



2022 & 2026 Final LCR Study Results Stockton Area

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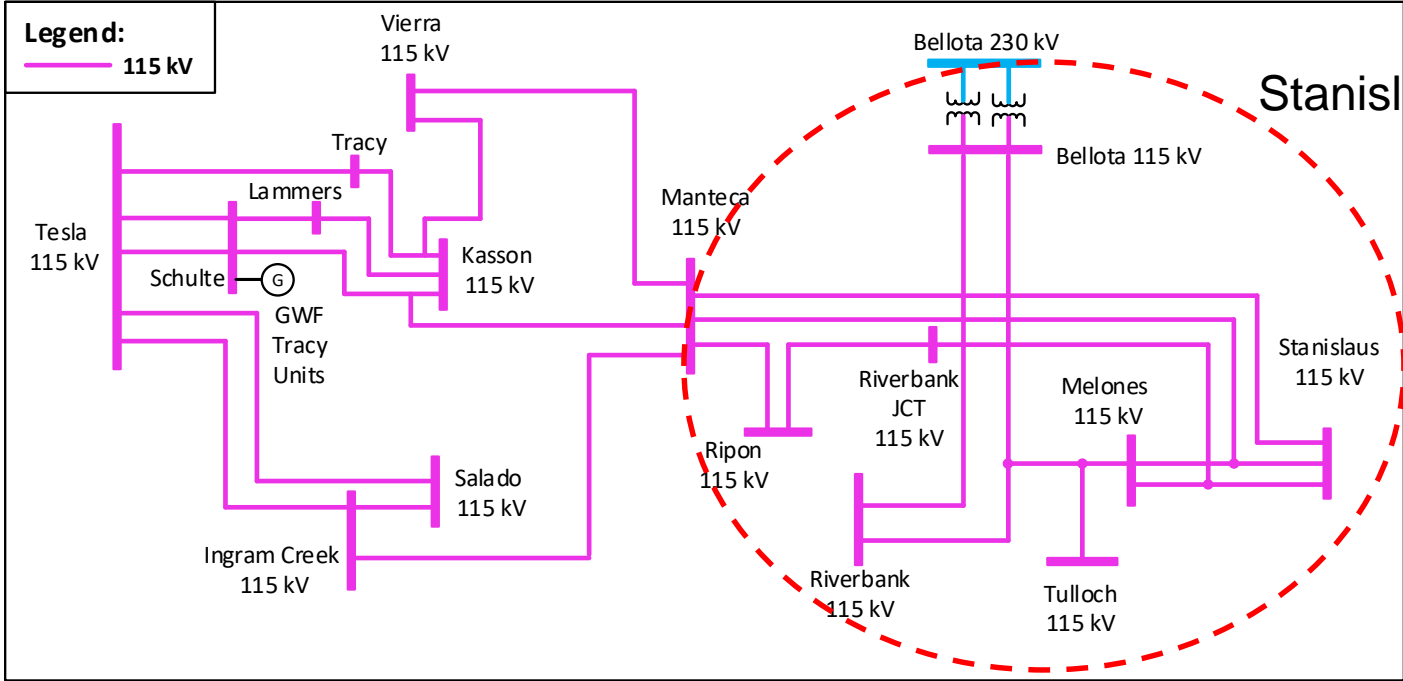
Regional Transmission Engineer Lead

