



2026 & 2030 Draft LCR Study Results Greater Fresno Area

Preethi Rondla

Lead Engineer, Regional Transmission – North

Stakeholder Call

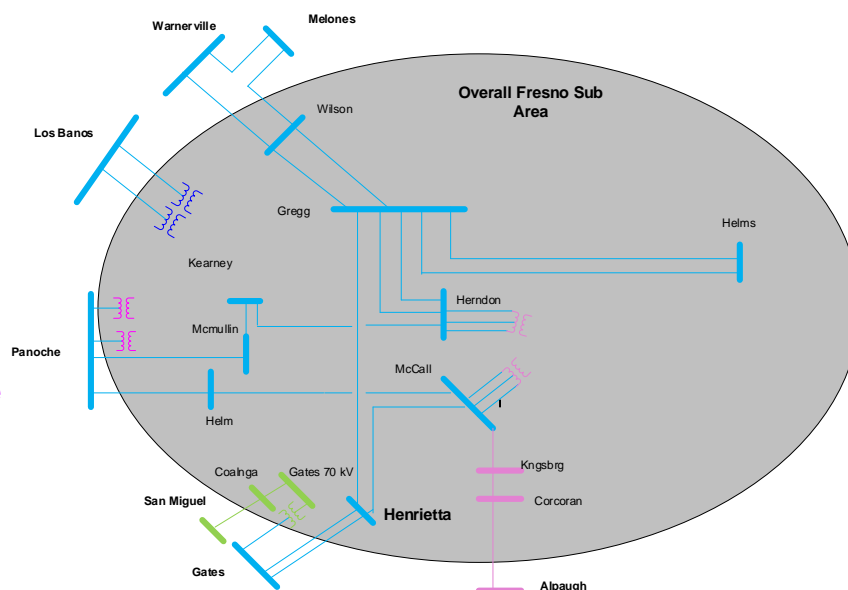
March 6, 2025

Greater Fresno Area

Electrical Boundaries and LCR Sub-Areas

Electrical Boundaries:

- Gates – Mustang #1 230 kV line
- Gates – Mustang #2 230 kV line
- Panoche – Tranquility #1 230 kV line
- Panoche – Tranquility #2 230 kV line
- Warnerville – Wilson 230 kV line
- Melones – Wilson 230 kV line
- Panoche 230/115 kV transformer #1
- Panoche 230/115 kV transformer #2
- Smyrna – Alpaugh – Corcoran 115 kV line
- Los Banos #3 230/70 kV transformer
- Los Banos #4 230/70 kV transformer
- San Miguel – Coalinga #1 70 kV line
- Gates 230/70 kV transformer #5



New major transmission projects

Project Name	Expected ISD
Panoche-Oro Loma 115 kV Reconductoring	Complete
Wilson 115 kV Area Reinforcement	Aug-29
Oro Loma 70 kV Area Reinforcement	Aug-28
Borden 230/70 kV Transformer Bank #1 Capacity Increase	Dec-27
Wilson-Oro Loma 115 kV Line Reconductoring	May-28
Bellota-Warnerville 230 kV Reconductoring	Complete
Coppermine 70 kV Reinforcement	May-27
Los banos 70 kV area reinforcement	Dec-29
Gates new transformer bank addition project	May-30
Reedley 70 kV Capacity Increase	May-30
Camden 70 kV Reinforcement	May-30

Power plant changes

Resource Additions:

- 3 battery
- 1 hybrid
- 5 solar
- 1 wind
- 11 energy only resources (mostly solar)

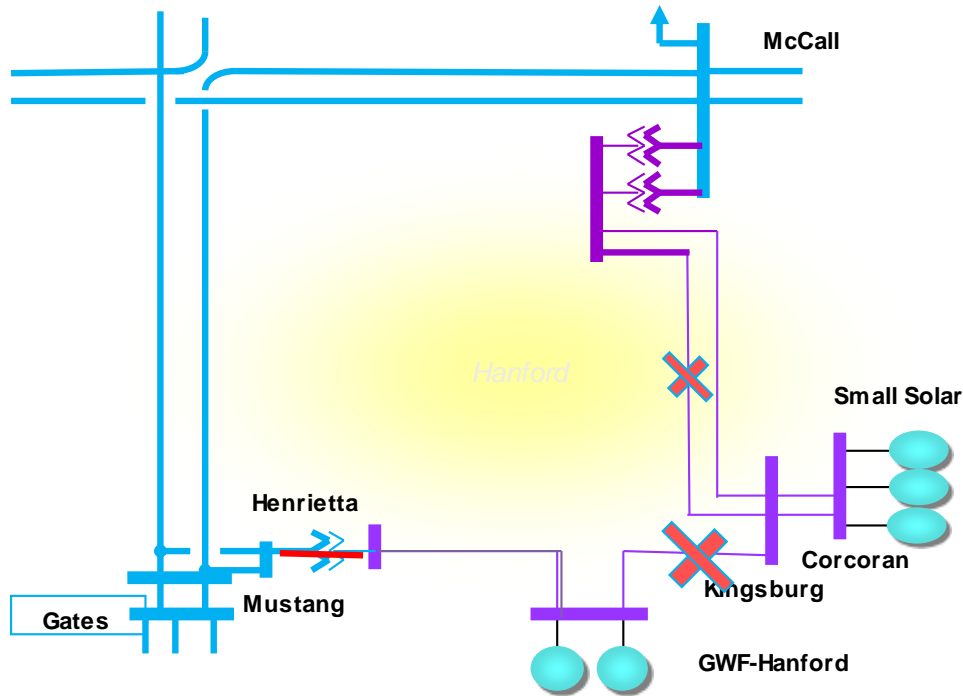
Resource Retirements:

