



2022 & 2026 Draft LCR Study Results North Coast & North Bay Area

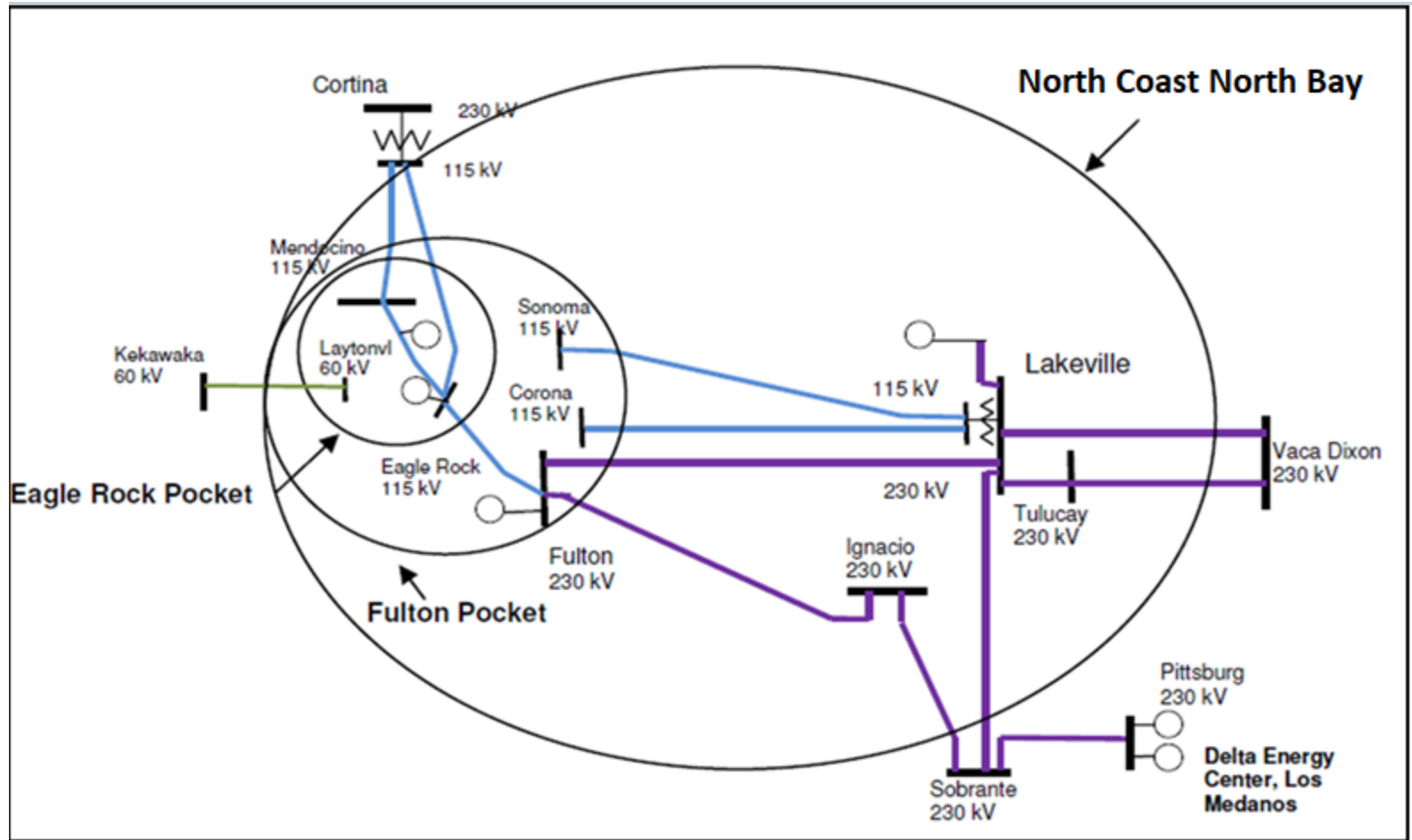
Bryan Fong

Senior Regional Transmission Engineer

Stakeholder Call

March 11, 2021

North Coast & Bay Area Transmission System



Major transmission projects

Project Name	Expected ISD
Clear Lake 60 kV System Reinforcement	2022
Ignacio Area Upgrade	2023

Resource Additions:

- No new resource additions

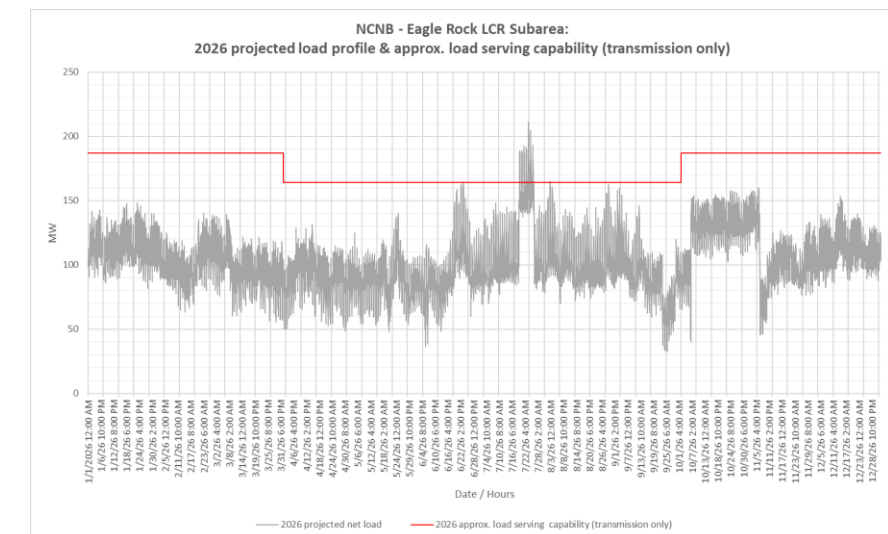
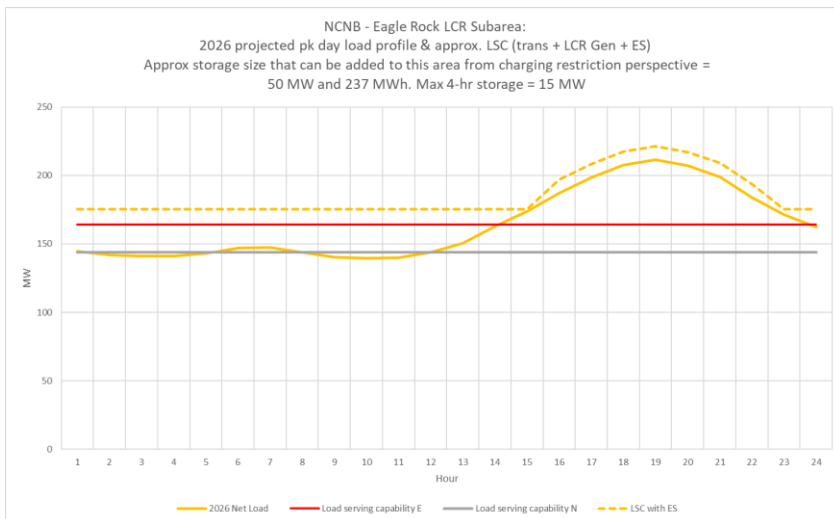
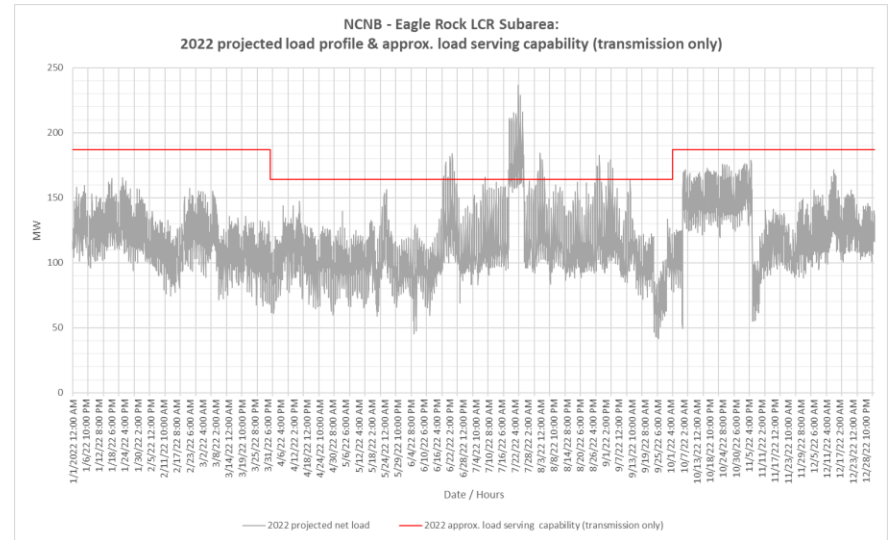
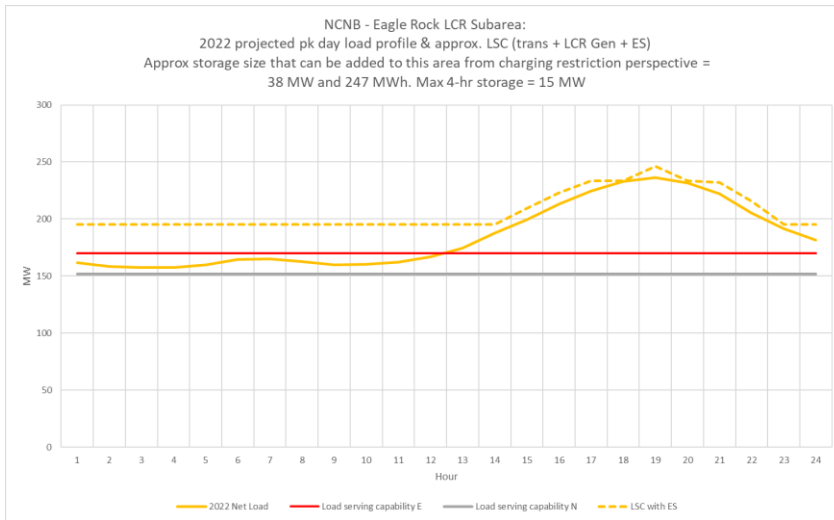
Resource Retirements:

- No new retirements

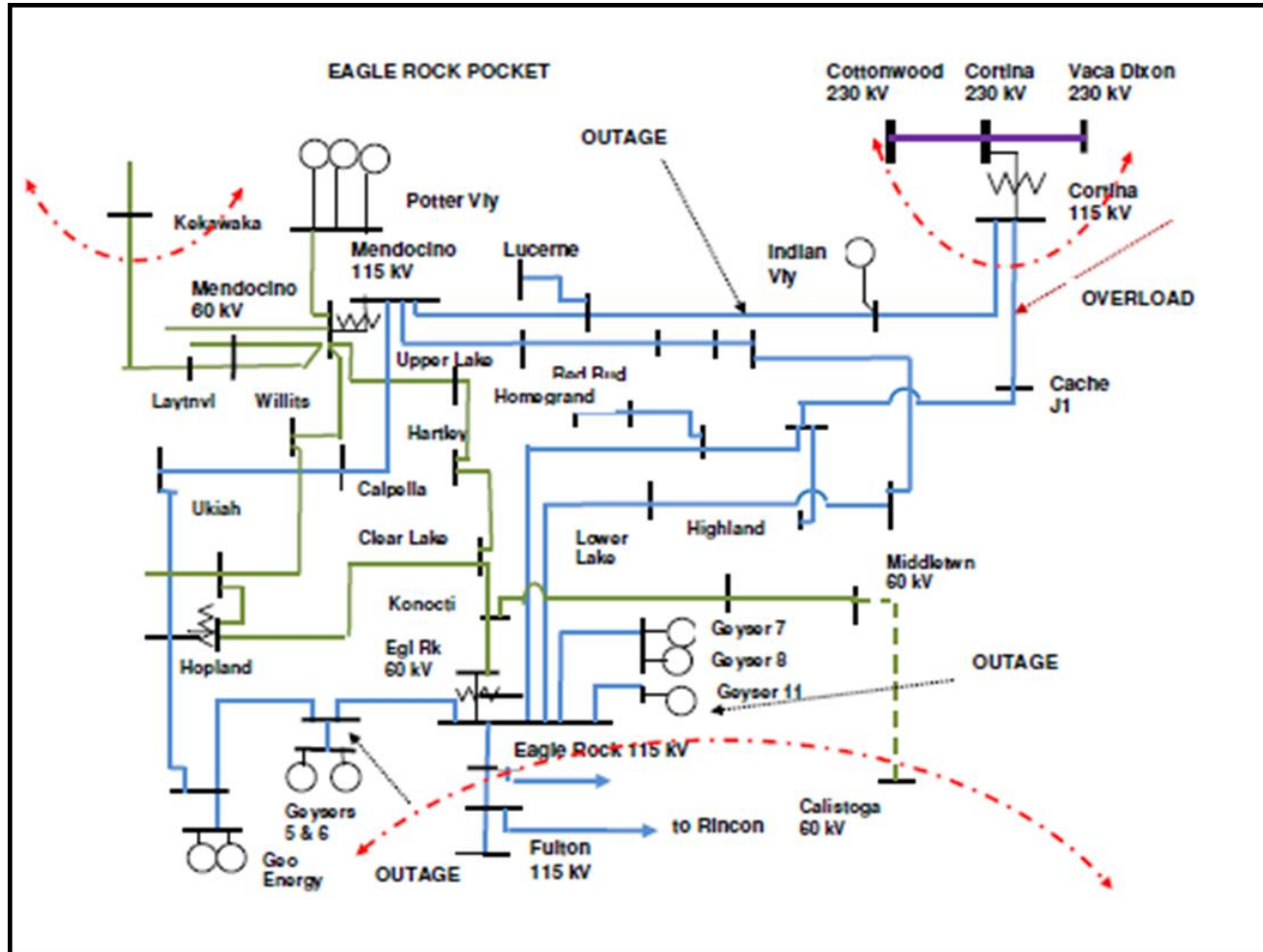
Eagle Rock Sub-area: Load and Resources

Load (MW)	2022	2026	Generation (MW)	2021	2025
Gross Load	253	226	Market	248	248
AAEE	-3	-2	Solar	0	0
Behind the meter DG	0	0	Muni	2	2
Net Load	250	224	QF	0	0
Transmission Losses	14	12	Future preferred resource and energy storage	0	0
Pumps	0	0	Total Qualifying Capacity	250	250
Load + Losses + Pumps	264	236			