Stakeholder Call

April 7, 2021

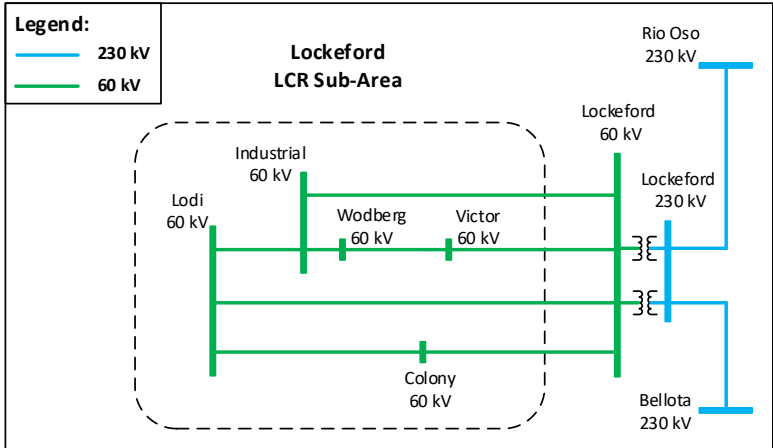
Stockton Area Transmission System & LCR Sub-areas

Tesla - Bellota



Stanislaus

Lockeford



New major transmission projects

Project Name	Expected ISD
Year 2022	
None	
Year 2026	
None	

Power plant changes

Additions:

- No new resource addition

Retirements:

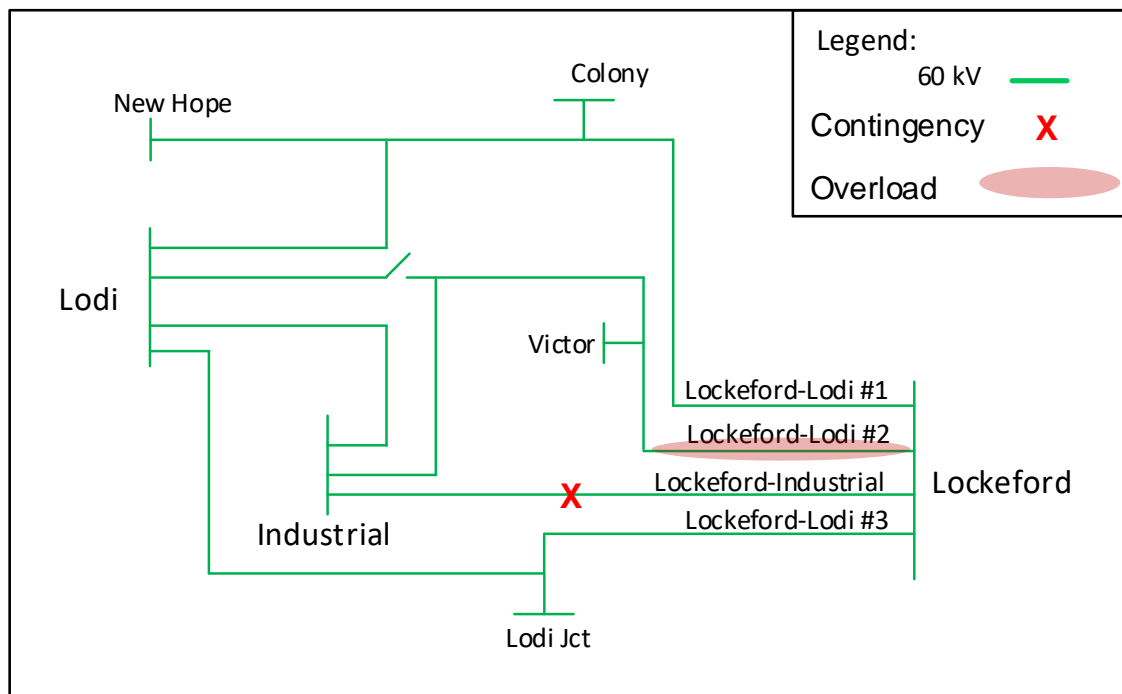
- No new retirements

Stockton Area Overall: Load and Resources

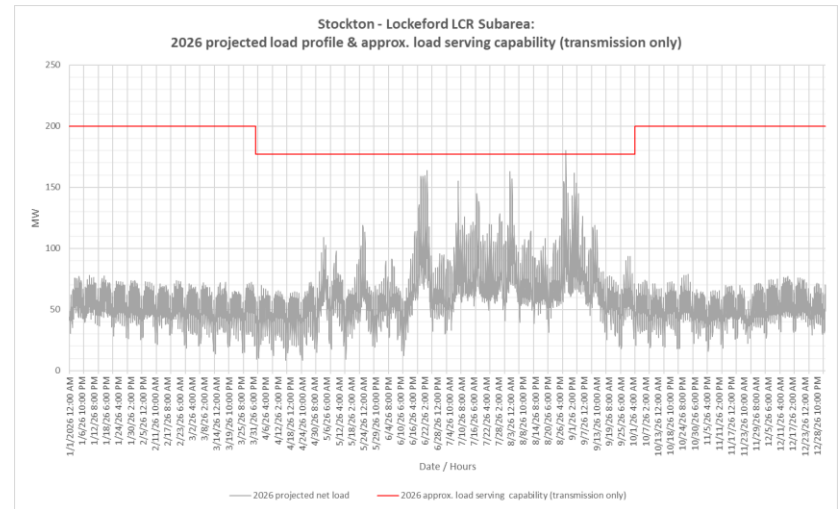
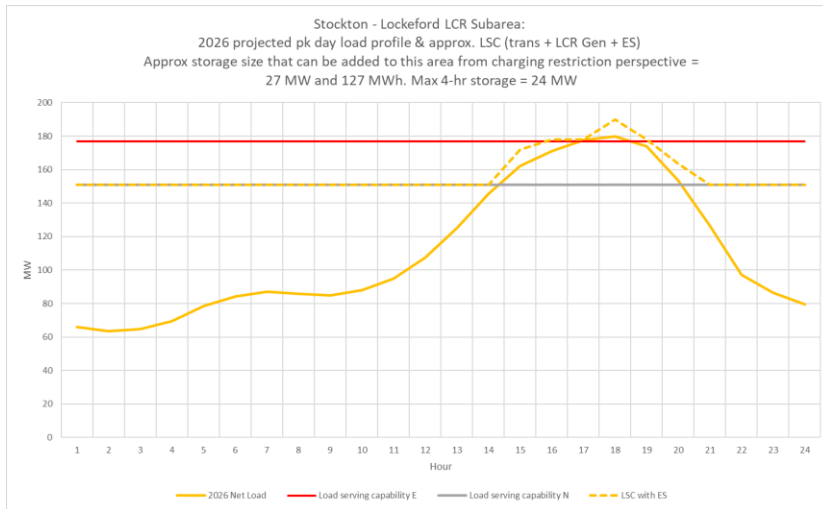
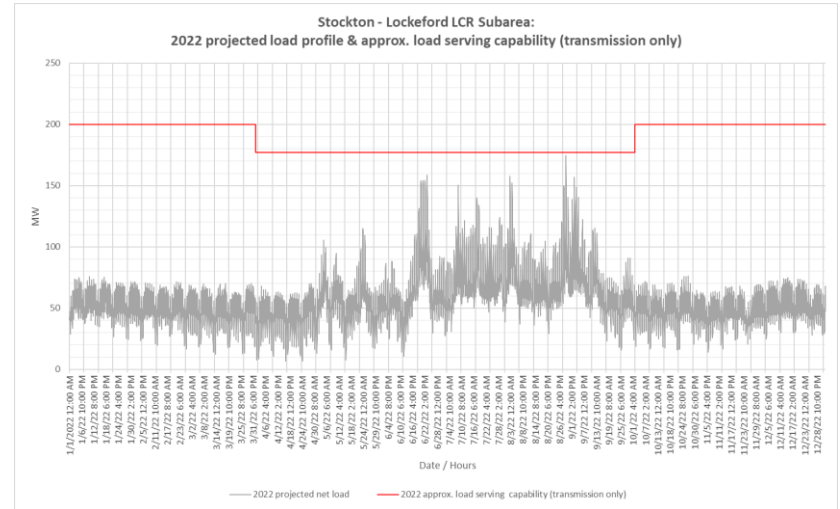
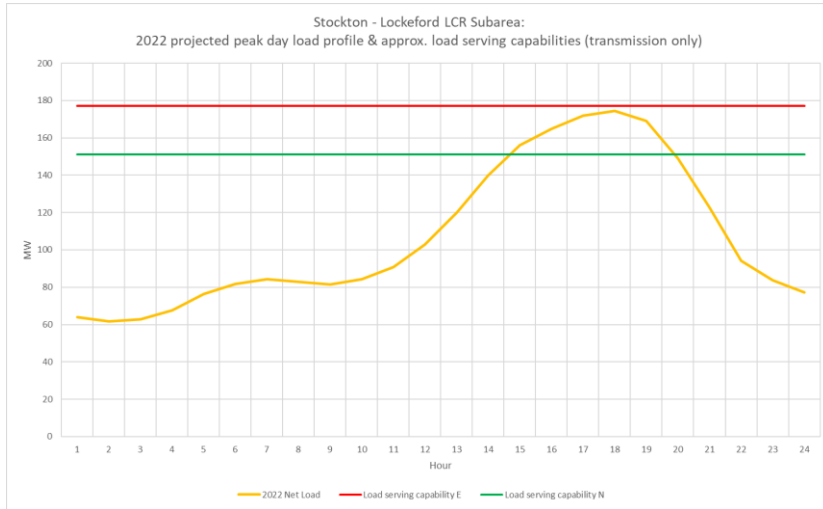
Load (MW)	2022	2026	Generation (MW)	2022	2026
Gross Load	1,015	1,120	Market/ Net Seller/ Battery	445	445
AAEE	-7	-13	Solar	12	12
Behind the meter DG	0	-5	Wind	0	0
Net Load	1,008	1,109	Muni	129	129
Transmission Losses	19	23	QF	0	0
Pumps	0	0	Future preferred resource and energy storage	0	0
Load + Losses + Pumps	1,027	1,125	Total Qualifying Capacity	586	586