- None

Hanford Sub-area: Load and Resources

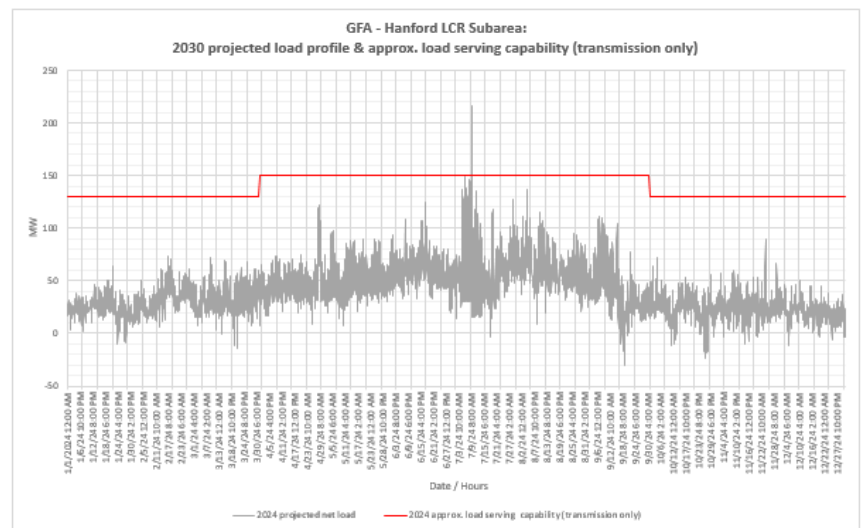
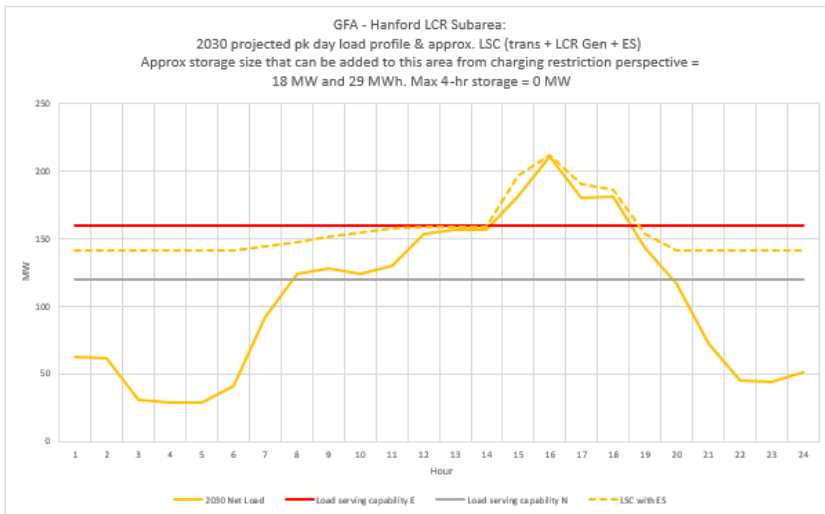
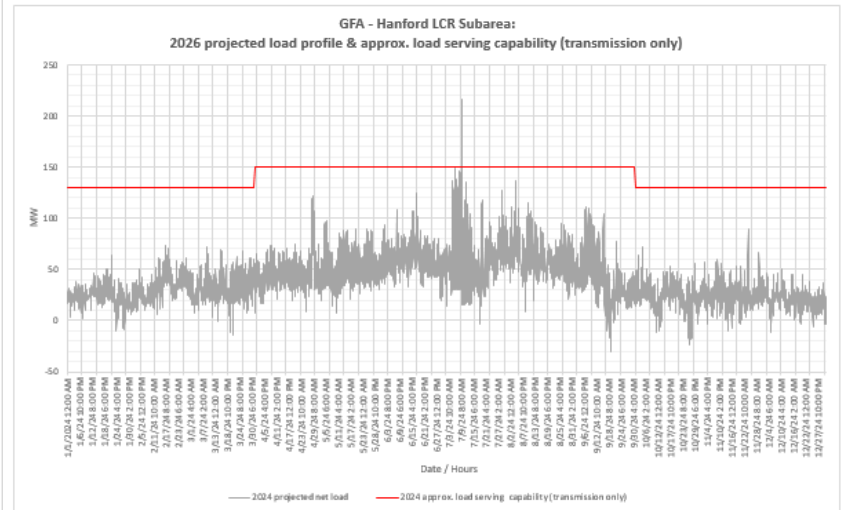
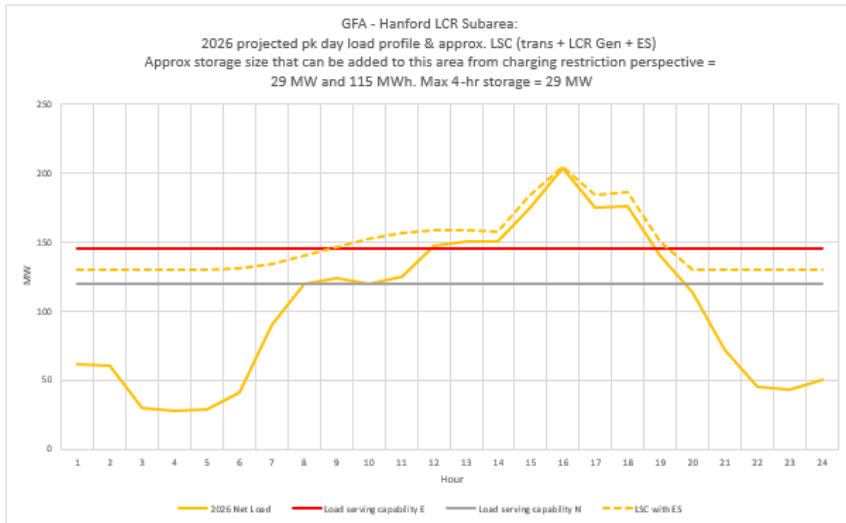
Load (MW)	2026	2030	Generation (MW)	2026	2030
Gross Load	206	212	Market/Net Seller	133	133
AAEE	-2	-4	Battery	32	32
Behind the meter DG	-4	-5	Muni/QF	0	0
Net Load	200	203	Solar	83	83
Transmission Losses	5	5	Existing 20-minute Demand Response	0	0
Pumps	0	0	Mothballed	0	0
Load + Losses + Pumps	205	208	Total Qualifying Capacity	248	248

Hanford Sub-Area Requirements



Limit	Cat.	Limiting Facility	Contingency	2026 LCR (MW)	2030 LCR (MW)
First Limit	P6	Henrietta 230/115 kV Bank 3 (2026)	McCall-Kingsburg #1 115kV line and GWF-Kingsburg 115kV line	29	18
		Kingsburg-Contadina 115 kV line (2030)	McCall-Kingsburg #1 115kV line and McCall-Kingsburg #2 115kV line		

