2025 & 2029 Final LCR Study Results Kern Area

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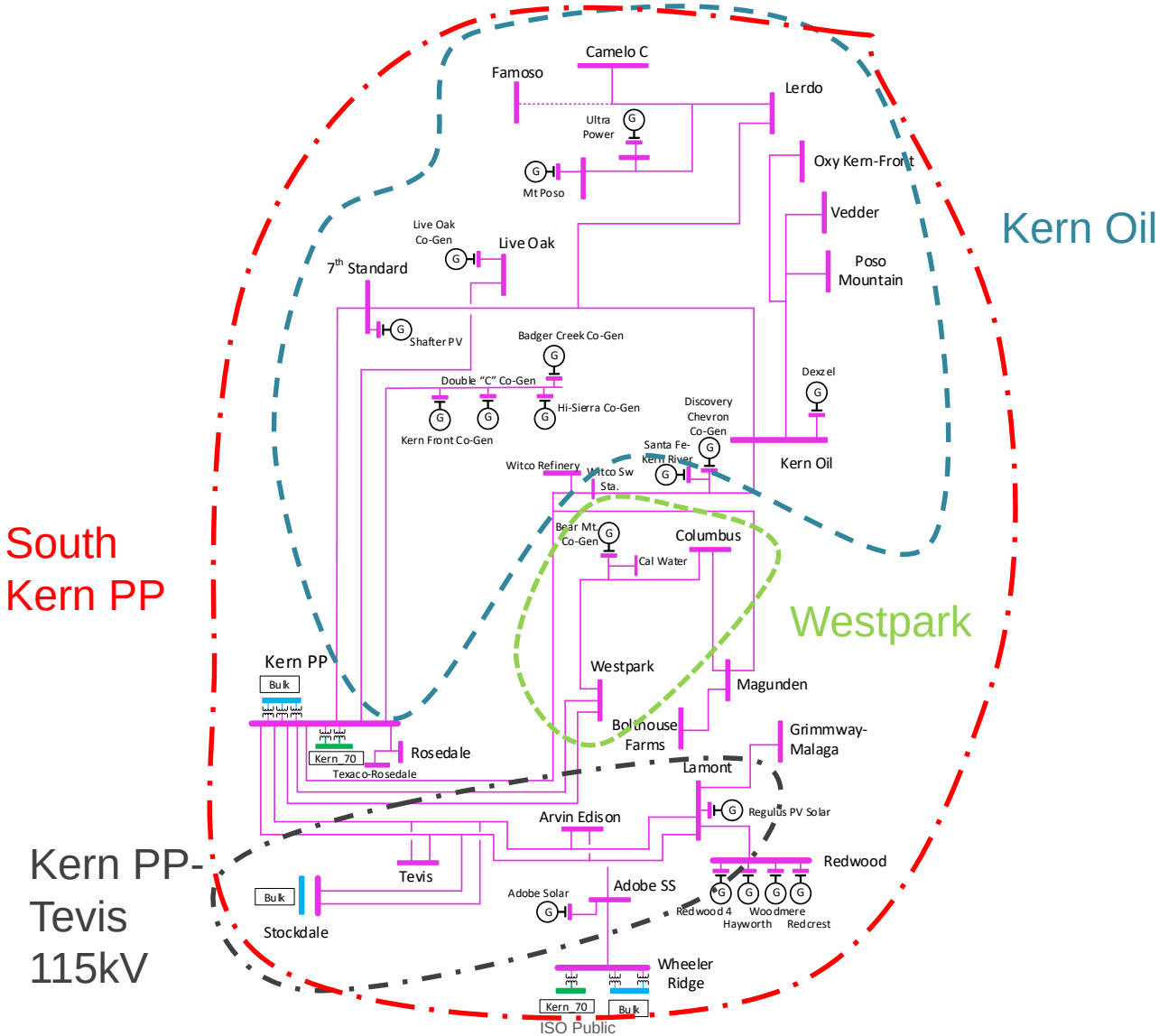
Senior Regional Transmission Engineer