Lockeford Sub-Area : Requirements

Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2022	P3	Lockeford – Lodi #2 60 kV	Lockeford-Industrial 60 kV line and Lodi CT	No requirements
2026	P3	Lockeford – Lodi #2 60 kV	Lockeford-Industrial 60 kV line and Lodi CT	27 (3)

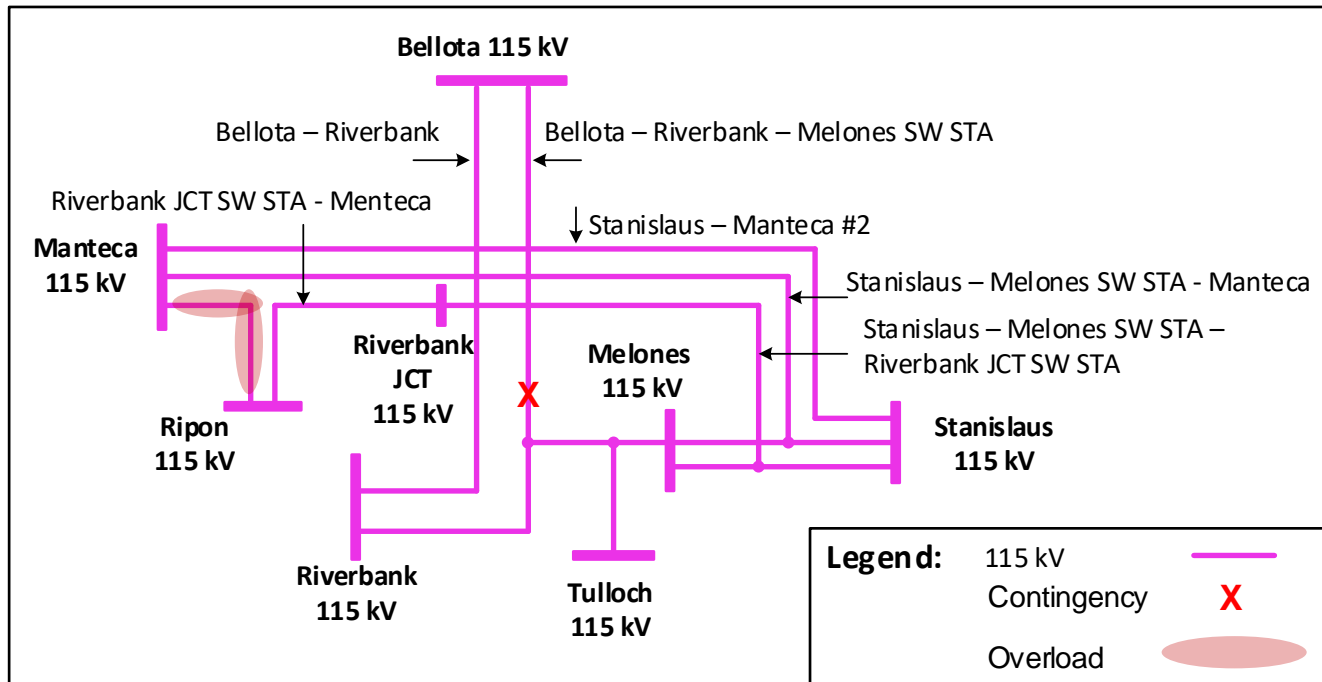


Lockeford Sub-area: Load Profiles



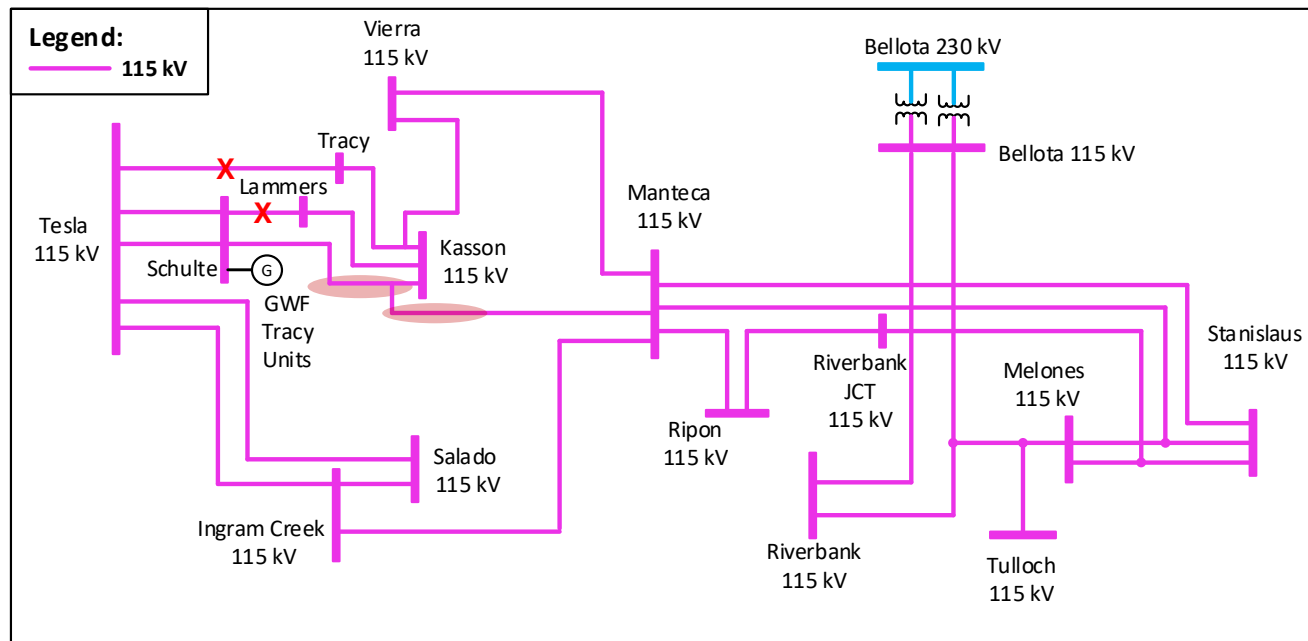
Stanislaus Sub-Area : Requirements

Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2022	P3	Manteca - Ripon 115 kV Line	Bellota-Riverbank-Melones 115 kV line and Stanislaus PH unit	196