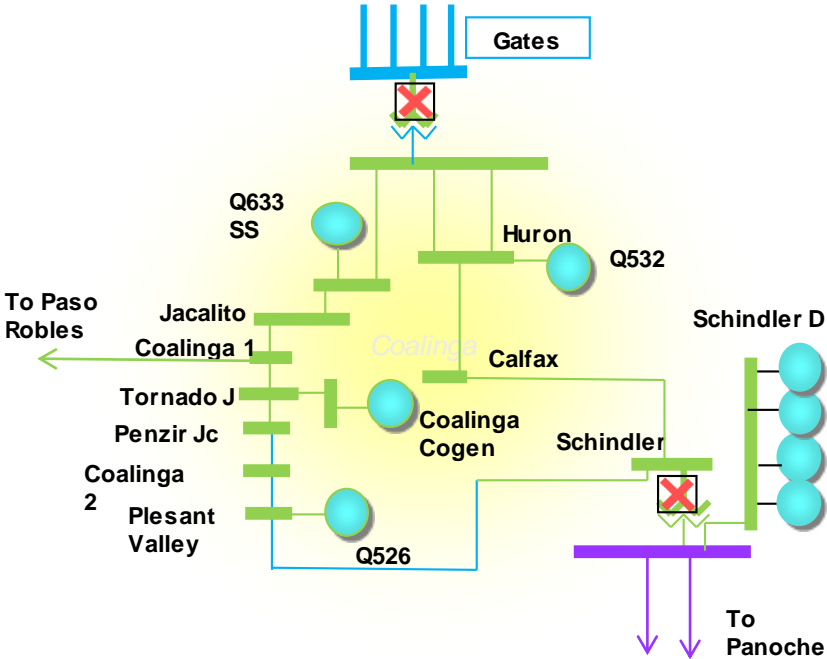
Hanford Sub-area: Load Profiles



Coalinga Sub-area: Load and Resources

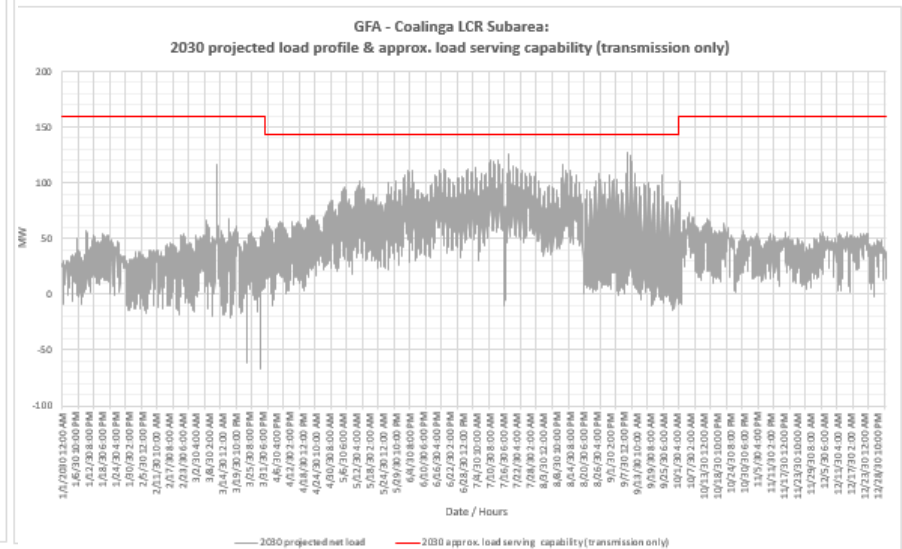
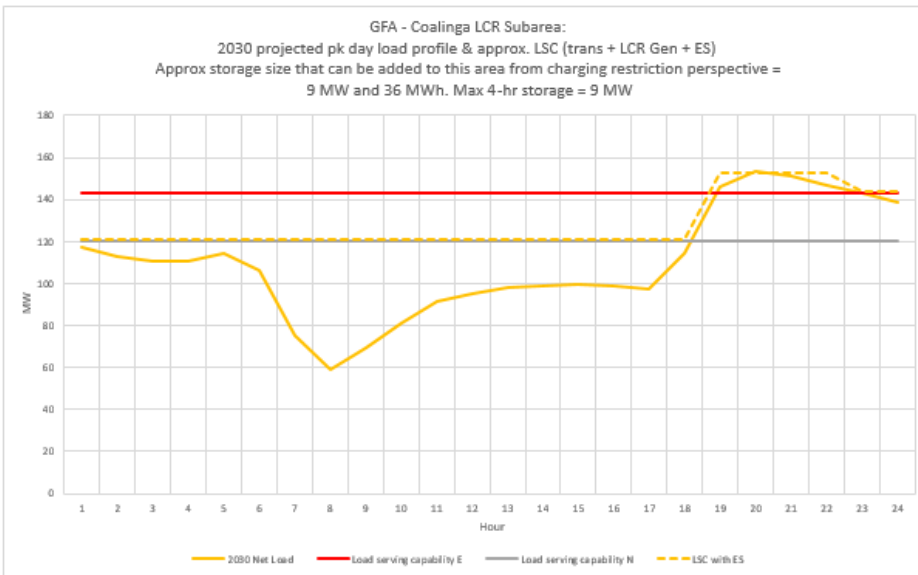
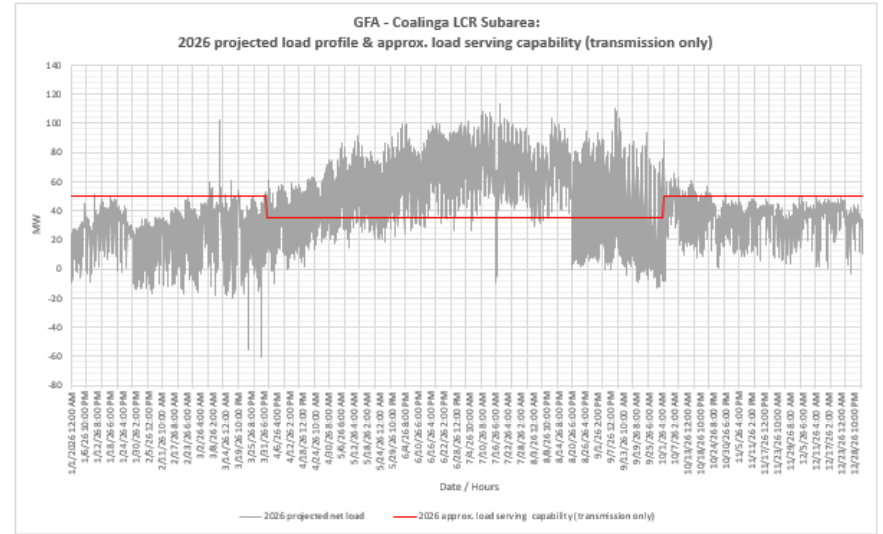
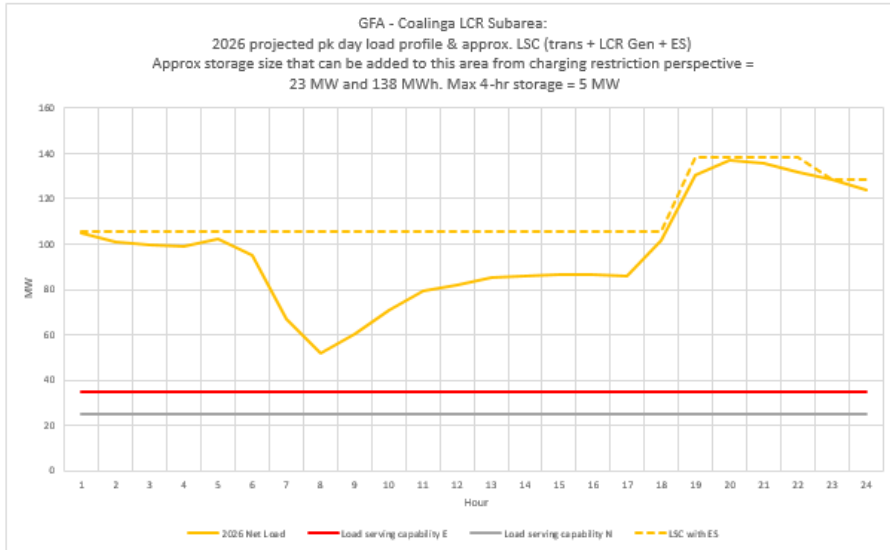
Load (MW)	2026	2030	Generation (MW)	2026	2030
Gross Load	136	153	Market, Net Seller	0	0
AAEE	-1	-1	Battery	10	10
Behind the meter DG	-1	-1	Muni/QF	3	3
Net Load	134	151	Solar	22	22
Transmission Losses	2	2	Existing 20-minute Demand Response	0	0
Pumps	0	0	Mothballed	0	0
Load + Losses + Pumps	136	153	Total Qualifying Capacity	35	35

Coalinga Sub-Area Requirements



Limit	Category	Limiting Facility	Contingency	2026 LCR (MW)	2030 LCR (MW)
First Limit	P6 (2026)	Overload on San Miguel-Colinga #1 70 kV line	Gates 230/70 kV bank 5 and Schindler 115/70 kV bank 2 (2026)	94 (59 NQC) (81 Peak)	9
	P1(2030)	Calfax-Huron jct 70 kV line	Gates-Coalinga #2 70 kV line (2030)		

Coalinga Sub-area: Load Profiles

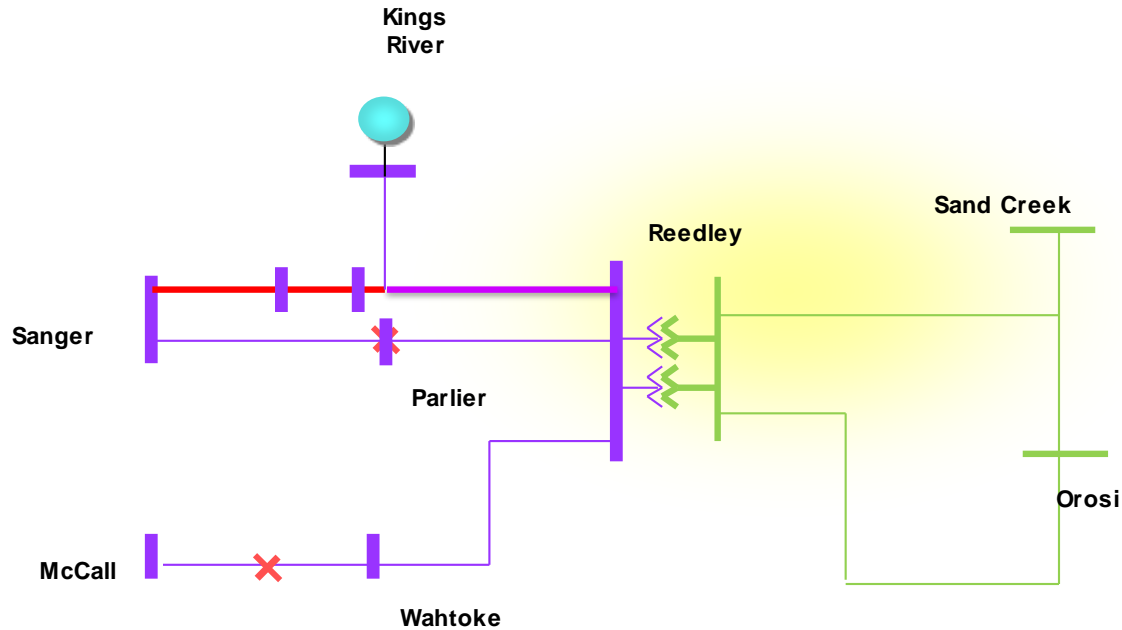


Borden Sub-area: Eliminated due to the Borden Transformer Capacity Increase Project

Reedley Sub-area: Load and Resources

Load (MW)	2026	2030	Generation (MW)	2026	2030
Gross Load	241	223	Market, Net Seller	51	51
AAEE	-3	-5	Battery	0	0
Behind the meter DG	-6	-7	Muni/QF	0	0
Net Load	232	211	Solar	0	0
Transmission Losses	39	41	Existing 20-minute Demand Response	0	0
Pumps	0	0	Mothballed	0	0
Load + Losses + Pumps	271	252	Total Qualifying Capacity	51	51