Stakeholder Call

April 11 2024

Kern Area LCR Sub-Areas



Major new projects

Project Name	Expected ISD
Midway-Temblor 115 kV Line Reconductor & Voltage Support	October-2027
Bakersfield Nos. 1 and 2 230 kV Tap Lines Reconductoring	August-2027
Kern PP 115 kV Area Reinforcement	July- 2027
Wheeler Ridge Junction Station Project	Q4-2032

Kern Area Overall: Load and Resources

Load (MW)	2025	2029	Generation (MW)	2025	2029
Gross Load	952	913	Market/ Net Seller	368	368
AAEE	-11	-19	Battery	20	20
Behind the meter DG	0	0	MUNI/QF	9	9
Net Load	**941**	**893**	Solar	43	43
Transmission Losses	8.8	8	Existing 20 minute DR	9	9
Pumps	0	0	Mothballed	0	0
Load + Losses + Pumps	**950**	**902**	**Total Qualifying Capacity**	**449**	**449**

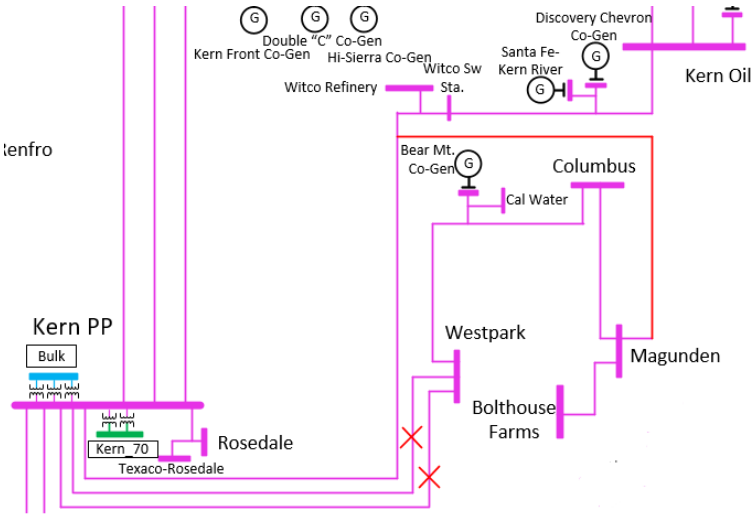
Kern Area LCR

Kern Power-Tevis Sub-Area

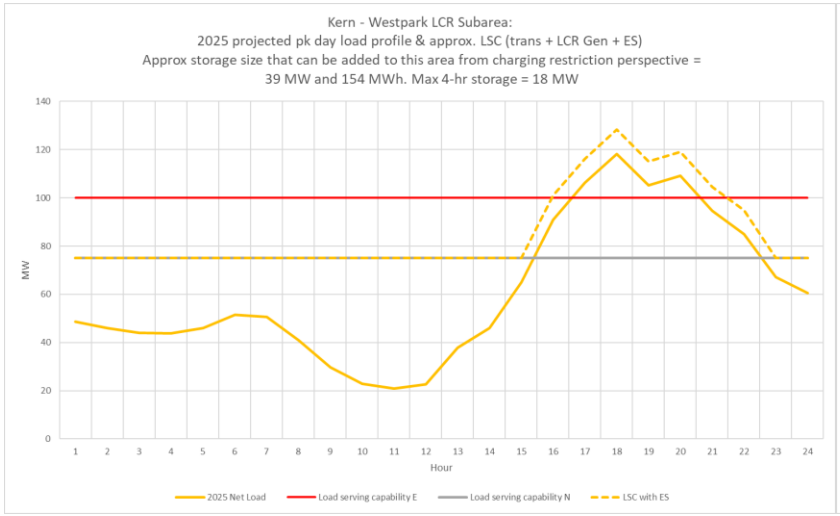
Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2025	N/A	Not Binding		N/A
2029	N/A	Not Binding		N/A

