



# 2020 & 2024 Final LCR Study Results Humboldt Area

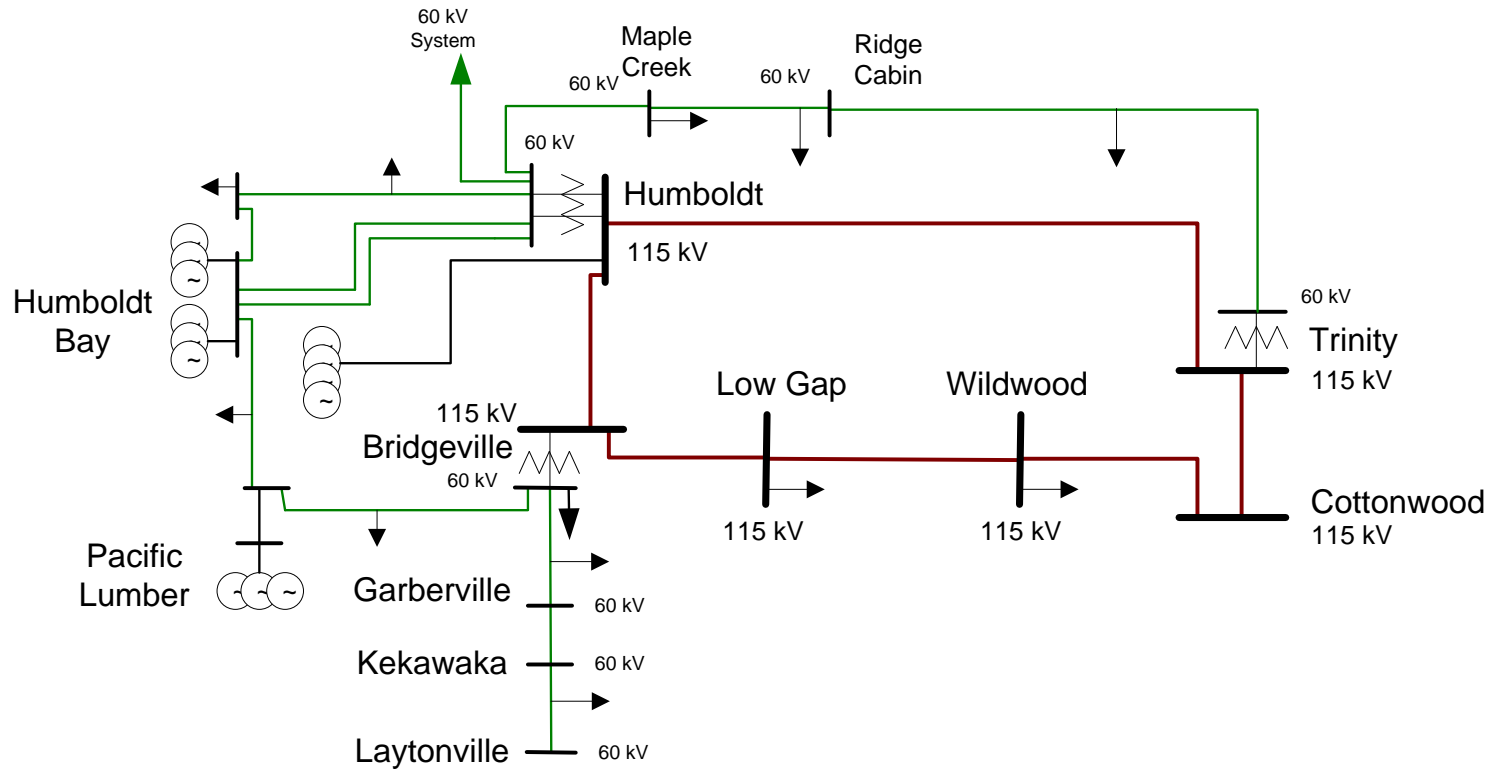
Lindsey Thomas

Regional Transmission Engineer

Stakeholder Call

April 10, 2019

# Humboldt Area Transmission System



# Topology changes

## Transmission Additions:

- No new transmission additions

## Resource Additions:

- No new resource additions

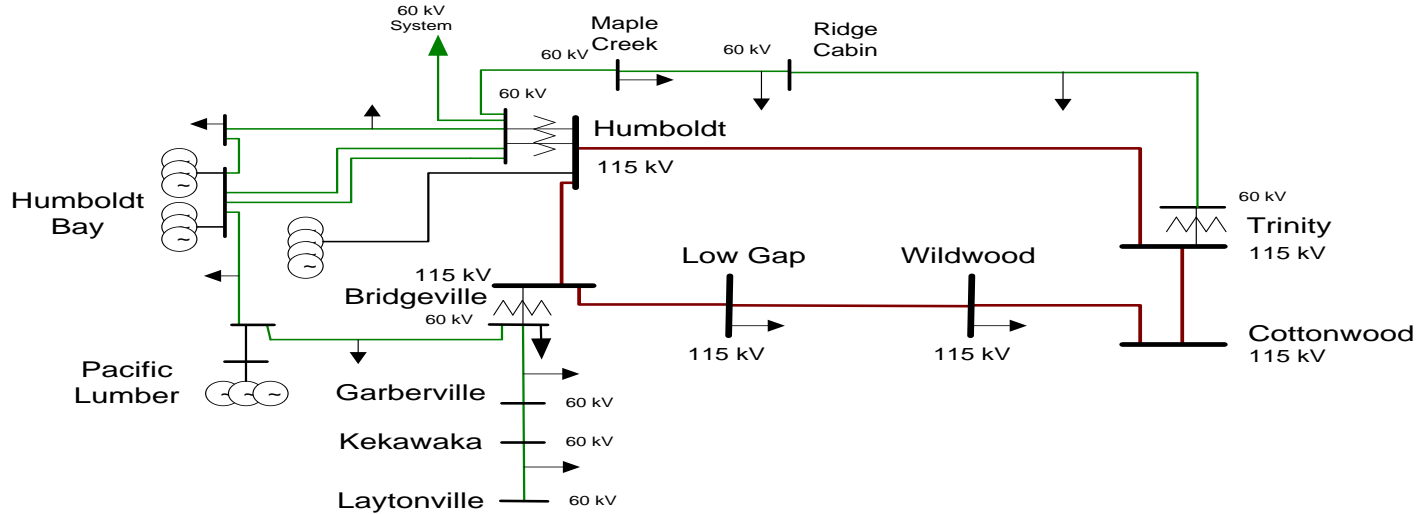
## Resource Retirements:

- No new retirements

# Humboldt: Load and Resources

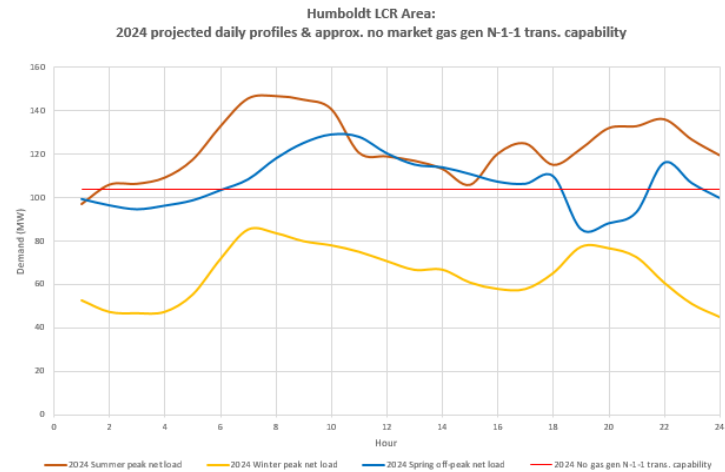
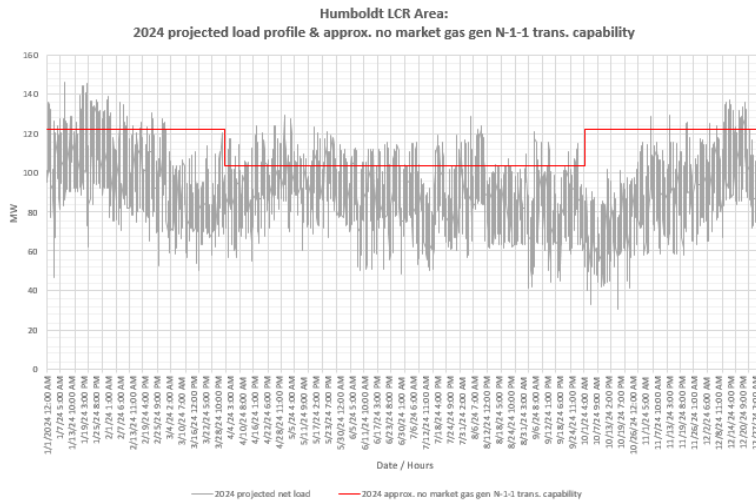
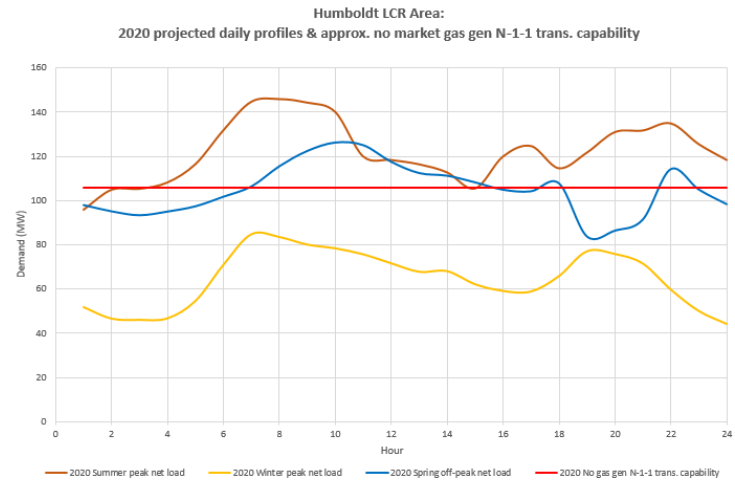
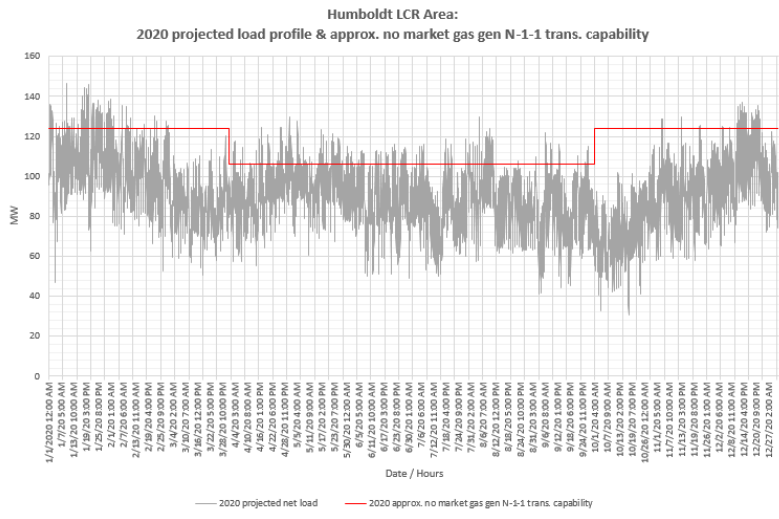
Load (MW)	2020	2024	Generation (MW)	2020	2024
Gross Load	151	151	Market/ Net Seller	197	197
AAEE	-8	-8	Solar	0	0
Behind the meter DG	0	0	Wind	0	0
<b>Net Load</b>	<b>143</b>	<b>143</b>	Muni	0	0
Transmission Losses	10	10	QF	0	0
Pumps	0	0	Future preferred resource and energy storage	0	0
<b>Load + Losses + Pumps</b>	<b>153</b>	<b>153</b>	<b>Total Qualifying Capacity</b>	<b>197</b>	<b>197</b>

# Humboldt Area : Requirements



Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2020	B	Thermal overload on Humboldt -Trinity 115 kV line	Cottonwood-Bridgeville 115 kV line + one Humboldt PP units out of service	83
2020	C	Thermal overload on Humboldt -Trinity 115 kV line	Cottonwood – Bridgeville 115 kV line + Humboldt – Humboldt Bay 115kV line	130
2024	B	Thermal overload on Humboldt -Trinity 115 kV line	Cottonwood-Bridgeville 115 kV line + one Humboldt PP units out of service	83
2024	C	Thermal overload on Humboldt -Trinity 115 kV line	Cottonwood – Bridgeville 115 kV line + Humboldt – Humboldt Bay 115kV line	132

# Humboldt Area: Load Profiles



## Changes between years

Subarea	2019		2020	
	Load	LCR	Load	LCR
Humboldt	187	165	153	130

Subarea	2023		2024	
	Load	LCR	Load	LCR
Humboldt	188	169	153	132

LCR decrease is mostly due to decrease in load forecast.

# Humboldt Area Total LCR Need

2020 LCR Need	Existing Generation Capacity Needed (MW)	Deficiency (MW)	Total MW Need
Category B (Single)	83	0	83
Category C (Multiple)	130	0	130

2024 LCR Need	Existing Generation Capacity Needed (MW)	Deficiency (MW)	Total MW Need
Category B (Single)	83	0	83
Category C (Multiple)	132	0	132