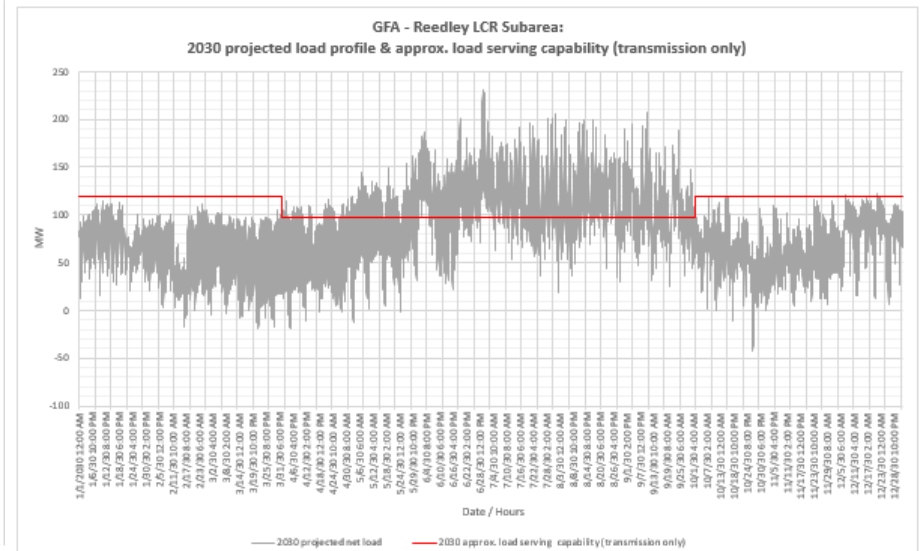
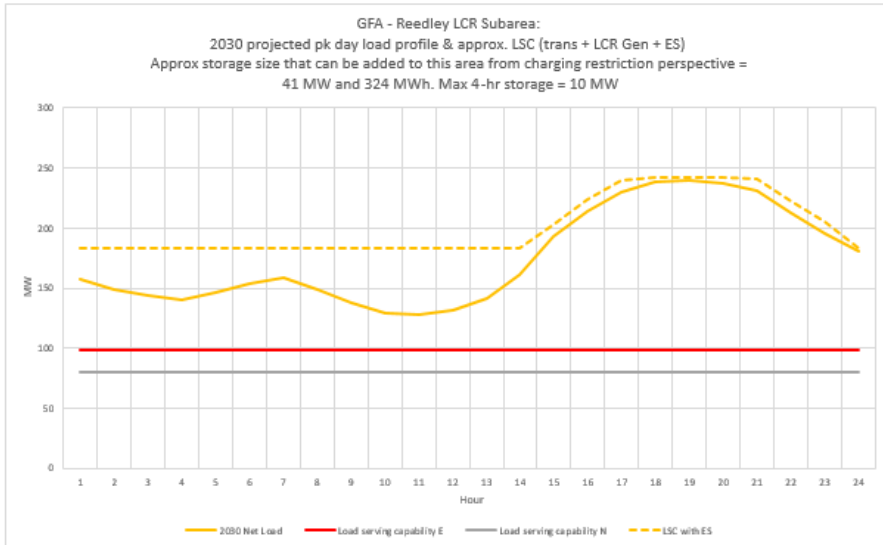
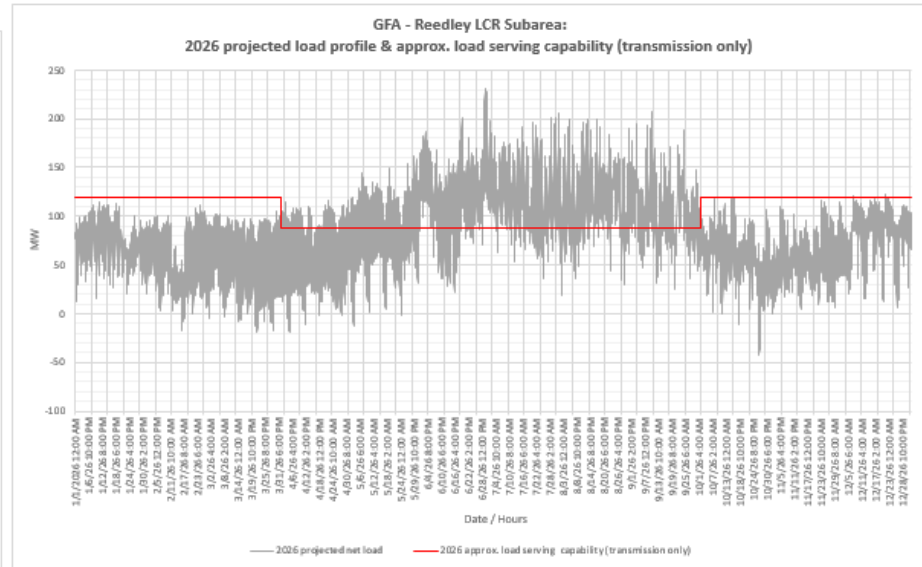
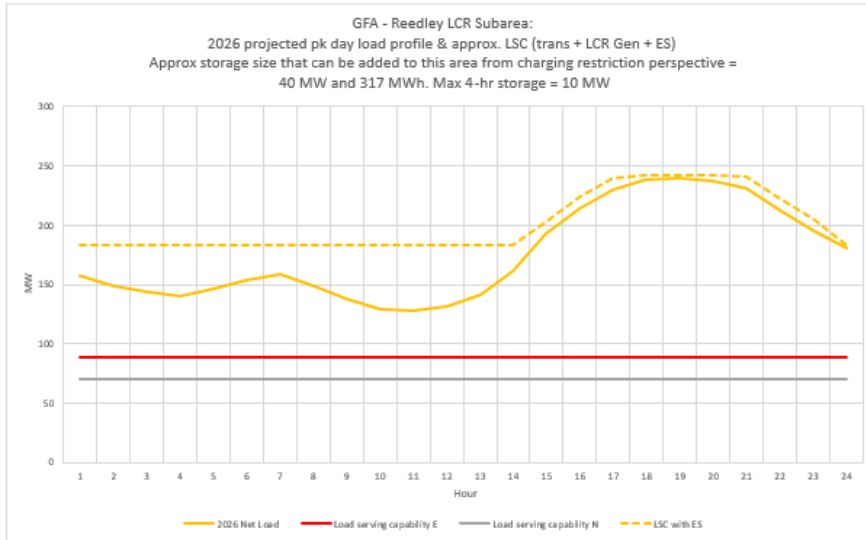
Reedley Sub-Area Requirements



Limit	Category	Limiting Facility	Contingency	2026 LCR (MW)	2030 LCR (MW)
First Limit	P6	Kings River-Sanger-Reedley 115kV line with Wahtoke load in-service	McCall-Reedley 115kV Line & Sanger-Reedley 115kV line	128 (77)	120 (59)