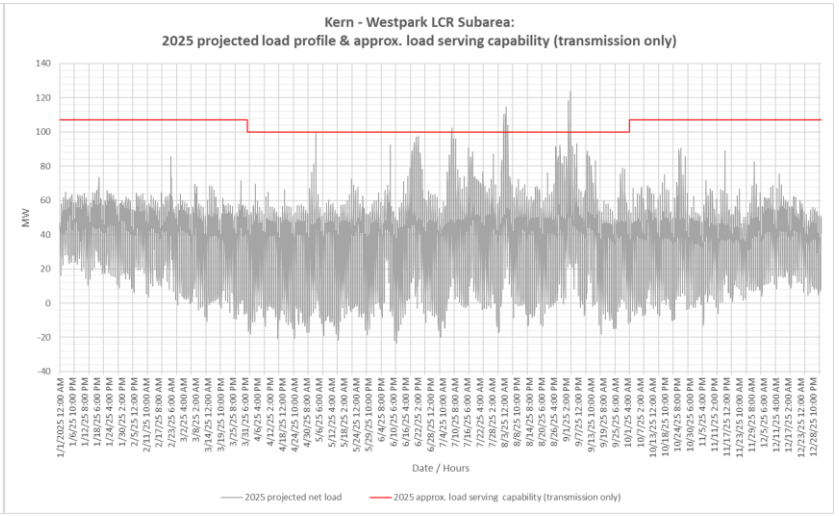
Kern Area LCR
Westpark Sub-Area

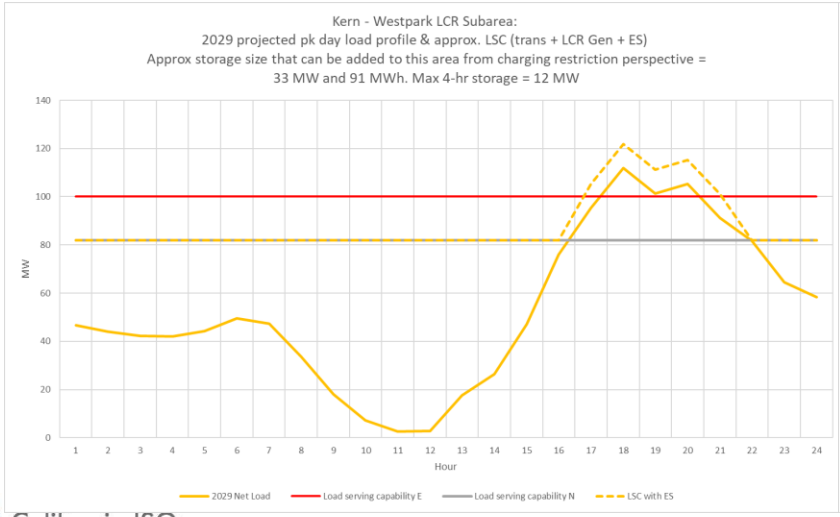
Year	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2025	P7	MAGUNDEN - MAGUDN J 115 kV line	Kern PP-Westpark No. 1 & 2 115 kV Lines	39
2029	P7	MAGUNDEN - MAGUDN J 115 kV line	Kern PP-Westpark No. 1 & 2 115 kV Lines	33

