (351)
South of Rio Oso	N/A	453	N/A	502
Sierra Overall	N/A	1532	N/A	1354
Total	2000	1918 (386)	1853	1705 (351)

The load forecast for the overall area has declined between 2025 and 2026, leading to a corresponding decrease in the overall Local Capacity Requirement (LCR).

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

Changes from 2029 to 2030

Sub-area	2029		2030	
	Load	LCR	Load	LCR
Pease	N/A	N/A	N/A	N/A
Placer	194	115 (51)	215	157 (95)
Gold Hill - Drum	N/A	N/A	N/A	N/A
South of Rio Oso	N/A	471	N/A	521
Sierra Overall	N/A	1885	N/A	1911
Total	1978	1936 (51)	1981	2006 (95)

The load forecast for the overall area has risen between 2029 and 2030, resulting in a corresponding increase in the overall Local Capacity Requirement (LCR).

- No LCR for Gold Hill-Drum sub-area, due to implementation of Gold Hill 230/115 kV Transformer Addition Project.
- No LCR for Pease sub-area, due to implementation of East Marysville 115/60 kV Project Implementation

Sierra Area Total LCR Need

Study Year	Existing Generation Capacity Needed (MW)	Deficiency (MW)	Total MW Need
2026	1354	351	1705
2030	1911	95	2006