Slide 13

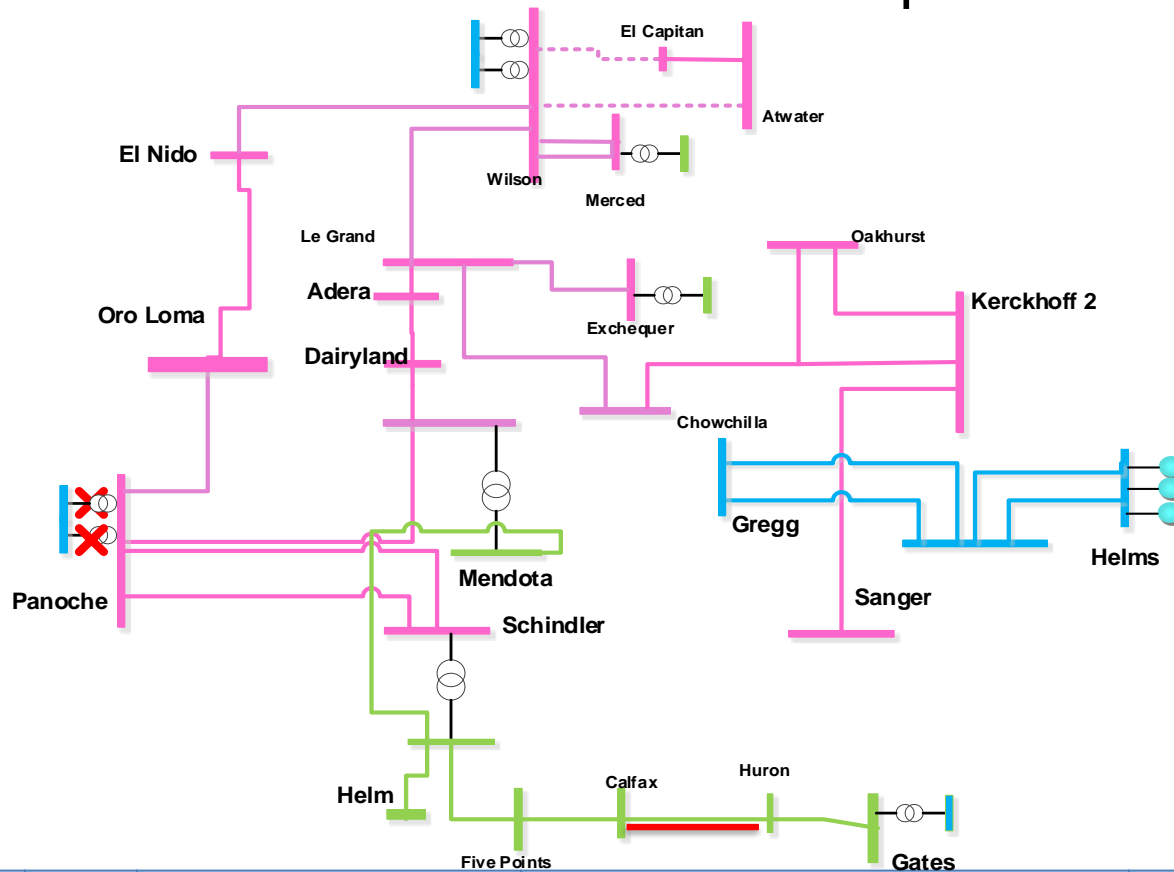
Reedley Sub-area: Load Profiles



Panoche Sub-area: Load and Resources

Load (MW)	2026	2030	Generation (MW)	2026	2030
Gross Load	518	557	Market, Net Seller	274	274
AAEE	-4	-7	Battery	0	0
Behind the meter DG	-8	-10	Muni/QF	107	107
Net Load	506	540	Solar	89	89
Transmission Losses	15	16	Existing 20-minute Demand Response	0	0
Pumps	0	0	Mothballed	0	0
Load + Losses + Pumps	521	556	Total Qualifying Capacity	470	470

Panoche Sub-Area Requirements

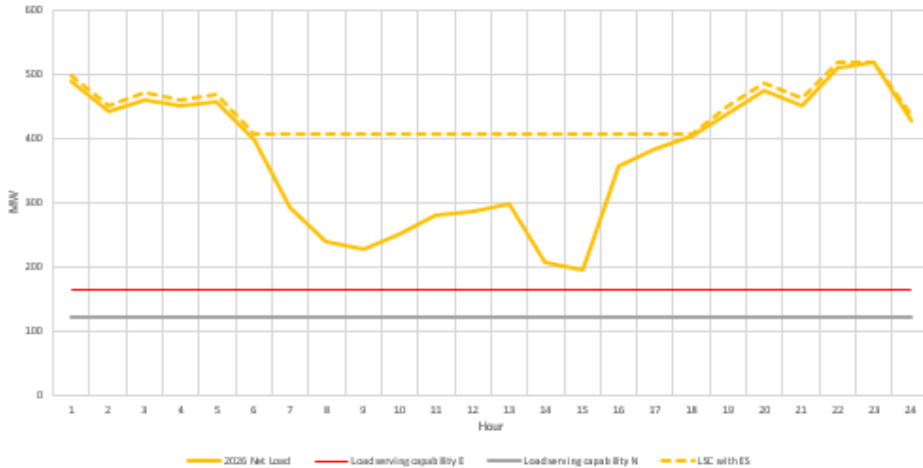


Limit	Cat.	Limiting Facility	Contingency	2026 LCR (MW)	2030 LCR (MW)
First Limit	P6	Huron-Calfax 70 kV line	Panoche 230/115 kV bank1 and Bank 2	353	381

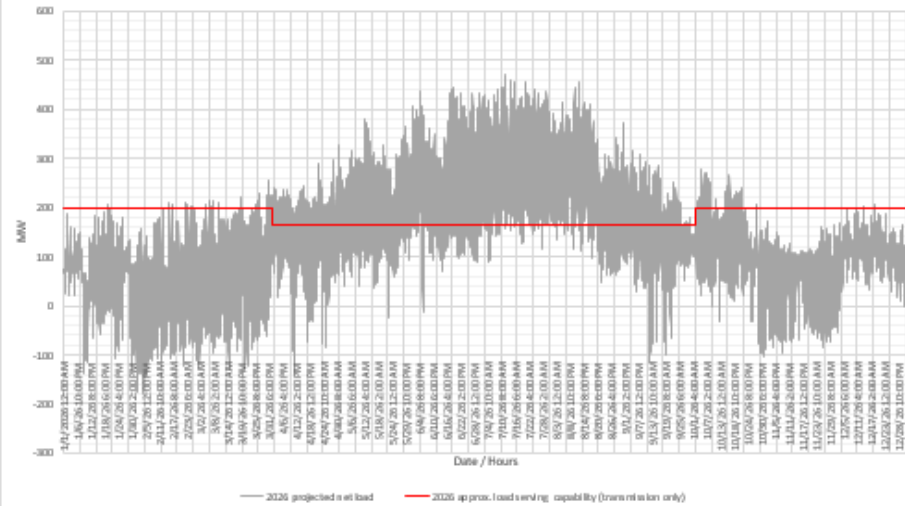


Panoche Sub-area: Load Profiles

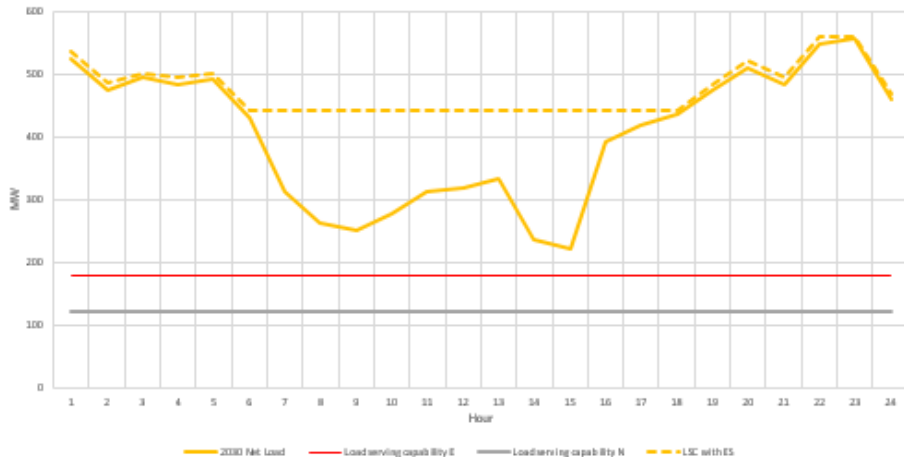
GFA - Panoche LCR Subarea:
 2026 projected pk day load profile & approx. LSC (trans + LCR Gen + ES)
 Approx storage size that can be added to this area from charging restriction perspective =
 65 MW and 554 MWh. Max 4-hr storage = 22 MW



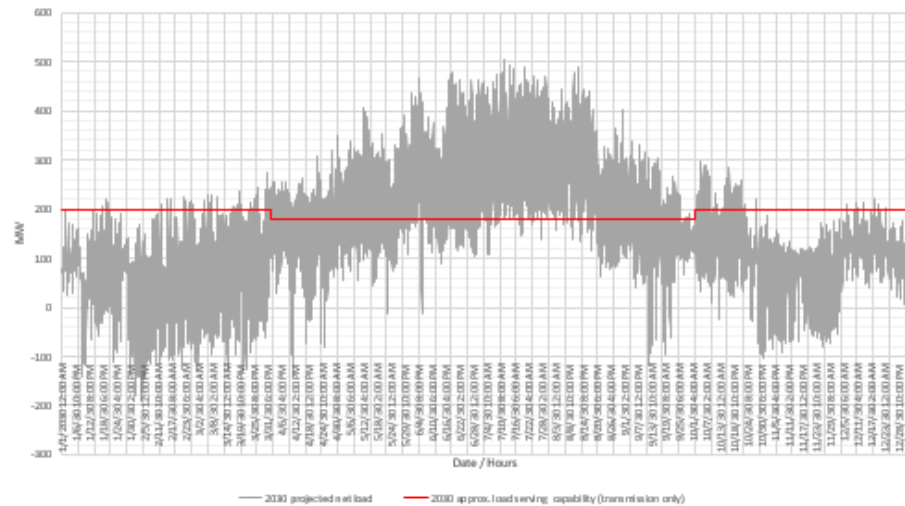
GFA - Panoche LCR Subarea:
 2026 projected load profile & approx. load serving capability (transmission only)



GFA - Panoche LCR Subarea:
 2030 projected pk day load profile & approx. LSC (trans + LCR Gen + ES)
 Approx storage size that can be added to this area from charging restriction perspective =
 59 MW and 509 MWh. Max 4-hr storage = 12 MW



