



2024 & 2028 Final LCR Study Results North Coast & North Bay Area

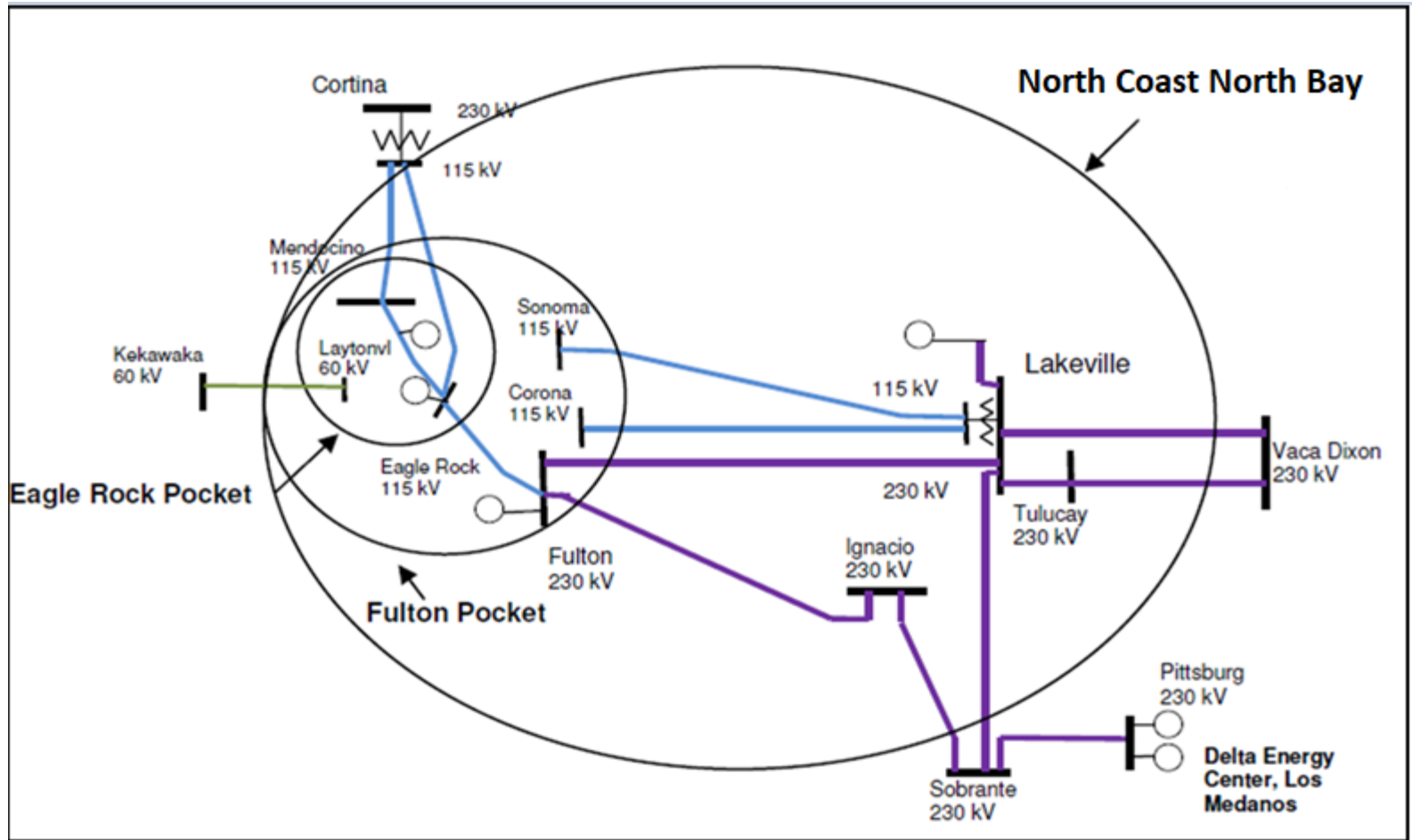
Bryan Fong

Senior Regional Transmission Engineer

Stakeholder Call

April 12, 2023

North Coast & Bay Area Transmission System



Major transmission projects

Project Name	Expected ISD
Lakeville 60 kV Area Reinforcement	Dec 2027
Clear Lake 60 kV System Reinforcement	Dec 2027
Vaca Dixon-Lakeville 230 kV Corridor Series Compensation	Oct 2025
Tulucay-Napa #2 60 kV Line Capacity Increase	Dec 2026