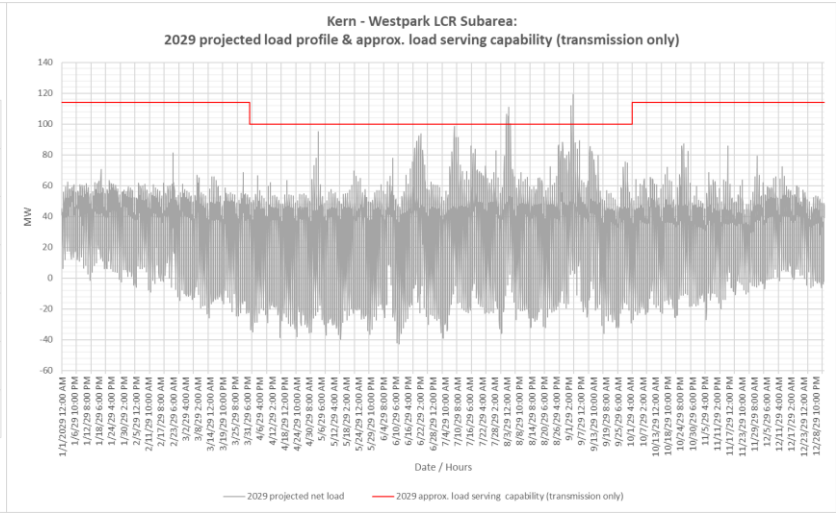


Westpark Sub-area: Load Profiles

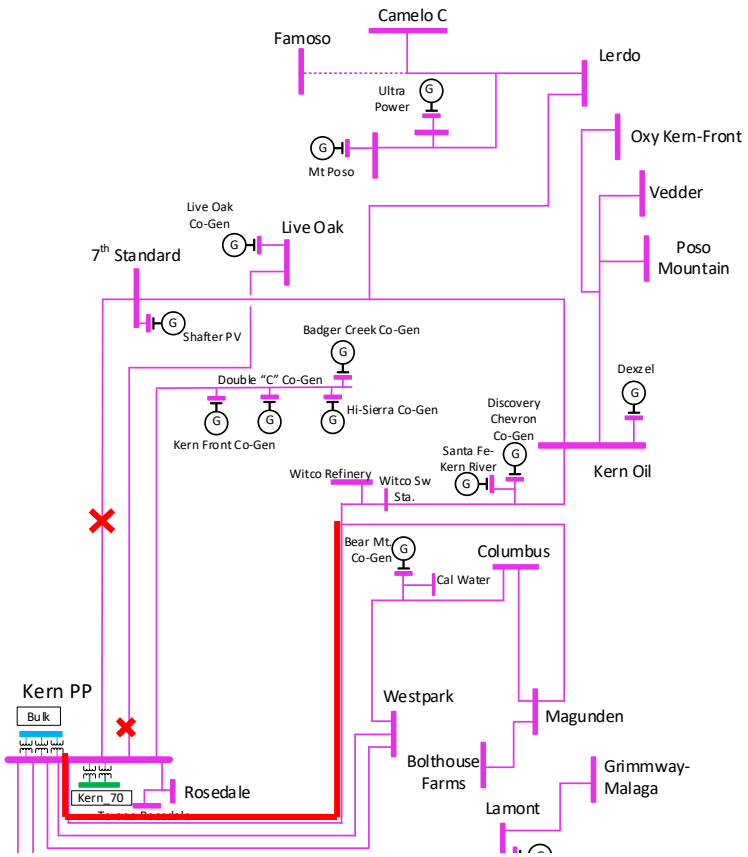








Kern Area LCR
Kern Oil Sub-Area

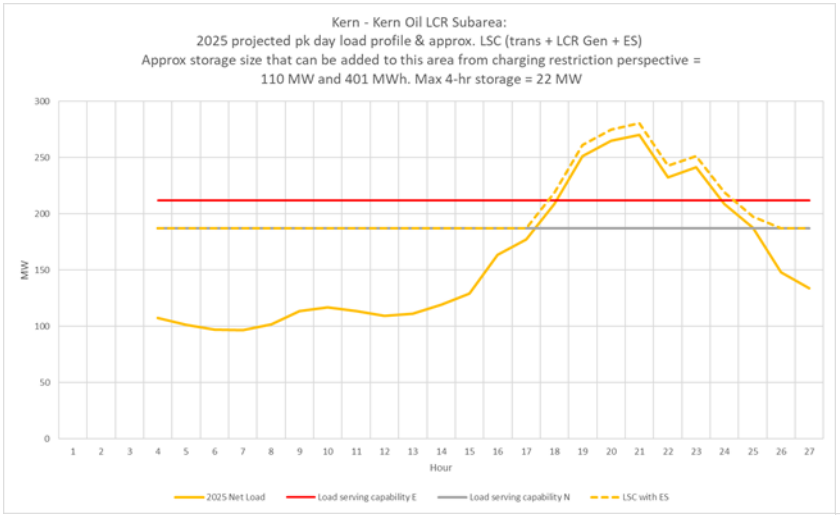


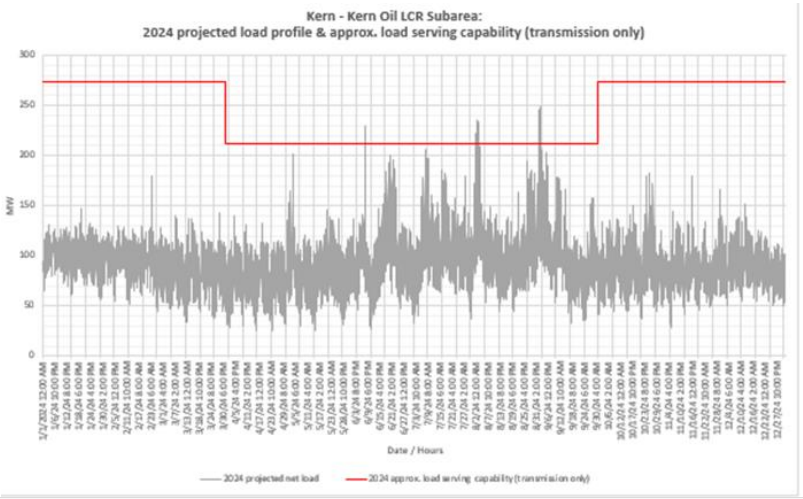
