



2025 & 2029 Final LCR Study Results Humboldt Area

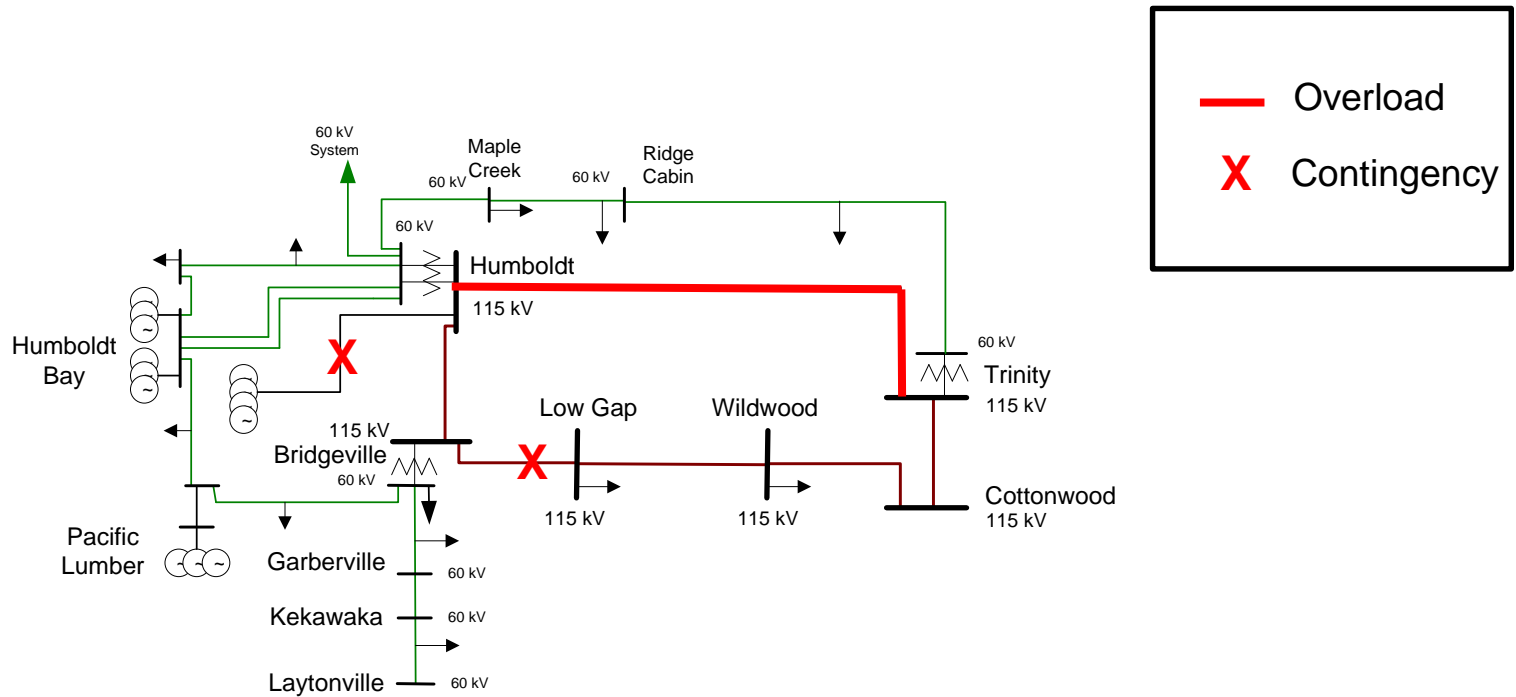
Preethi Rondla

Lead Engineer, Regional Transmission – North

Stakeholder Call

April 11, 2024

Humboldt Area Transmission System



Humboldt Load and Resources

Load (MW)	2025	2029	Generation (MW)	2025	2029
Gross Load	204	214	Market/Net Seller	175	175
AAEE	-1	-2	Battery	0	0
Behind the meter DG	0	0	Muni/QF	0	0
Net Load	203	212	Solar	0	0
Transmission Losses	11	11	Existing 20-minute Demand Response	0	0
Pumps	0	0	Mothballed	0	0
Load + Losses + Pumps	214	223	Total Qualifying Capacity	175	175

Topology changes

Transmission Additions:

- Maple Creek Reactive Support (re-scoped to Willow Creek 60 kV Substation) (2029 only)