Resource Additions:

- No new resource additions

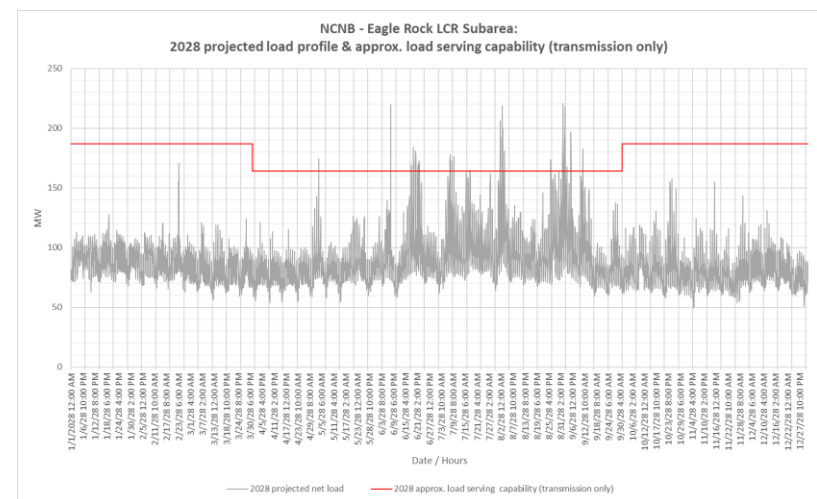
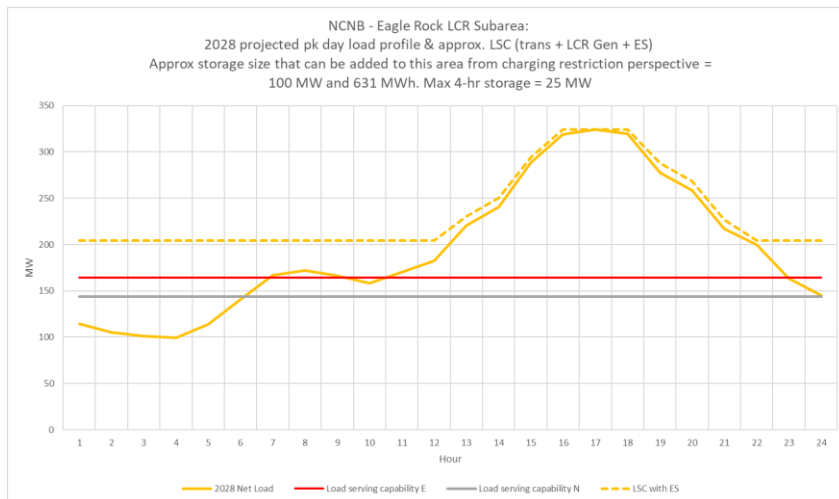
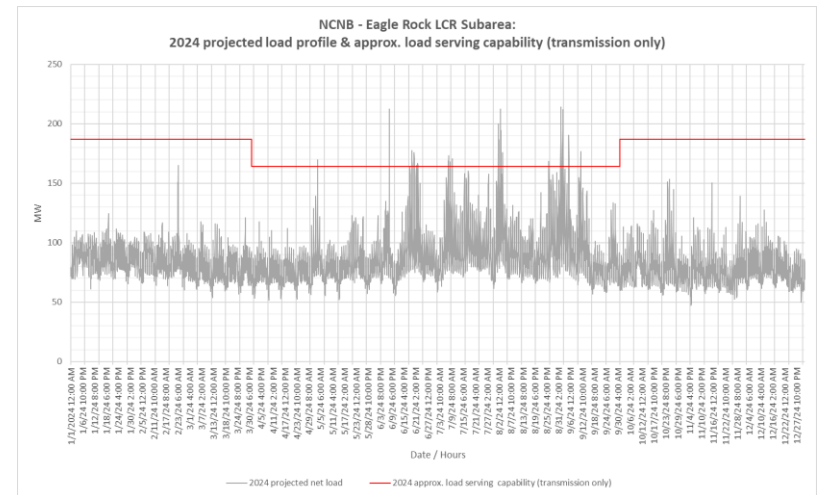
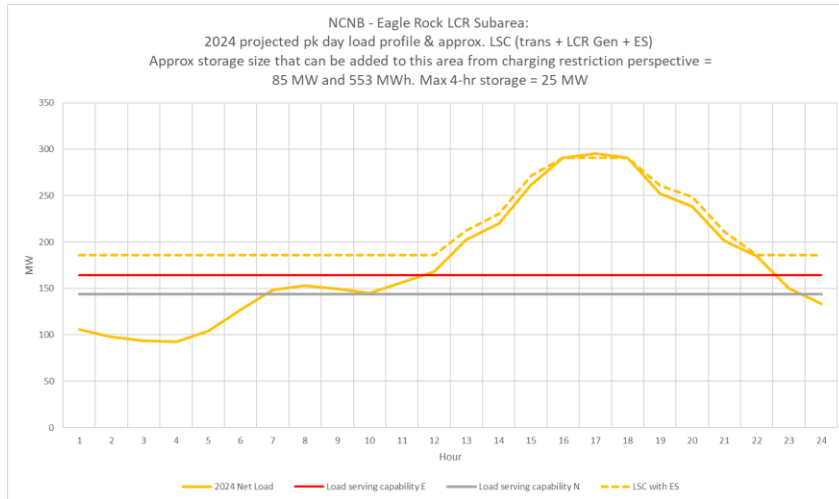
Resource Retirements:

- No new retirements

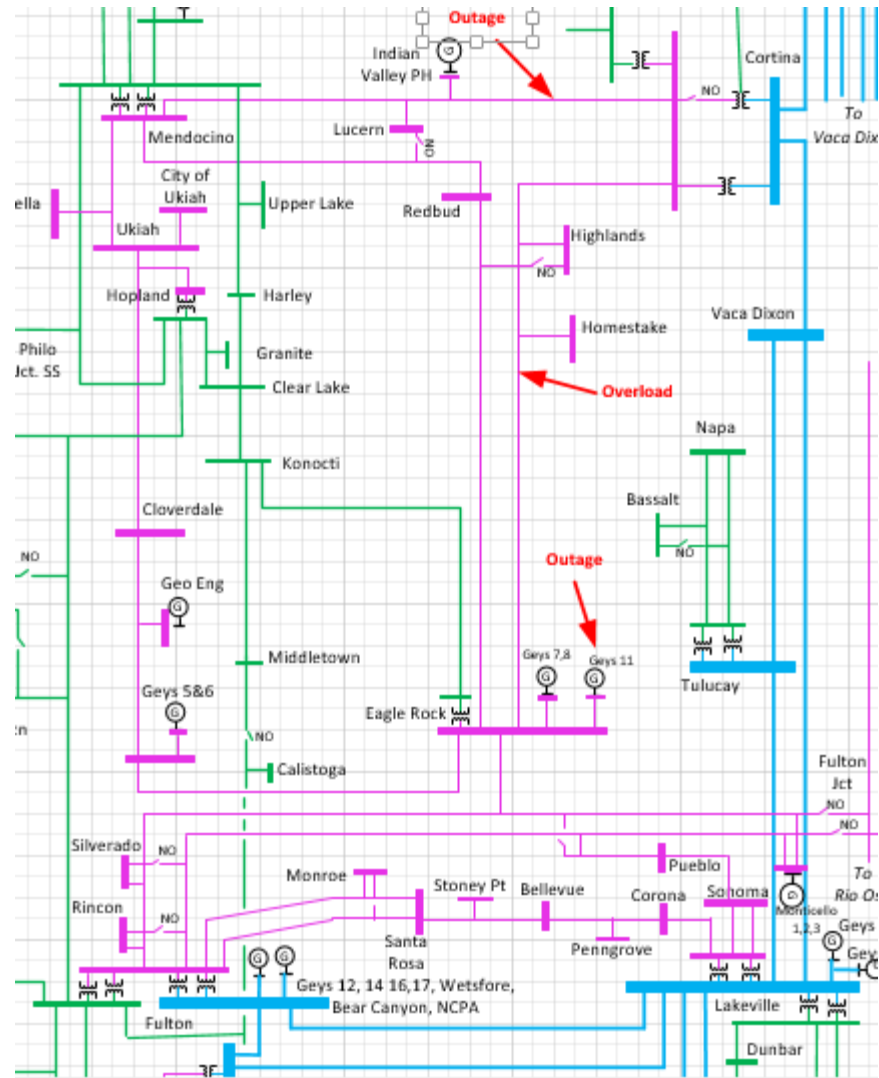
Eagle Rock Sub-area: Load and Resources

Load (MW)	2024	2028	Generation (MW)	2024	2028
Gross Load	247	255	Market/Net Seller	274	274
AAEE	-1	-2	Battery	0	0
Behind the meter DG	-3	0	Muni/QF	2	2
Net Load	243	253	Solar	0	0
Transmission Losses	12	12	Existing 20-minute Demand Response	0	0
Pumps	0	0	Mothballed	0	0