Kern Area LCR
Kern Oil Sub-Area

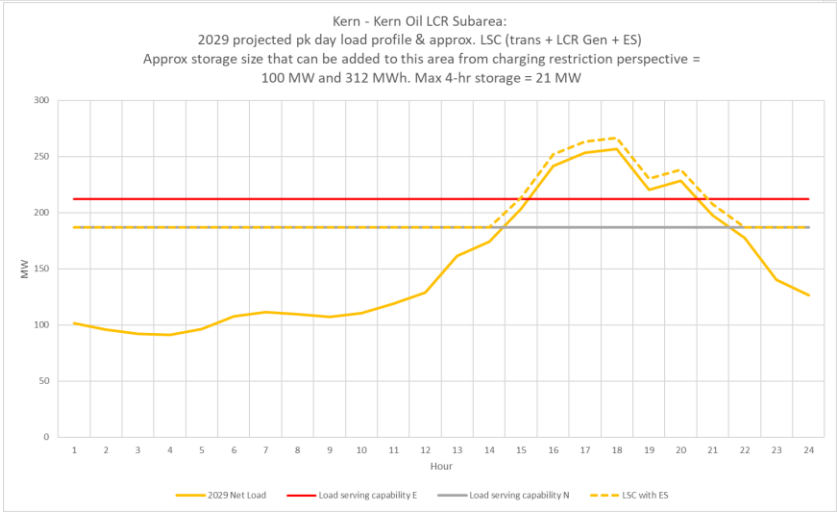
Year	Cat	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2025	P6	Kern Oil - Kern Water 115 kV Line	Kern PP-7th Standard 115 kV lines & Kern PP-Live Oak 115 kV Line	110