Eagle Sub-area: Load Profiles



Eagle Rock Sub-Area : One-line diagram



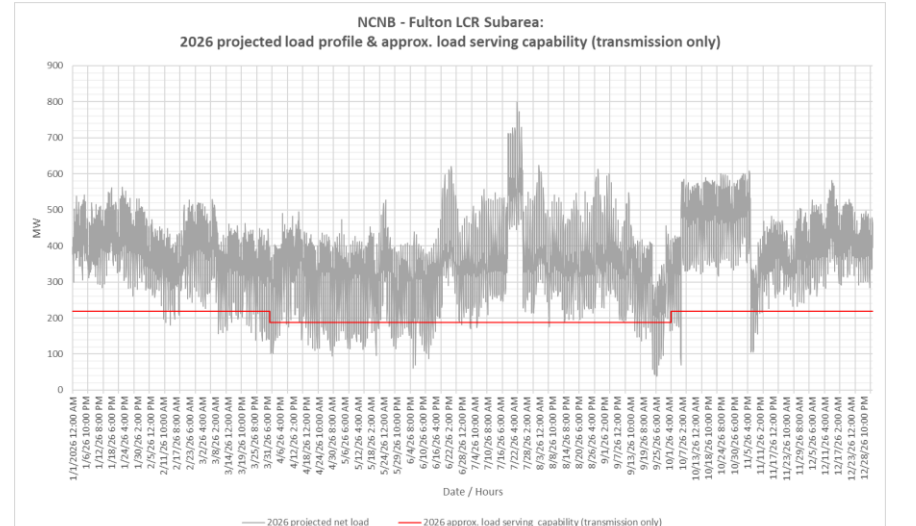
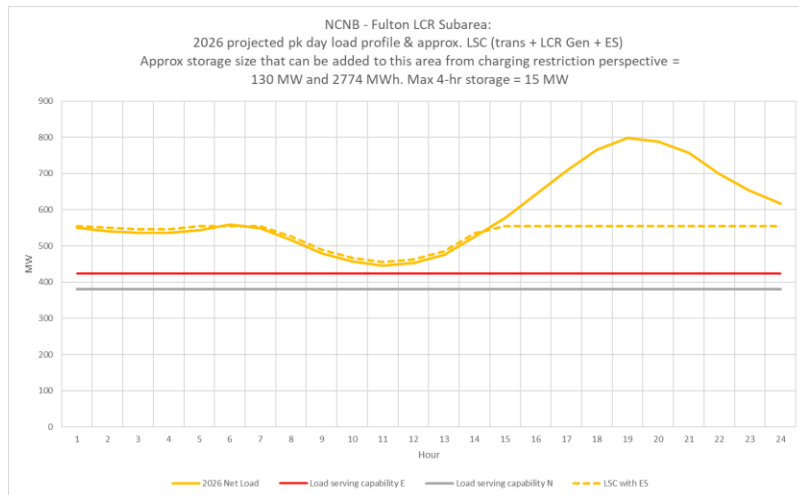
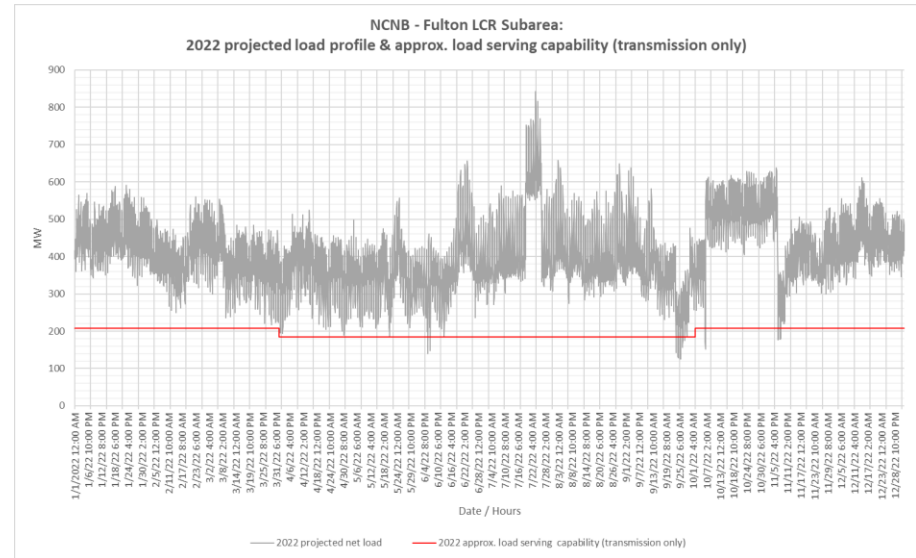
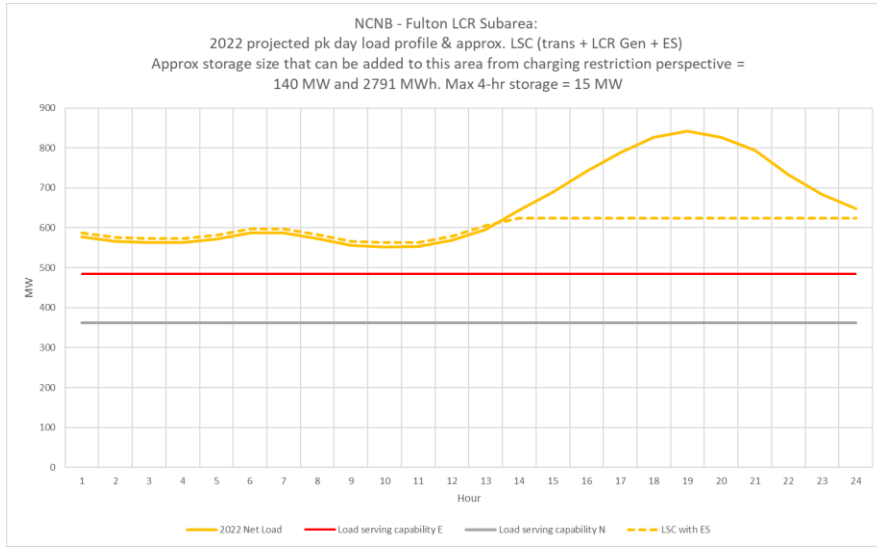
Eagle Rock Sub-Area : Requirements

Year	Limit	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2022	First Limit	P3	Thermal overload on Eagle Rock-Cortina 115 kV line	Cortina-Mendocino 115 kV line with Geyser #11 unit out of service	213
2026	First Limit	P3	Thermal overload on Eagle Rock-Cortina 115 kV line	Cortina-Mendocino 115 kV line with Geyser #11 unit out of service	248