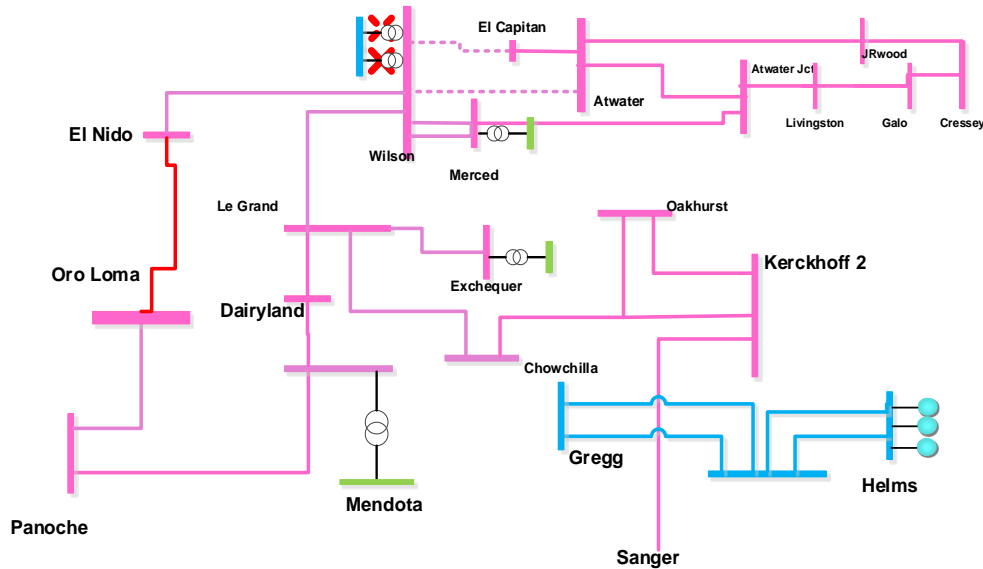
GFA - Panoche LCR Subarea:
 2030 projected load profile & approx. load serving capability (transmission only)



Wilson Sub-area: Load and Resources

Load (MW)	2026	2030	Generation (MW)	2026	2030
Gross Load	NA – Flow through area.		Market/Net Seller	127	127
AAEE			Battery	0	0
Behind the meter DG			Muni/QF	103	103
Net Load			Solar	59	59
Transmission Losses			Existing 20-minute Demand Response	0	0
Pumps			Mothballed	0	0
Load + Losses + Pumps			Total Qualifying Capacity	289	289

Wilson Sub-Area Requirements

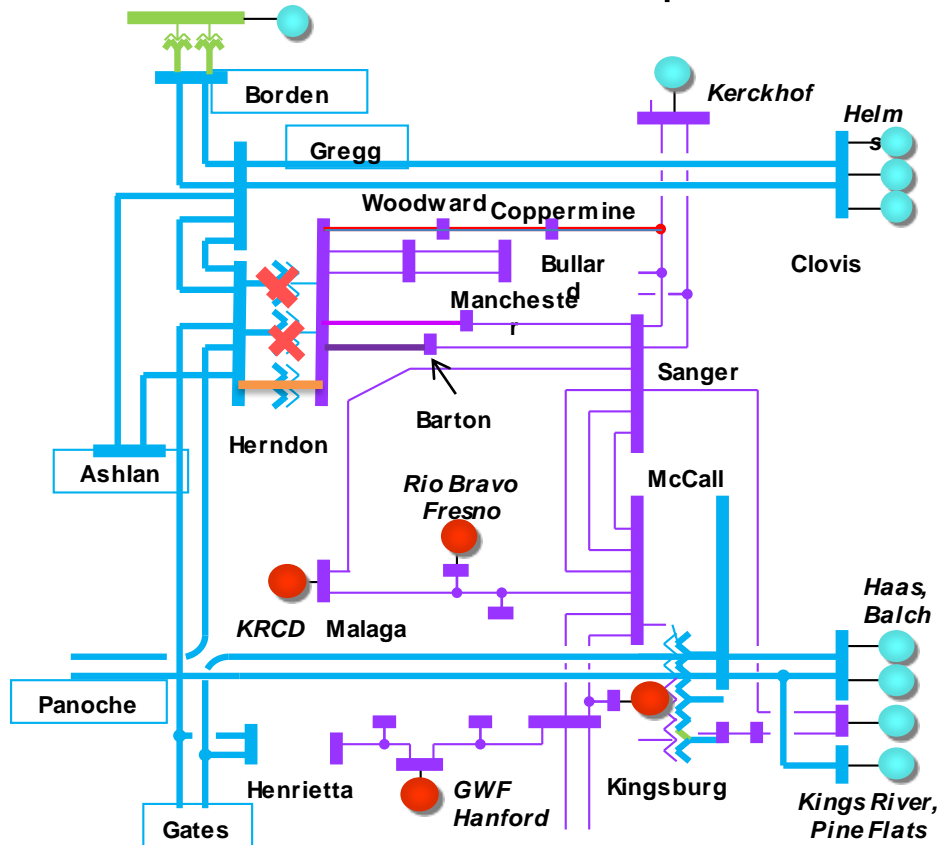


Limit	Cat.	Limiting Facility	Contingency	2026 LCR (MW)	2030 LCR (MW)
First Limit	P6	Oro Loma –El Nido 115 kV Line	Wilson 230/115kV TB #1 and Wilson 230/115kV TB #2	381 (92 NQC) (151 Peak)	Eliminated due to Project