Load + Losses + Pumps	255	265	Total Qualifying Capacity	276	276

Eagle Sub-area: Load Profiles



Eagle Rock Sub-Area: One-line diagram



ISO Public

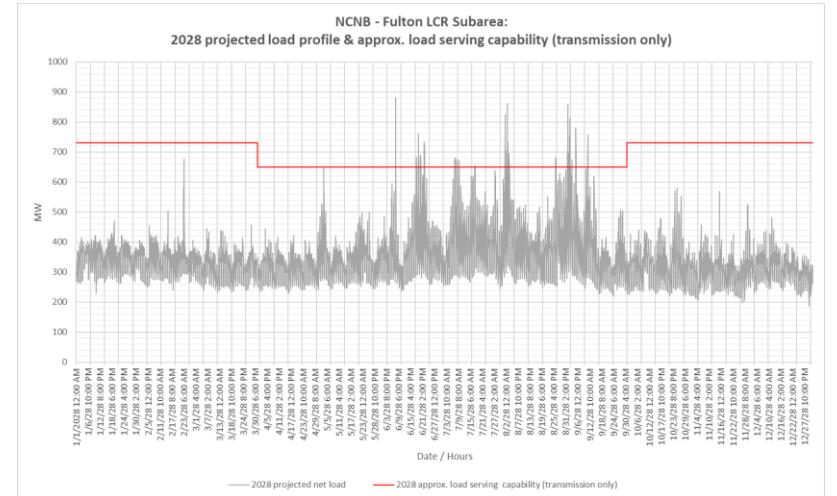
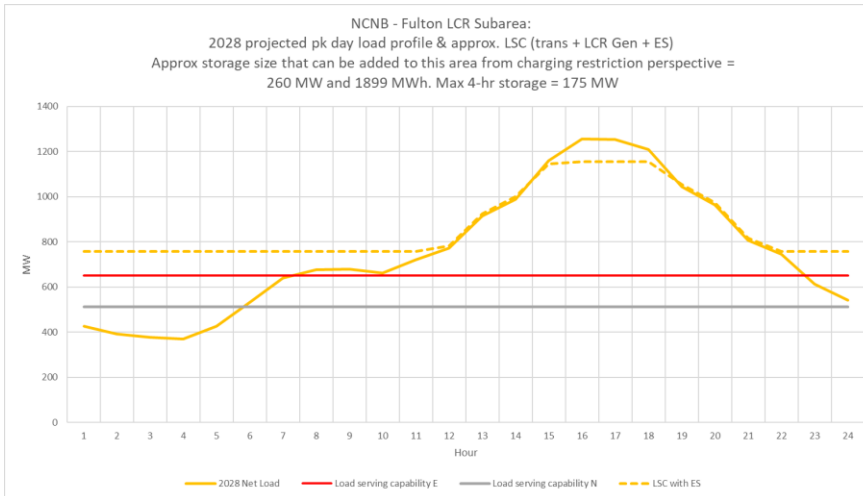
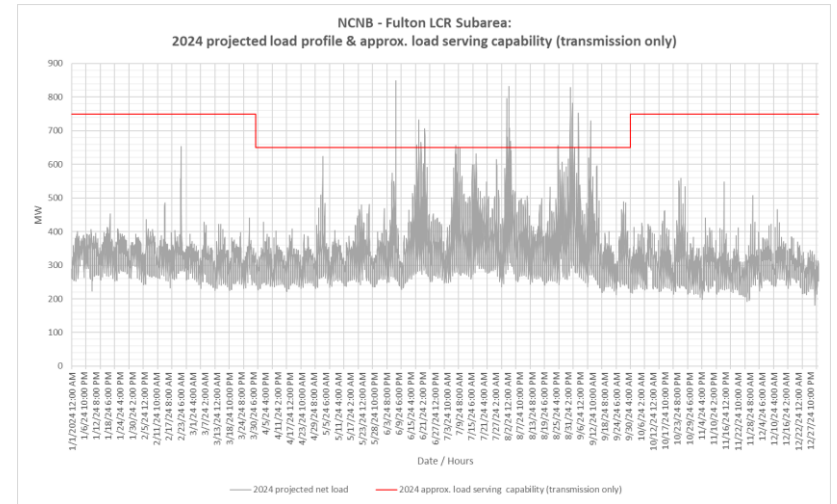
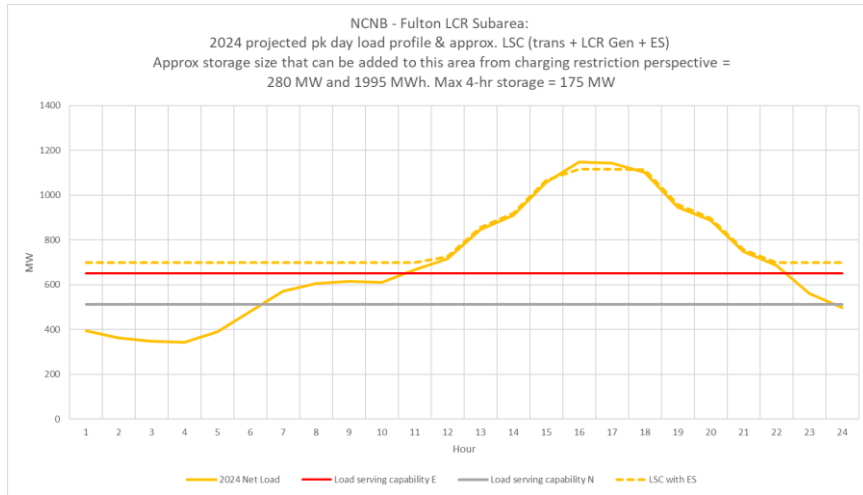
Eagle Rock Sub-Area: Requirements