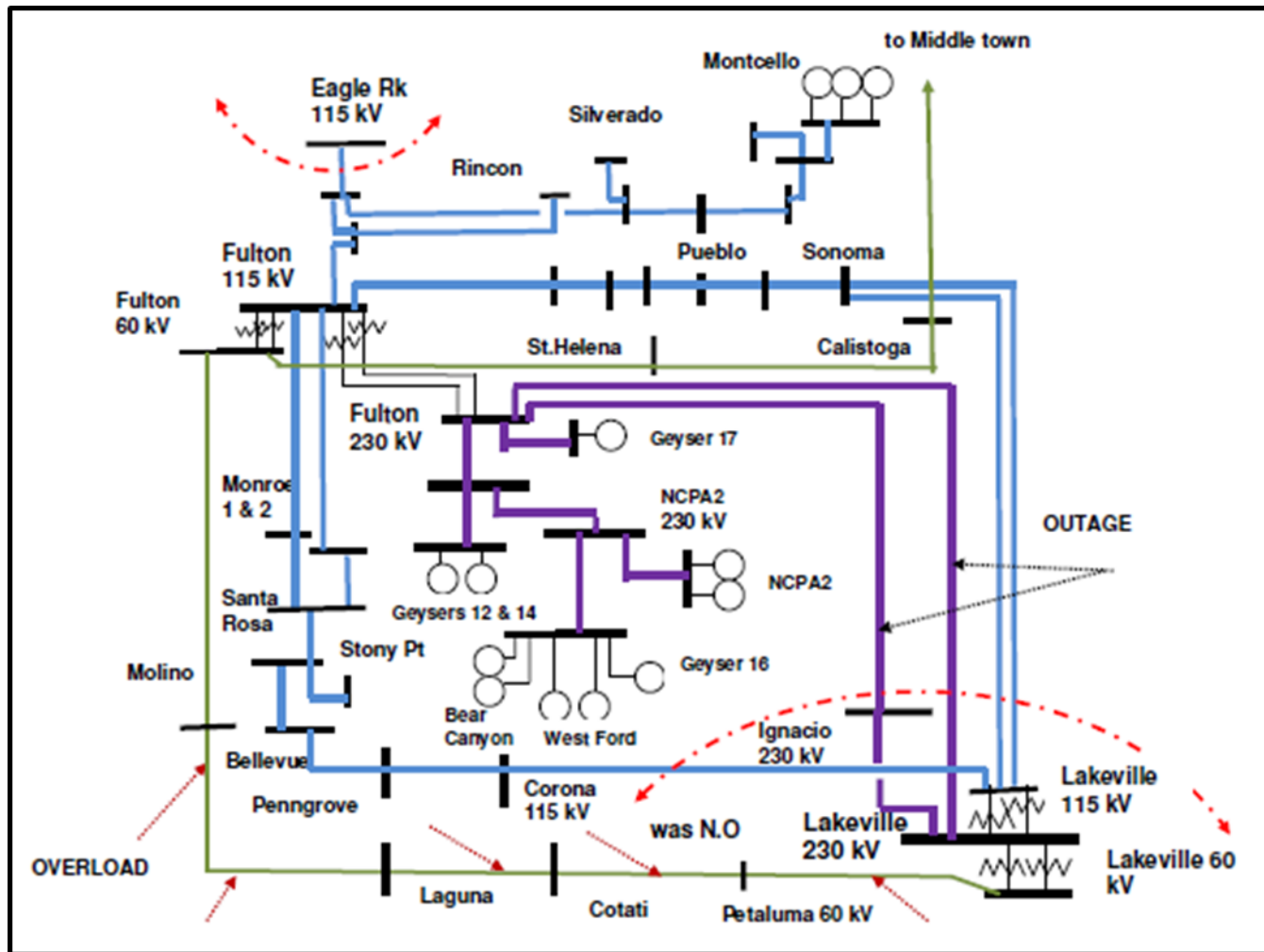
Fulton Sub-area: Load and Resources

Load (MW)	2022	2026	Generation (MW)	2021	2025
Gross Load	895	851	Market	469	469
AAEE	-11	-7	Wind	0	0
Behind the meter DG	0	0	Muni	54	54
Net Load	884	844	QF	5	5
Transmission Losses	25	22	Future preferred resource and energy storage	0	0
Pumps	0	0	Total Qualifying Capacity	528	528
Load + Losses + Pumps	909	866			