2026	P3	Manteca - Ripon 115 kV Line	Bellota-Riverbank-Melones 115 kV line and Stanislaus PH unit	226 (27)



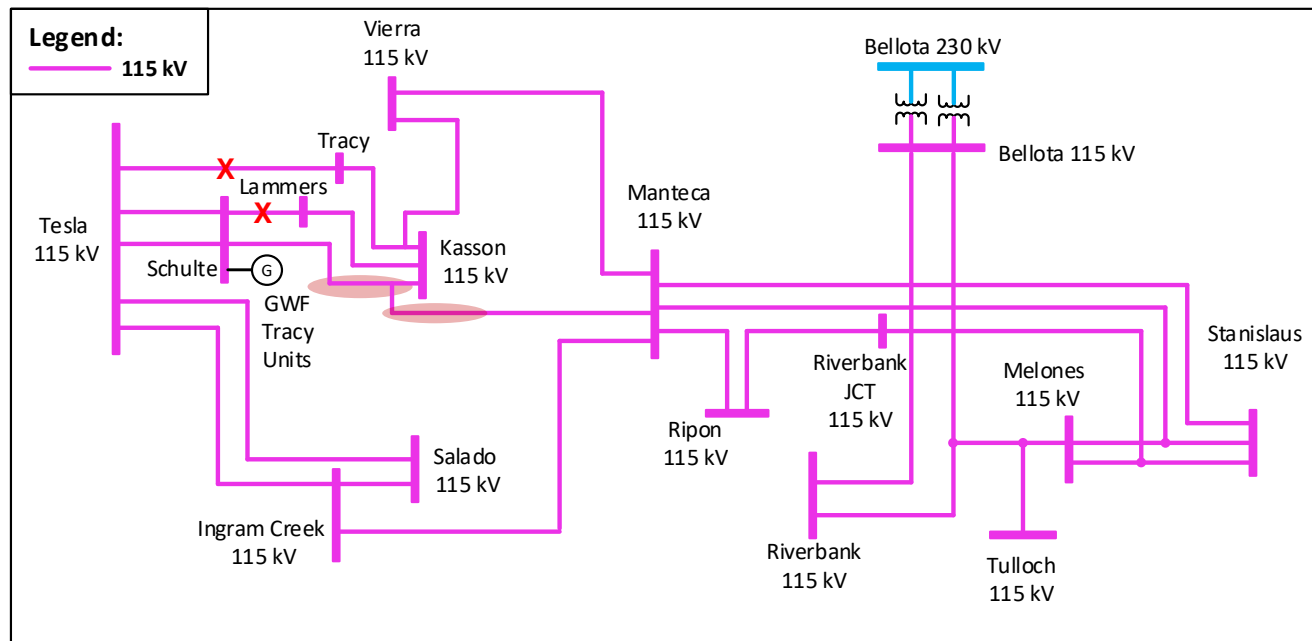
Tesla - Bellota Sub-Area : Requirements (2022)

Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2022	P2-4	Stanislaus – Melones – Riverbank Jct line	Tesla 115 kV bus	642 (70 NQC / 82 Peak)
2022	P6	Schulte-Kasson- Manteca 115 kV line	Schulte – Lammers and Tesla – Tracy 115 kV lines	1,063 (801 NQC / 813 Peak)
Total LCR Need in 2022				1,373 (801 NQC / 813 Peak)