Herndon Sub-area: Load and Resources

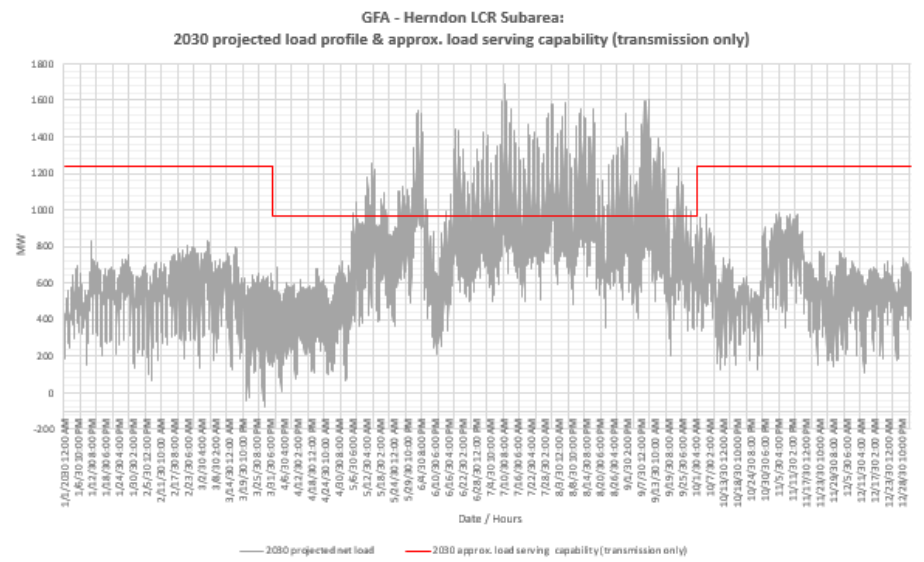
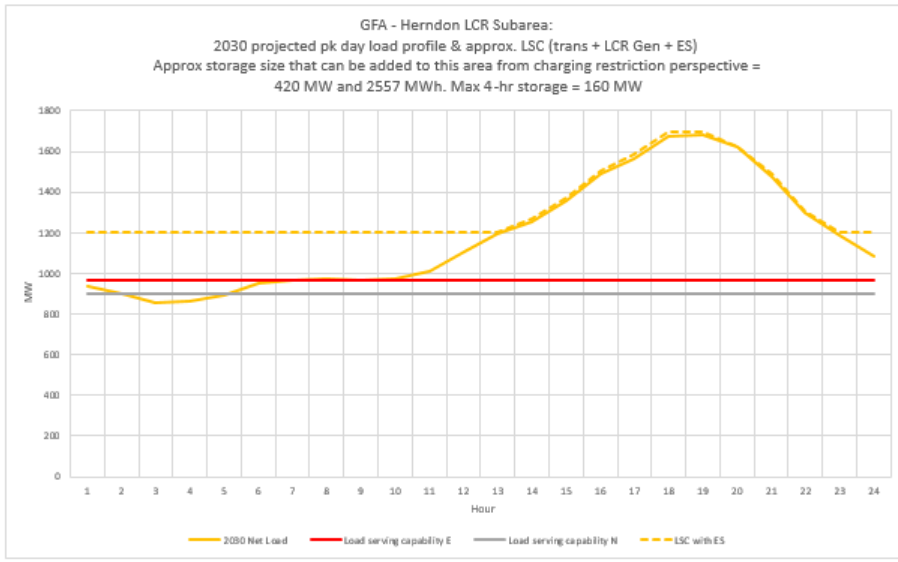
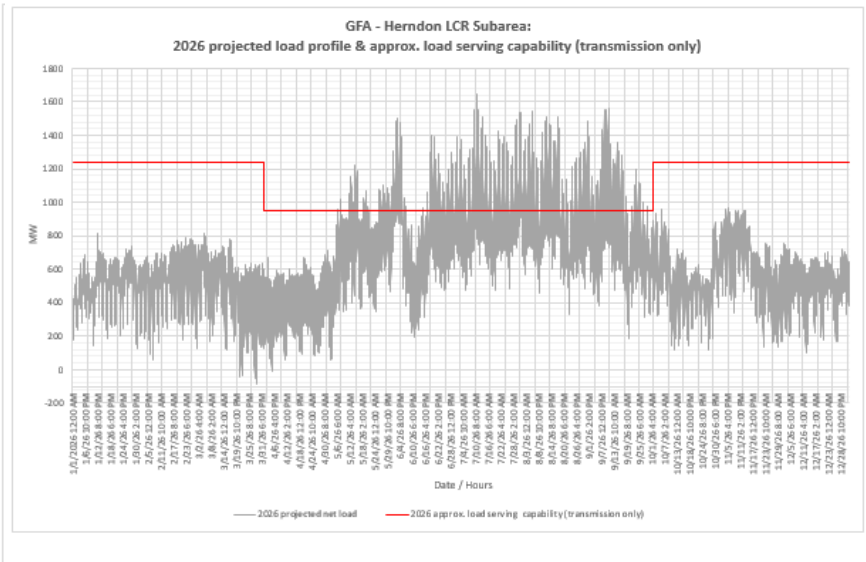
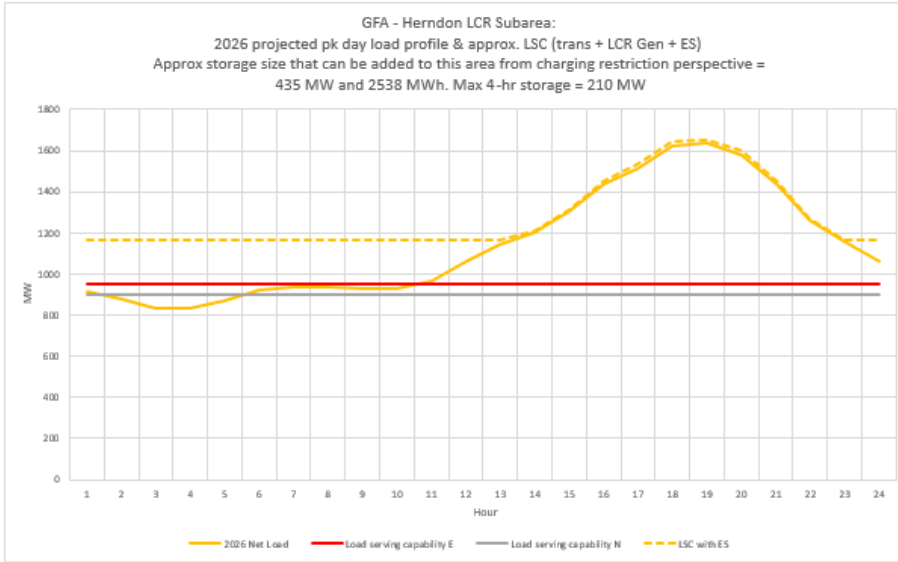
Load (MW)	2026	2030	Generation (MW)	2026	2030
Gross Load	1624	1691	Market/Net Seller	874	874
AAEE	-22	-37	Battery	48	48
Behind the meter DG	-34	-42	Muni/QF	97	97
Net Load	1568	1612	Solar	61	61
Transmission Losses	33	33	Existing 20-minute Demand Response	0	0
Pumps	0	0	Mothballed	0	0
Load + Losses + Pumps	1601	1645	Total Qualifying Capacity	1080	1080

Herndon Sub-Area Requirements



Limit	Cat.	Limiting Facility	Contingency	2026 LCR (MW)	2030 LCR (MW)
First limit	P6	Herndon 230/115kV Bank 3	Herndon 230/115 kV Bank 1 and Herndon 230/115 kV Bank 2	700	724

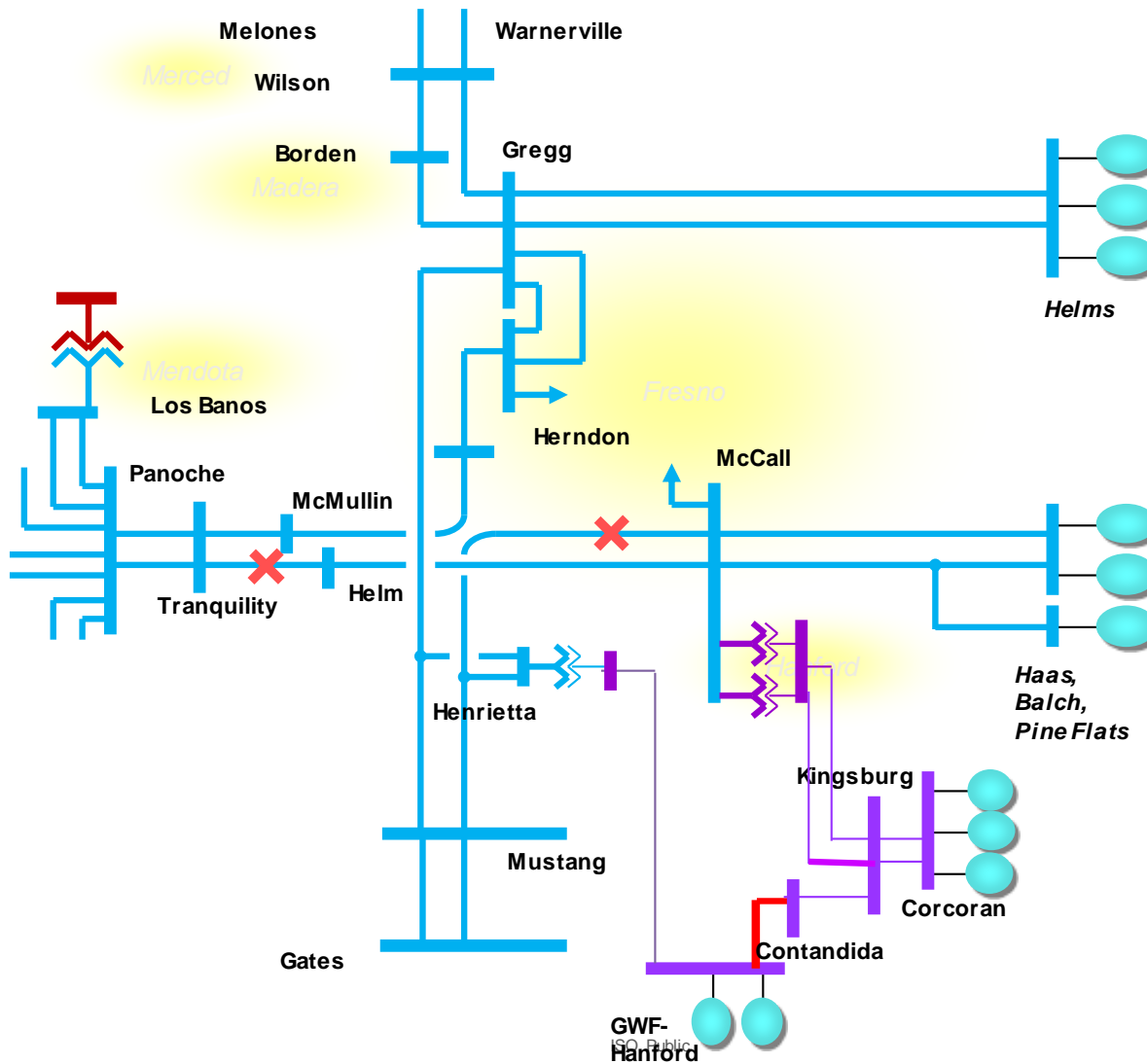
Herndon Sub-area: Load Profiles



Overall Load and Resources

Load (MW)	2026	2030	Generation (MW)	2026	2030
Gross Load	3566	3885	Market/Net Seller	2379	2379
AAEE	-44	-75	Battery/Hybrid	800	800
Behind the meter DG	-72	-90	Muni/QF	205	205
Net Load	3450	3712	Solar	440	440
Transmission Losses	142	146	Existing 20-minute Demand Response	0	0
Pumps	0	0	Wind	15	15
Load + Losses + Pumps	3592	3865	Total Qualifying Capacity	3839	3839