Year	Limit	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2024	First Limit	P3	Thermal overload on Eagle Rock-Cortina 115 kV line	Cortina-Mendocino 115 kV line with Geyser #11 unit out of service	195
2028	First Limit	P3	Thermal overload on Eagle Rock-Cortina 115 kV line	Cortina-Mendocino 115 kV line with Geyser #11 unit out of service	177

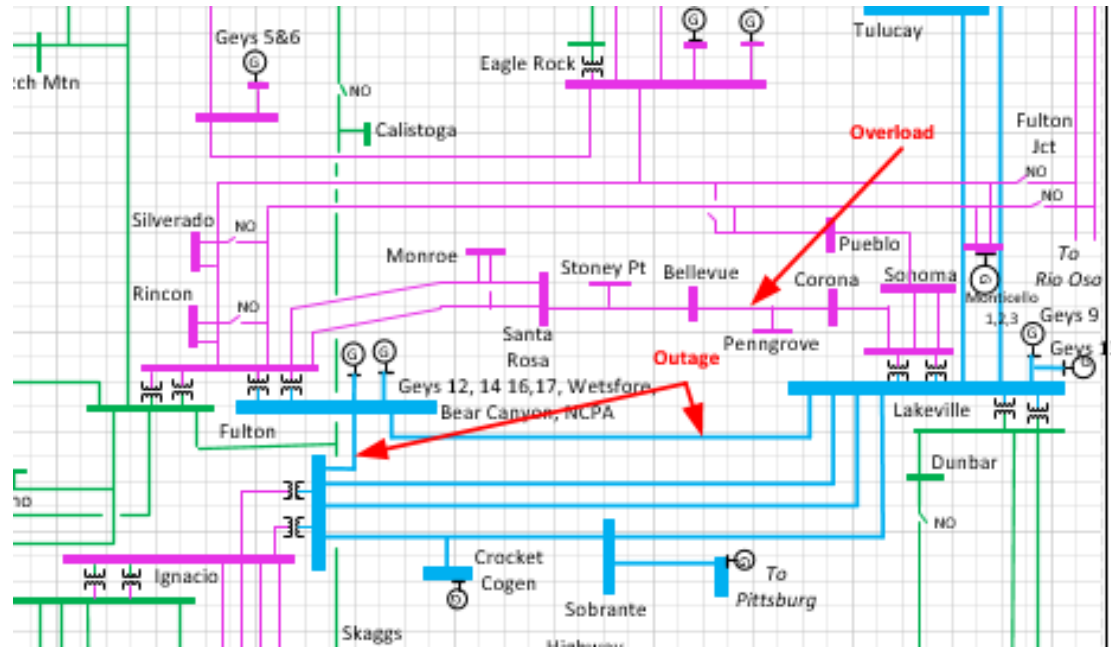
Fulton Sub-area: Load and Resources

Load (MW)	2024	2028	Generation (MW)	2024	2028
Gross Load	882	915	Market/Net Seller	539	439
AAEE	-5	-5	Battery	0	0
Behind the meter DG	-13	0	Muni/QF	58	58
Net Load	864	910	Solar	0	0
Transmission Losses	26	26	Existing 20-minute Demand Response	0	0
Pumps	0	0	Mothballed	0	0
Load + Losses + Pumps	890	936	Total Qualifying Capacity	597	597