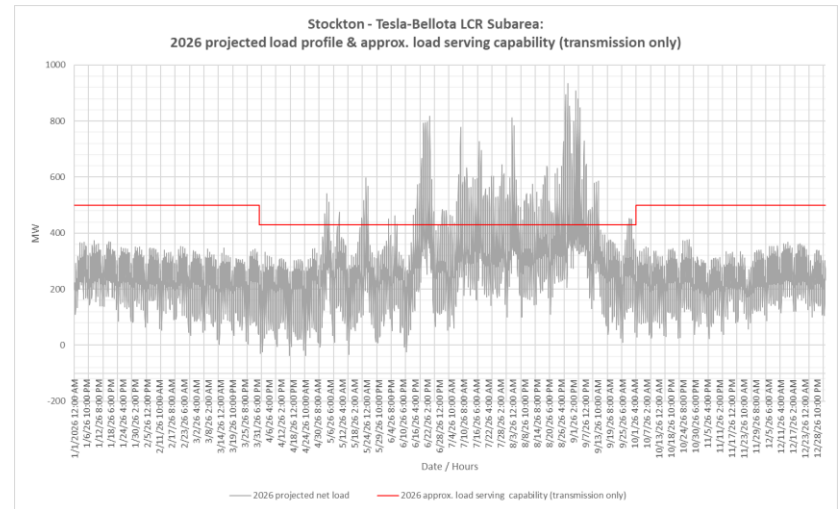
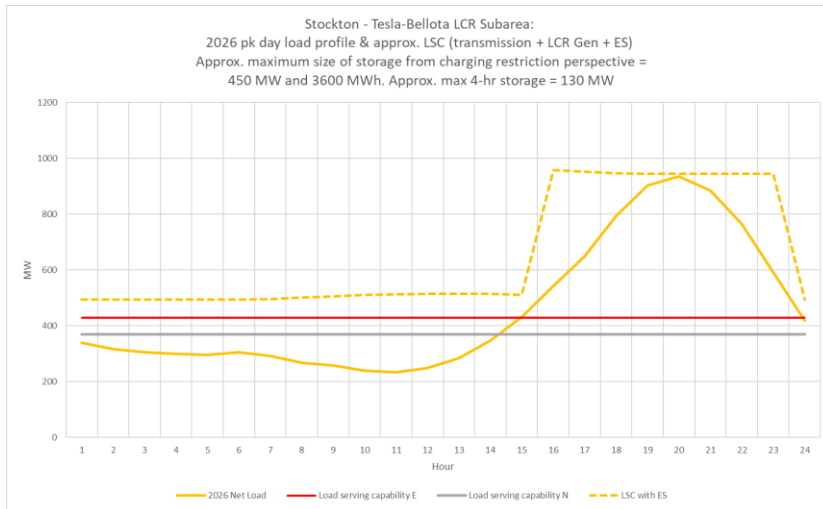
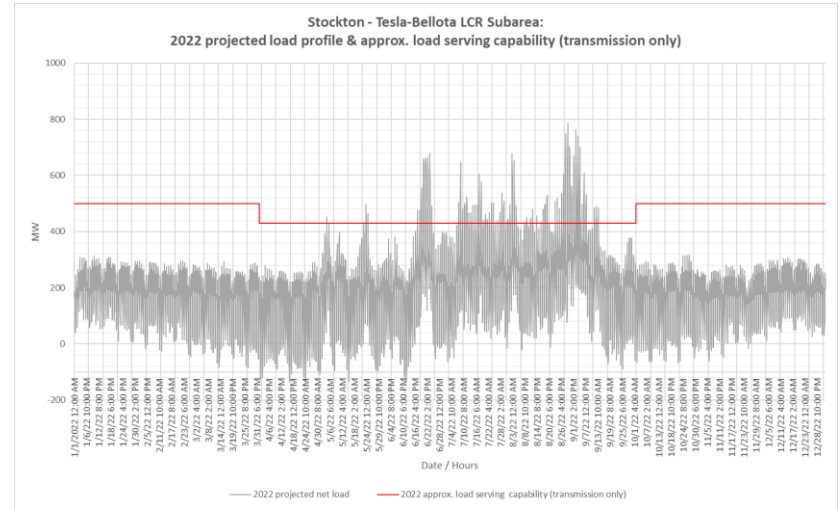
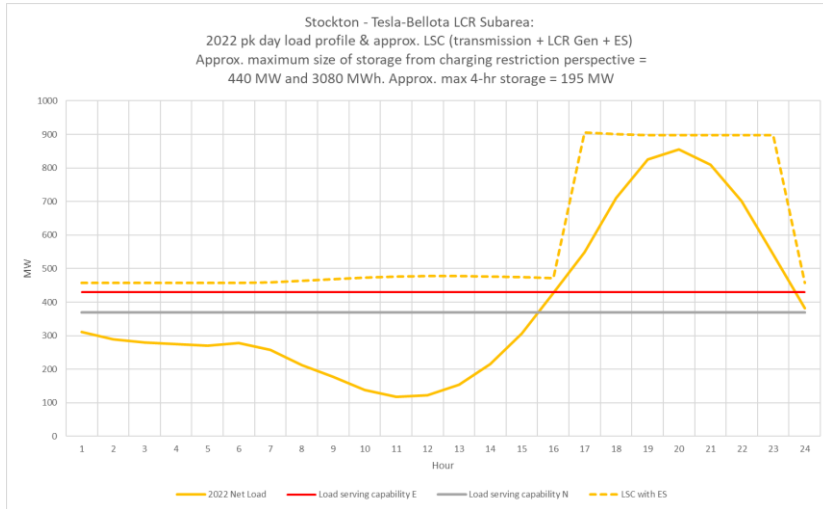