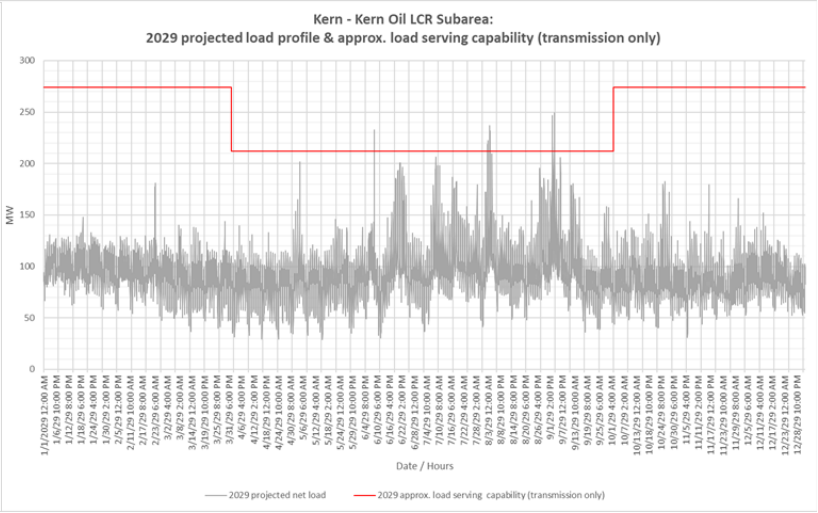
Year	Cat	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2029	P6	Kern Oil - Kern Water 115 kV Line	Kern PP-7th Standard 115 kV lines & Kern PP-Live Oak 115 kV Line	100