Fulton Sub-area: Load Profiles



Fulton Sub-Area : One-line diagram



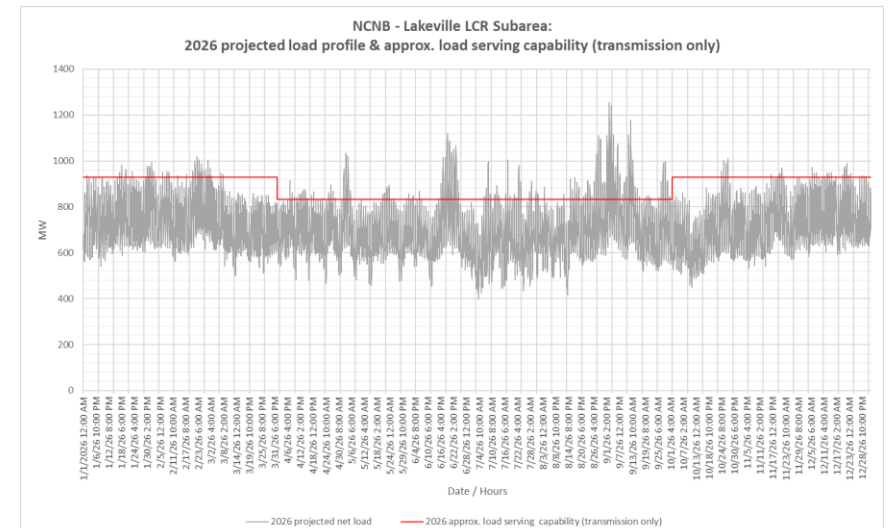
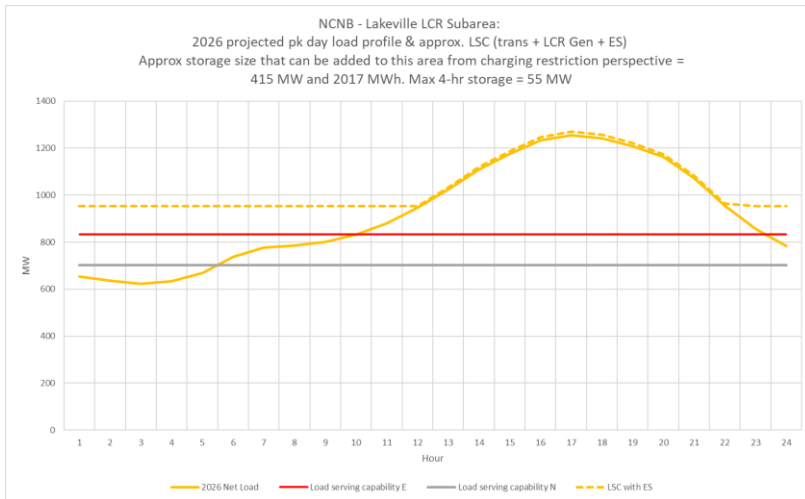
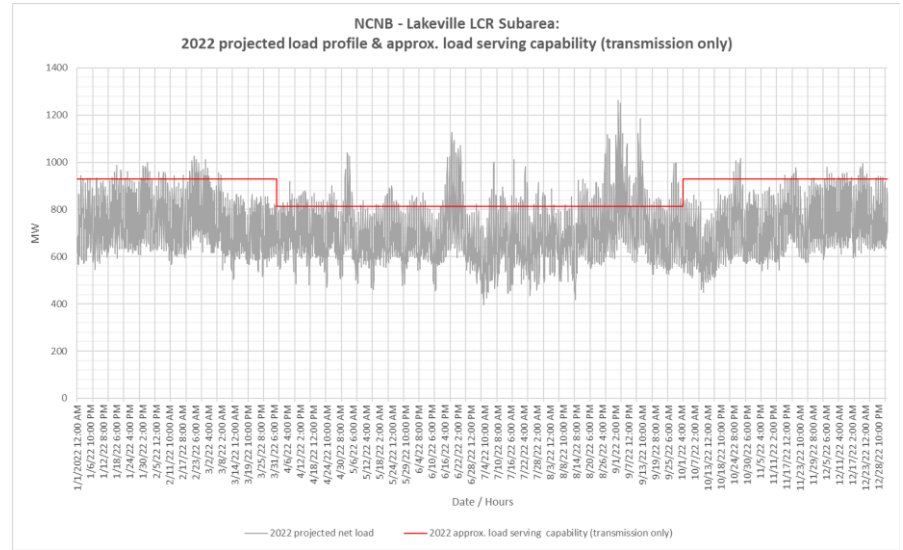
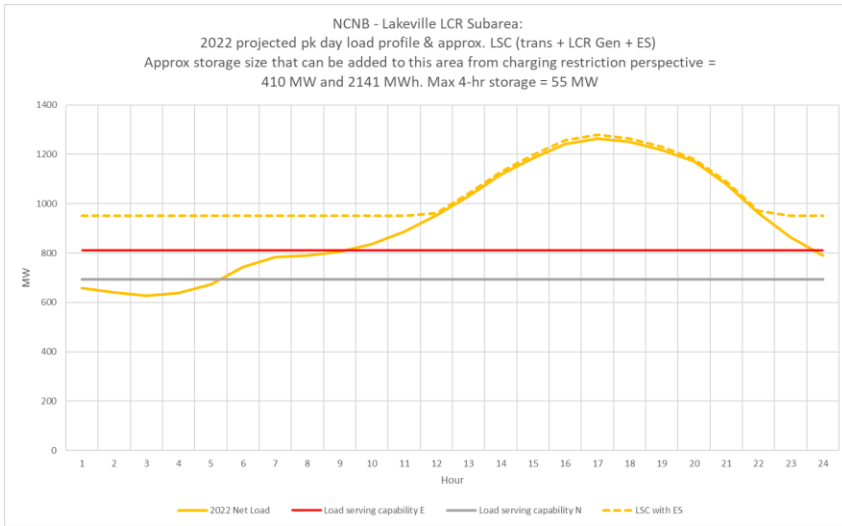
Fulton Sub-Area : Requirements