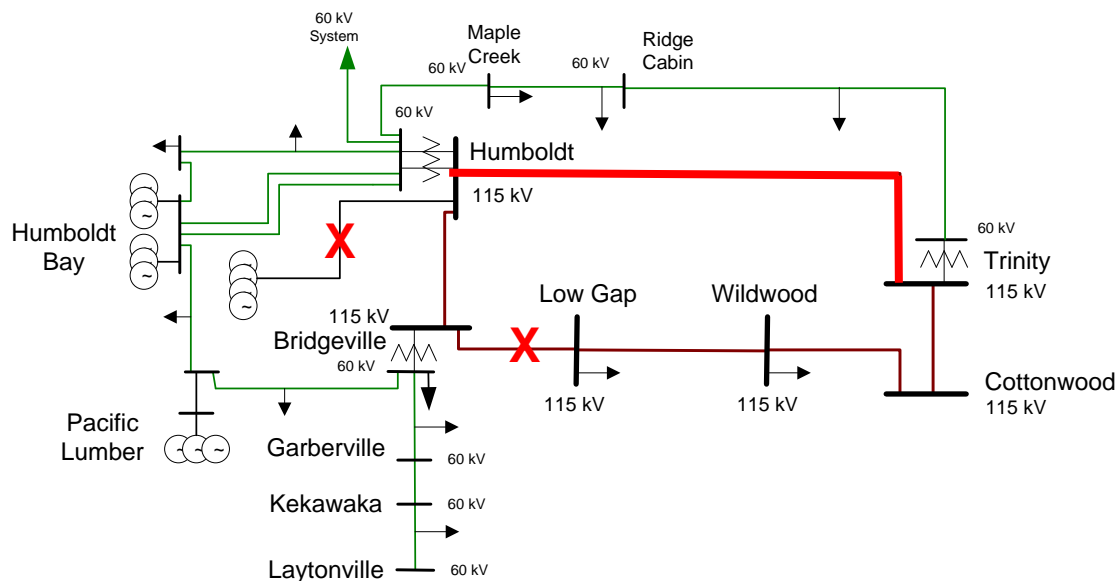
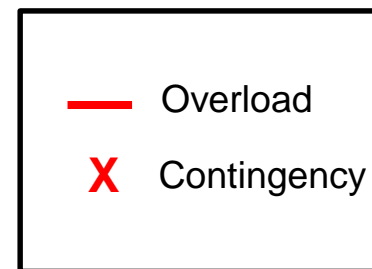
Resource Additions:

- No new resource additions

Resource Retirements:

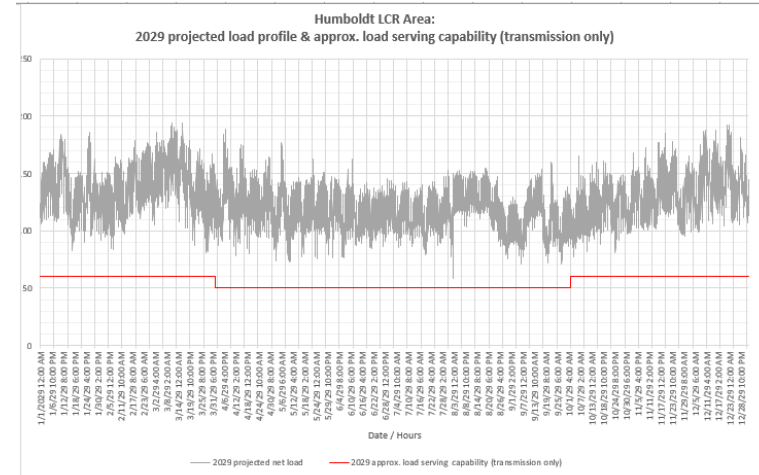
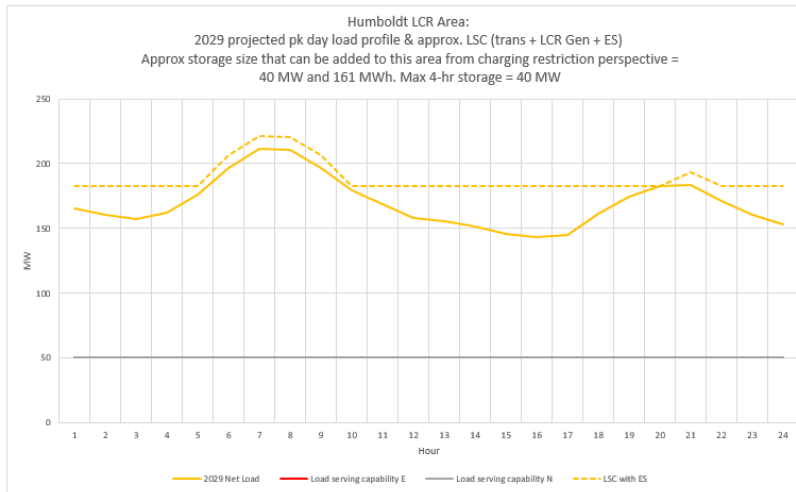
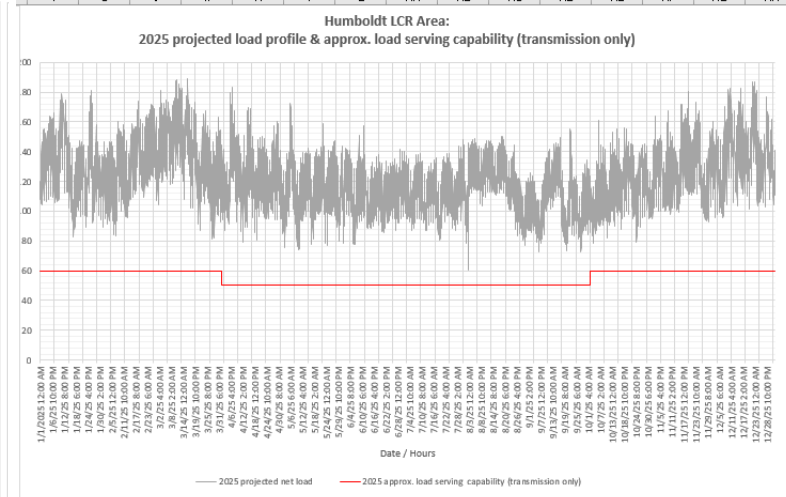
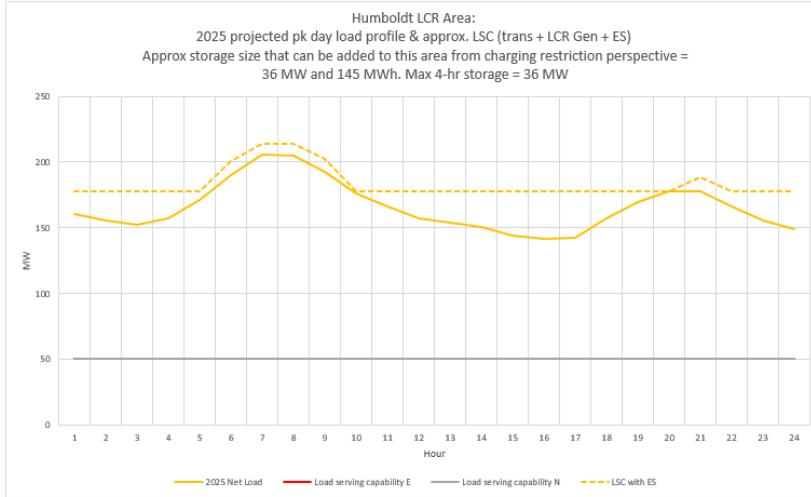
- No new retirements

Humboldt Area: Requirements



Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2025	P6	Thermal overload on Humboldt -Trinity 115 kV line	Cottonwood – Bridgeville 115 kV line + Humboldt – Humboldt Bay 115kV line	164
2029	P6	Thermal overload of Humboldt -Trinity 115 kV	Cottonwood – Bridgeville 115 kV line + Humboldt – Humboldt Bay 115kV line	173

Humboldt Area: Load Profiles



Changes between years

Subarea	2024		2025	
	Load	LCR	Load	LCR
Humboldt	172	133	217	164

Subarea	2028		2029	
	Load	LCR	Load	LCR
Humboldt	182	148	225	173

The increase in 2025 & 2029 LCR needs are mostly due to load forecast increase.

Humboldt Area: Requirements

Limit	Category	Limiting Facility	Contingency	2025 LCR (MW)	2029 LCR (MW)
2025 & 2029	P6	Thermal overload on Humboldt -Trinity 115 kV line	Cottonwood – Bridgeville 115 kV line + Humboldt – Humboldt Bay 115kV line	164	173

Study Year	Existing Generation Capacity Needed (MW)	NQC Deficiency (MW)	Total MW Need
2025	164	0	164
2029	173	0	173