Kern Oil Sub-area: Load Profiles



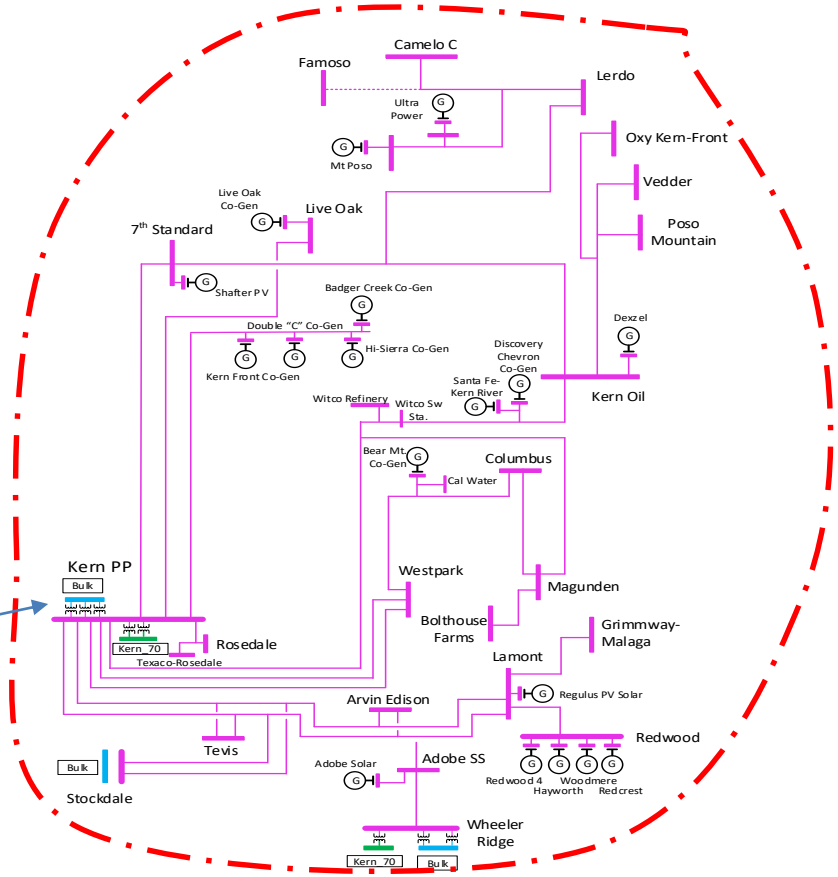






Kern Area LCR
South Kern PP Sub-Area

South Kern PP

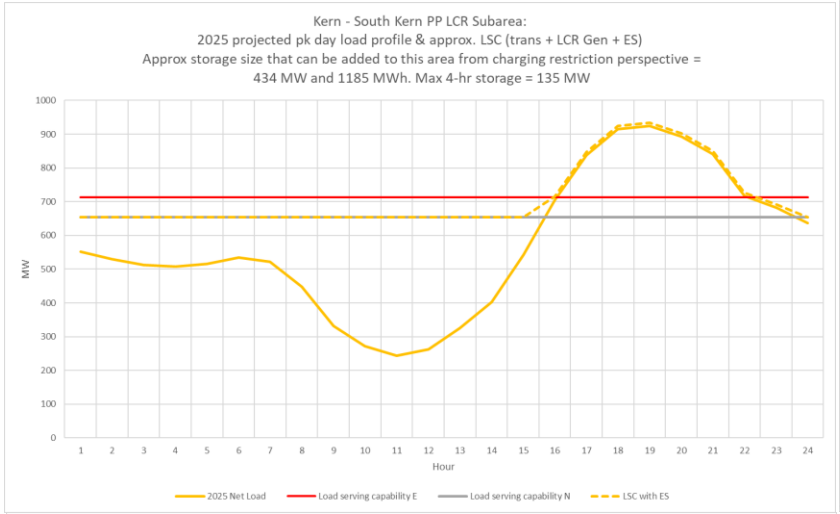


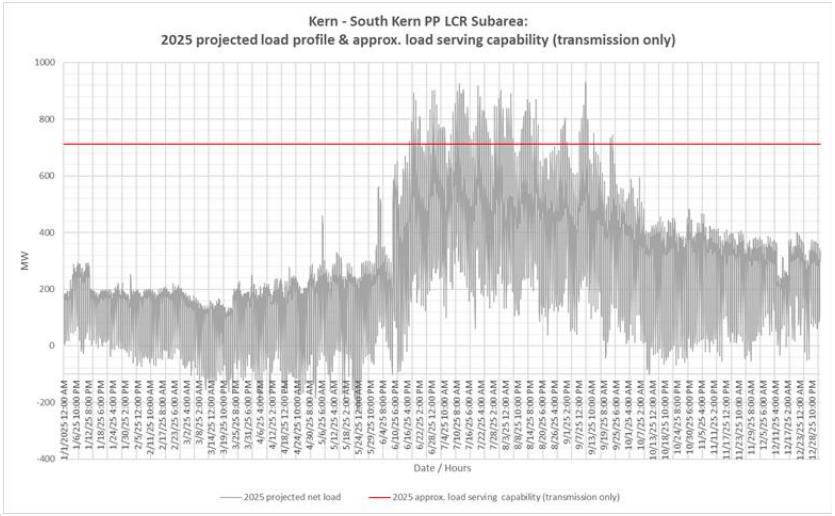
Kern Area LCR
South Kern PP Sub-Area

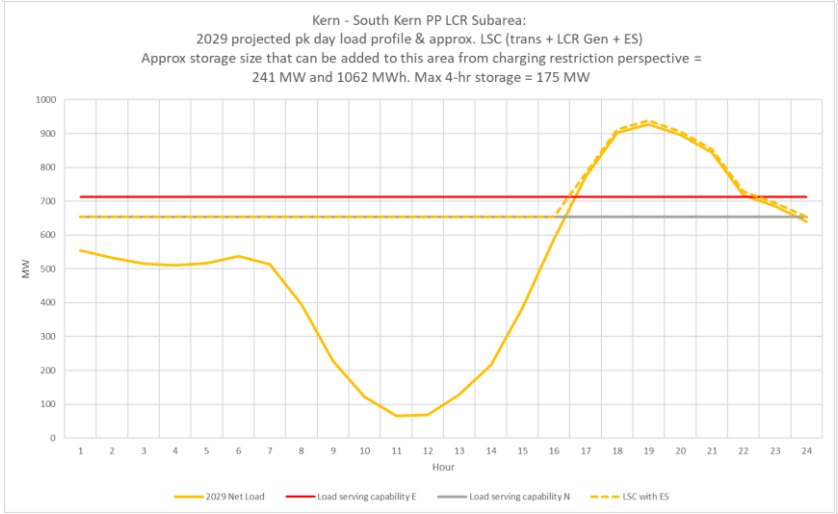
Year	Cat	Limiting Facility	Contingency	LCR (MW) (Deficiency)
2025	P6	Kern 230/115 kV T/F # 5	Kern 230/115 kV T/F # 3 & Kern 230/115 kV T/F # 4	434

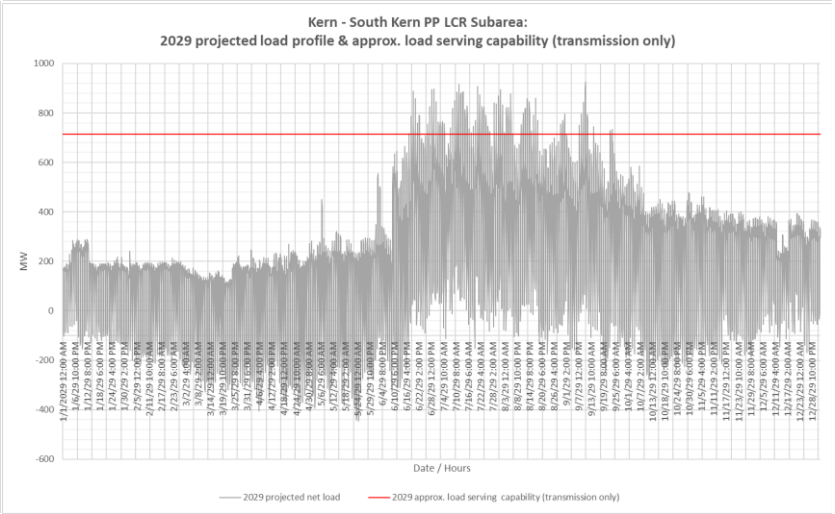
Year	Cat	Limiting Facility*	Contingency	LCR (MW) (Deficiency)
2029	P6	Kern 230/115 kV T/F # 5	Kern 230/115 kV T/F # 3 & Kern 230/115 kV T/F # 4	241

South Kern: Load Profiles









Kern Total LCR Need

2025 LCR Need	Existing Generation Capacity Needed (MW)	NQC Deficiency (MW)	Total MW Need
P6	434	0	434

2029 LCR Need	Existing Generation Capacity Needed (MW)	NQC Deficiency (MW)	Total MW Need
P6	241	0	241

Changes Compared to Previous LCR Requirements

Sub-area	2024		2025		2028		2029	
	Net Load	LCR	Net Load	LCR	Net Load	LCR	Net Load	LCR
Westpark	115	31	130	39	118	33	123	33
Kern Oil	258	127 (10 Peak 7 NQC)	318	110	282	169 (52 Peak 49 NQC)	299	100
KernPP-Tevis 115 kV	136	13 (13 Peak 0 NQC)	136	0	141	18 (18 Peak 0 NQC)	128	0
South Kern	925	454 (70 Peak 27 NQC)	952	434 (28 Peak 0 NQC)	966	560 (176 Peak 133 NQC)	902	241

The 2025 LCR need reduction is due to a small increase in rating for the South Kern sub-area limiting component.

The 2029 LCR need reduction is due mostly to load forecast reduction and the Kern 115 kV Reinforcement project.