Fulton Sub-area: Load Profiles



Fulton Sub-Area: One-line diagram



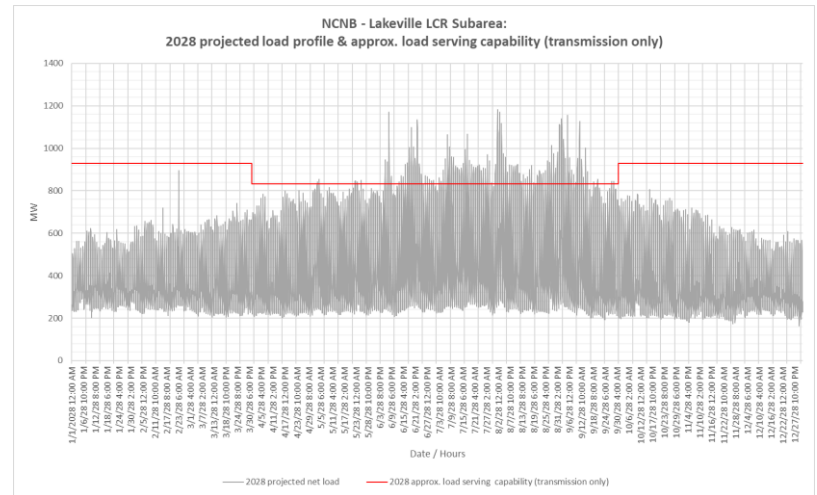
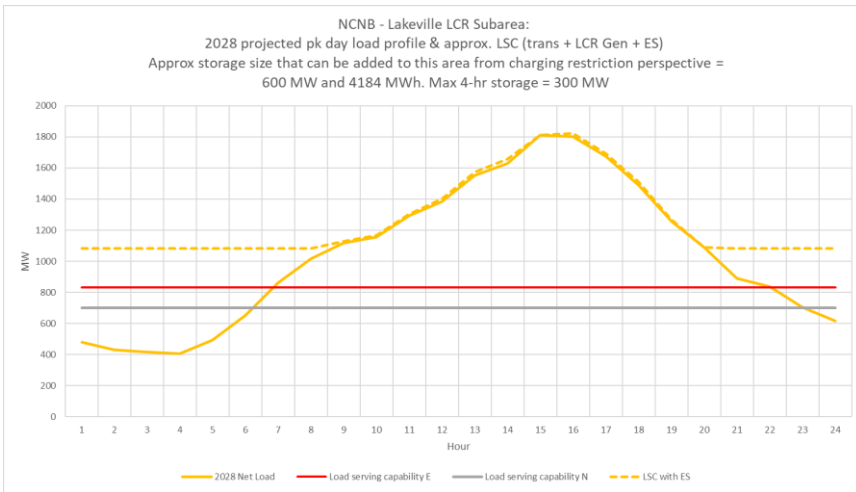
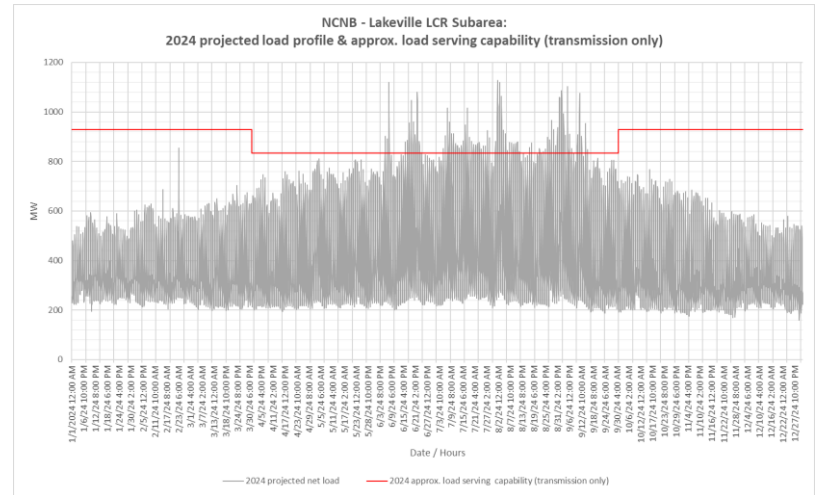
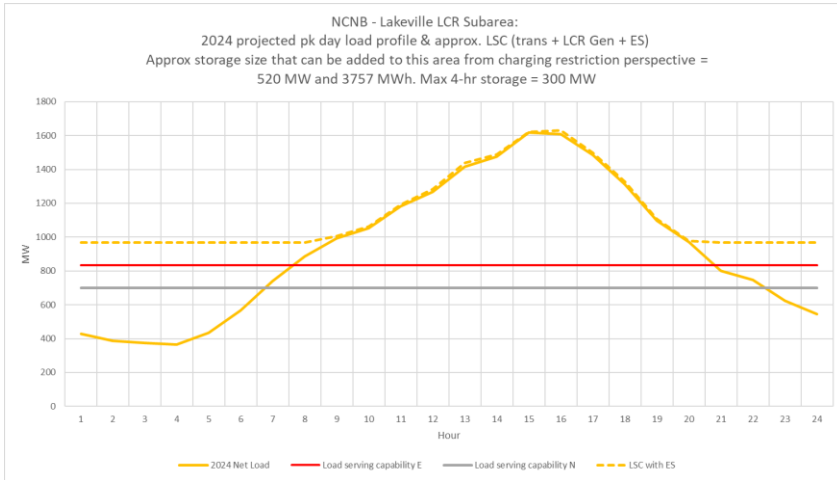
Fulton Sub-Area: Requirements

Year	Limit	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2024	First Limit	P6	Thermal overload on Corona-Penngrove 115kV Line	Fulton-Lakeville and Fulton-Ignacio 230 kV lines	304
2028	First Limit	P6	Thermal overload on Corona-Penngrove 115kV Line	Fulton-Lakeville and Fulton-Ignacio 230 kV lines	330