Tesla - Bellota Sub-Area : Requirements (2026)

Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2026	P2-4	Stanislaus – Melones – Riverbank Jct line	Tesla 115 kV bus	720 (158 NQC / 170 Peak)
2026	P6	Schulte-Kasson- Manteca 115 kV line	Schulte – Lammers and Tesla – Tracy 115 kV lines	1,332 (1,079 NQC / 1,091 Peak)
Total LCR Need in 2026				1,641 (1,079 NQC / 1,091 Peak)



Tesla - Bellota Sub-area: Load Profiles



Changes from 2021 to 2022

Sub-area	2021		2022	
	Load	LCR	Load	LCR
Lockeford	194	36 (12)	174	0
Stanislaus	N/A	205	N/A	196
Tesla - Bellota	898	1,219 (658)	853	1,373 (801)
Total	1,092	1,255 (670)	1,027	1,373 (801)

- The LCR decreases in Lockeford sub-area is due to lower load forecast.
- Although load forecast in the Tesla – Bellota sub-area decreased, but the LCR requirement has increased due to the lower line rating.

N/A=Flow-through area. No defined load pocket or not an LCR sub-area anymore

Changes from 2025 to 2026

Sub-area	2025		2026	
	Load	LCR	Load	LCR
Lockeford	198	N/A	180	27 (3)
Stanislaus	N/A	213 (1)	N/A	226 (27)
Tesla - Bellota	950	741 (134)	945	1,641 (1,079)
Total	1,148	741 (134)	1,125	1,668 (1,082)

- The ISD of the Lockeford – Lodi 230 kV project is now expected to be after 2026 and therefore the Lockeford will be an LCR sub-area in 2026.
- The ISD of the Vierra Looping in project that was the reason for the drop in the LCR requirement in the area is now expected to be after 2026.

N/A=Flow-through area. No defined load pocket or not an LCR sub-area anymore

Stockton Area Total LCR Need

Study Year	Existing Generation Capacity Needed (MW)	Deficiency (MW)	Total MW Need
2022	572	801	1,373
2026	586	1,082	1,668