Year	Limit	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2022	First Limit	P6	Thermal overload on Sonoma-Pueblo 115kV Line	Fulton-Lakeville and Fulton-Ignacio 230 kV lines	243
2026	First Limit	P6	Thermal overload on Pengrove-Corona 115kV Line	Fulton-Lakeville and Fulton-Ignacio 230 kV lines	316

North Coast & North Bay Area Overall: Load and Resources

Load (MW)	2022	2026	Generation (MW)	2021	2025
Gross Load	1485	1461	Market	723	723
AAEE	-19	-12	Wind	0	0
Behind the meter DG	0	0	Muni	114	114
Net Load	1466	1449	QF	5	5
Transmission Losses	43	40	Future preferred resource and energy storage	0	0
Pumps	0	0	Total Qualifying Capacity	842	842
Load + Losses + Pumps	1509	1489			

NCNB: Load Profiles



NCNB Area : Requirement

Year	#	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2022	First Limit	P3	Vaca Dixon-Lakeville 230 kV line	Vaca Dixon-Tulucay 230 kV line with Delta Energy Center power plant out of service	868
2026	First Limit	P3	Vaca Dixon-Lakeville 230 kV line	Vaca Dixon-Tulucay 230 kV line with Delta Energy Center power plant out of service	995

North Coast & North Bay Area Total Generation & LCR Need

Generation	Market (MW)	(MW)	Muni (MW)	QF (MW)	Total MW
2022	723	0	114	5	842
2026	723	0	114	5	842

Year	LCR Need	Existing Generation Capacity Needed (MW)	Deficiency (MW)	Total MW Need
2022	P3	842	26	868
2026	P3	842	153	995

Changes Compared to Previous LCR Requirements

Subarea	2021		2025		2022		2026	
	Load	LCR	Load	LCR	Load	LCR	Load	LCR
Eagle Rock	232	184	235	188	264	213	236	248
Fulton	866	340	872	272	909	243	866	316
Overall	1456	843	1481	837	1509	868 (26)	1489	995 (153)

The increase in 2022 LCR need is mostly due to load forecast increase.

The increase in 2026 LCR need is mostly due to change in limiting contingency and limiting element.