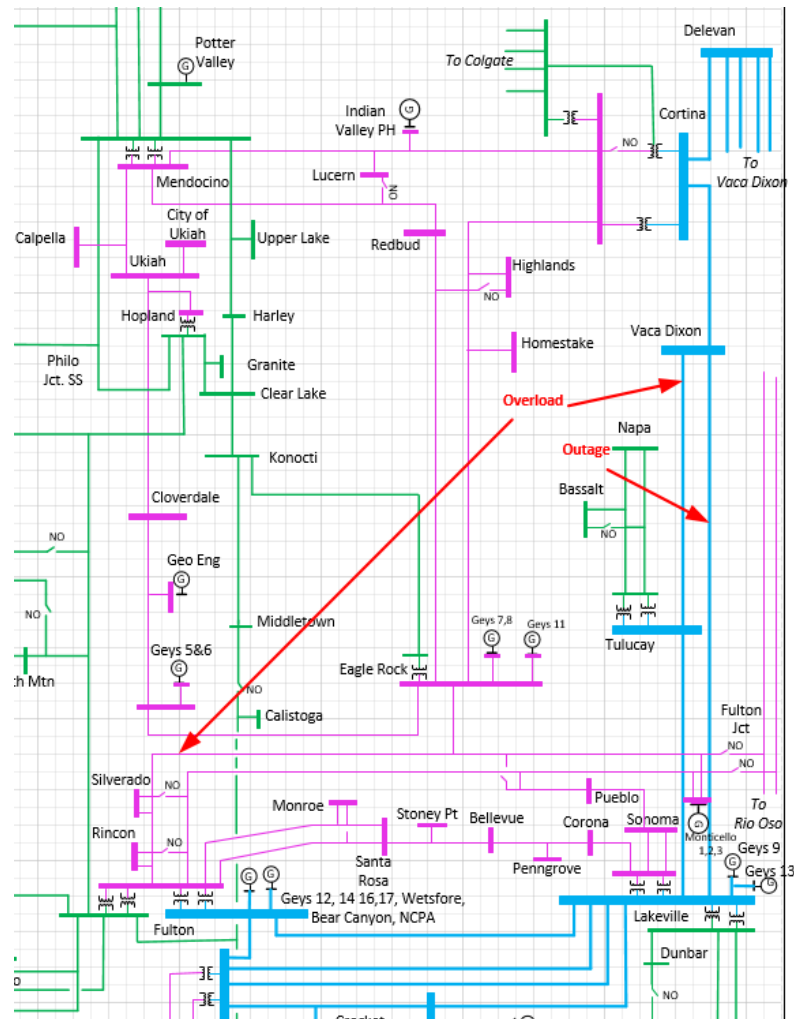
North Coast & North Bay Area Overall: Load and Resources

Load (MW)	2024	2028	Generation (MW)	2024	2028
Gross Load	1485	1542	Market/Net Seller	840	840
AAEE	-8	-11	Battery	0	0
Behind the meter DG	-23	0	Muni/QF	137	137
Net Load	1454	1531	Solar	0	0
Transmission Losses	41	41	Existing 20-minute Demand Response	12	12
Pumps	0	0	Mothballed	0	0
Load + Losses + Pumps	1495	1572	Total Qualifying Capacity	989	989

NCNB: Load Profiles



NCNB Area: One-line diagram



NCNB Area: Requirement

Year	Limit	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2024	First	P3	Vaca Dixon-Tulucay 230 kV line	Vaca Dixon-Lakeville 230 kV line with Delta Energy Center power plant out of service	983
2028	First	P3	Eagle Rock-Fulton- Silverado 115 kV line	Vaca Dixon-Lakeville 230 kV line with Delta Energy Center power plant out of service	891

North Coast & North Bay Area Total Generation & LCR Need

Generation	Market/Net Seller (MW)	Battery (MW)	Muni/QF (MW)	Solar (MW)	DR (MW)	Total MW
2024	840	0	137	0	12	989
2028	840	0	137	0	12	989

Year	LCR Need	Generation Capacity Needed (MW)	Deficiency (MW)	Total MW Need
2024	P3	983	0	983
2028	P3	891	0	891

Changes Compared to Previous LCR Requirements

Sub-area	2023		2027		2024		2028	
	Load	LCR	Load	LCR	Load	LCR	Load	LCR
Eagle Rock	260	246	268	258	255	195	265	177
Fulton	906	337	924	378	890	304	936	330
Overall	1494	857	1521	1025 (114)	1495	983	1572	891

The increase in 2024 Overall LCR need is mostly due to a different load pattern in the NCNB area.

The decrease in 2028 Overall LCR need is mostly due to a different limiting facility.