Overall Sub-Area Requirements

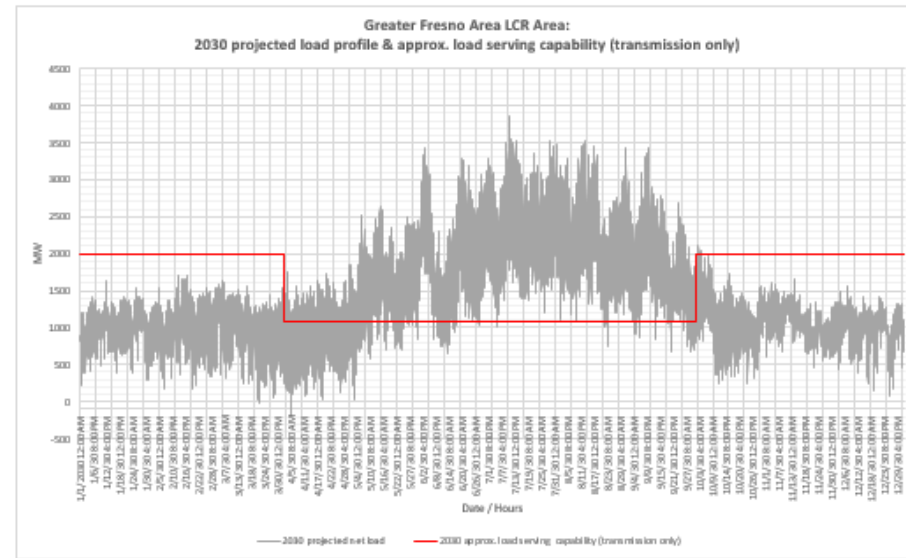
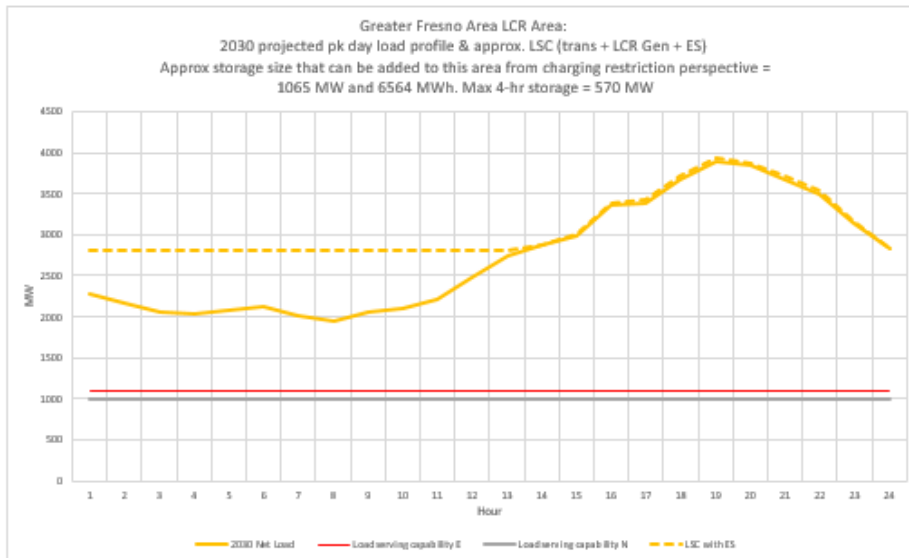
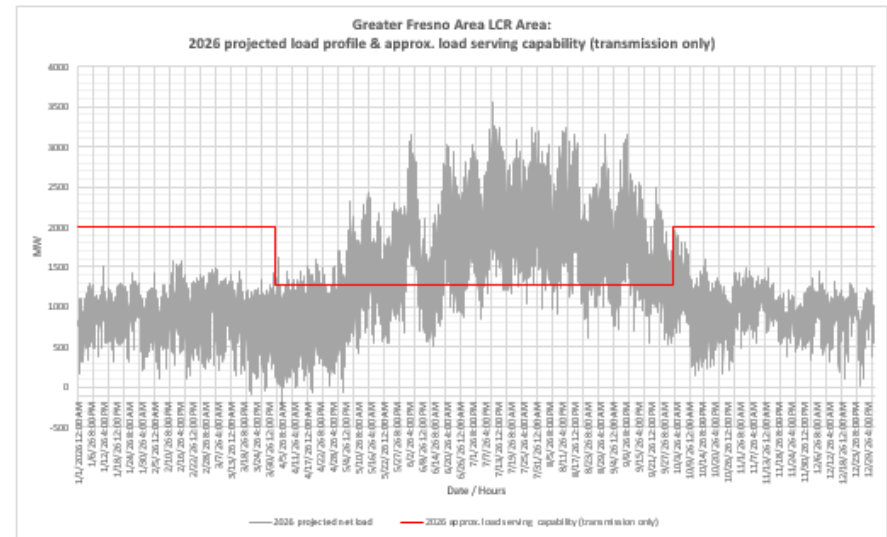
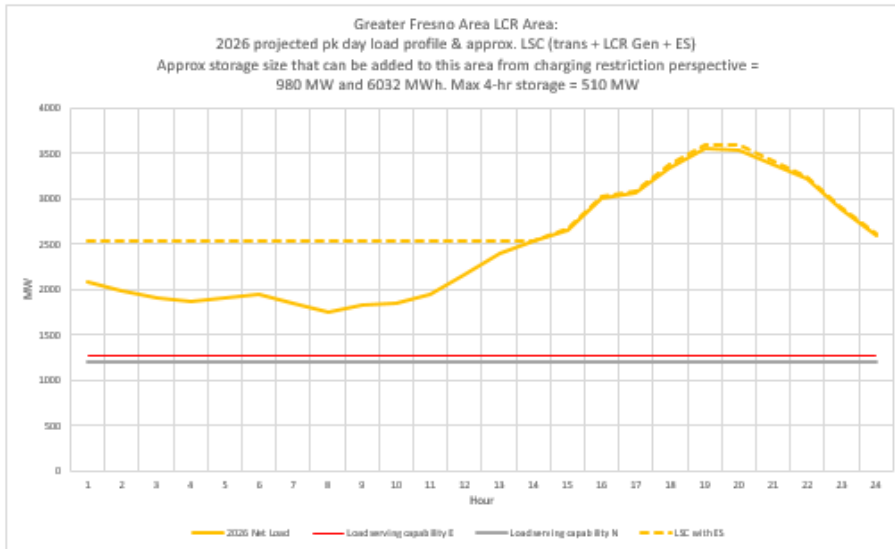


Overall Fresno Area: Requirements

Limit	Category	Limiting Facility	Contingency	2026 LCR (MW)	2030 LCR (MW)
First limit	P6	Kingsburg-Contadina 115 kV Line	Helm-Mccall 230kV Line and Henrietta tap-Mustang 230kV Line	2100	2603

Study Year	Generation Capacity Needed (MW)	NQC Deficiency (MW)	Total MW Need
2026	2100	228	2328
2030	2603	59	2662

Overall Sub-area: Load Profiles



Changes Compared to Previous LCR Requirements

Sub-area	2025		2026		2029		2030	
	Load	LCR	Load	LCR	Load	LCR	Load	LCR
Hanford	237	46	205	29	228	36	212	18
Coalinga	142	105 (78 NQC) (92 Peak)	136	94 (59 NQC) (81 Peak)	134	101 (74 NQC) (88 Peak)	154	9
Borden	175	68 (58 NQC) (64 Peak)	Eliminated due to Project	Eliminated due to Project	Eliminated due to Project		Eliminated due to Project	
Reedley	262	170 (129)	241	128 (77)	253	165 (124)	223	120 (59)
Panoche 115 kV	535	426 (2 NQC) (45 Peak)	518	353	494	404 (23 Peak)	558	381
Wilson 115/70 kV	Flow- Through	435 (177 NQC) (204 Peak)	Flow- Through	381 (92 NQC) (151 Peak)	Eliminated due to Project		Eliminated due to Project	
Herndon	1798	812	1624	700	1775	803	1691	723
Overall	3732	2532	3566	2100	3625	2512	3885	2603

The 2026 overall Fresno requirement has reduced mostly due to load forecast reductions, the 2030 requirement has increased mostly due to load forecast increases.