



2021 & 2025 Draft LCR Study Results Big Creek/Ventura Area

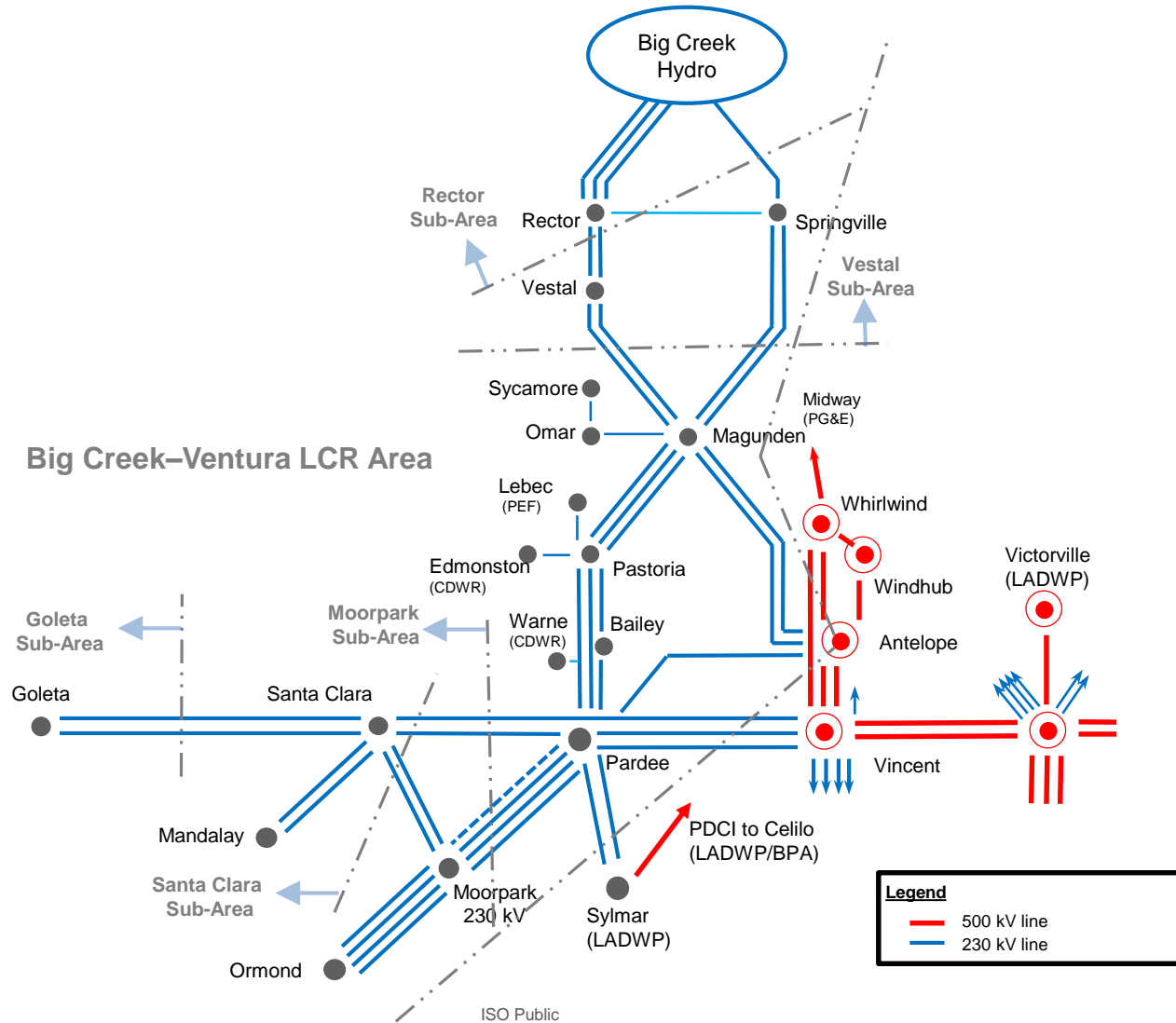
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Regional Transmission Engineer Lead

Stakeholder Call

March 16, 2020

Big Creek - Ventura Area Transmission System



Major transmission projects

- Big Creek Corridor Rating Increase Project (Completed)
- Pardee-Moorpark No. 4 230 kV Transmission Project (ISD-12/31/2020)

Resource Assumptions

- Ormond Beach is assumed to be available in 2021 but not in 2025
- Generators that have given notice to retire or mothball (Ellwood, E.F. Oxnard, and Channel Islands Power) are assumed to be unavailable
- CPUC-approved battery storage resources for the Santa Clara area (195 MW/780 MWh) are modeled

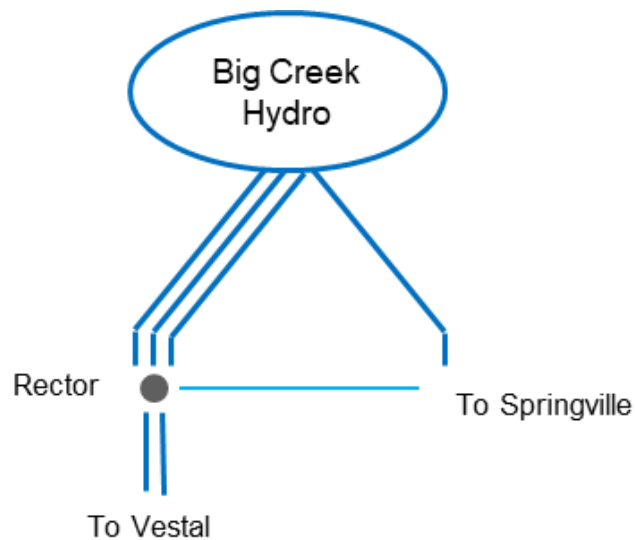
Load and Resources

Load (MW)			Generation NQC (MW)* (Sept.)		
	2021	2025		2021	2025
Gross Load	4,435	4,589	Market/Net Seller	2,554	2,554
AAEE*	-30	-76	Solar	152	152
Behind the meter PV*	-294	-403	Muni	305	305
Net Load	4111	4,110	QF	64	64
Transmission Losses	65	64	LTPP Pref. Res & ES	207	207
Pumps	275	275	Demand Response	100	100
Load+Losses+Pumps	4,451	4,449	Total Qualifying Capacity	3,381	3,381

* Generation capacity excludes Ormond Beach, Ellwood, E.F. Oxnard (Oxgen) and Channel Islands Power (Camgen)

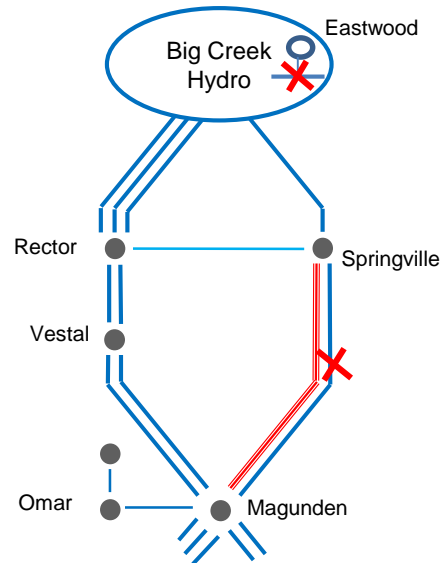
Rector Sub-Area Requirements

Category	Limiting Facility	Contingency	LCR (MW)	
			2021	2025
	LCR for Rector is satisfied by the LCR of the larger Vestal sub-area		0	0



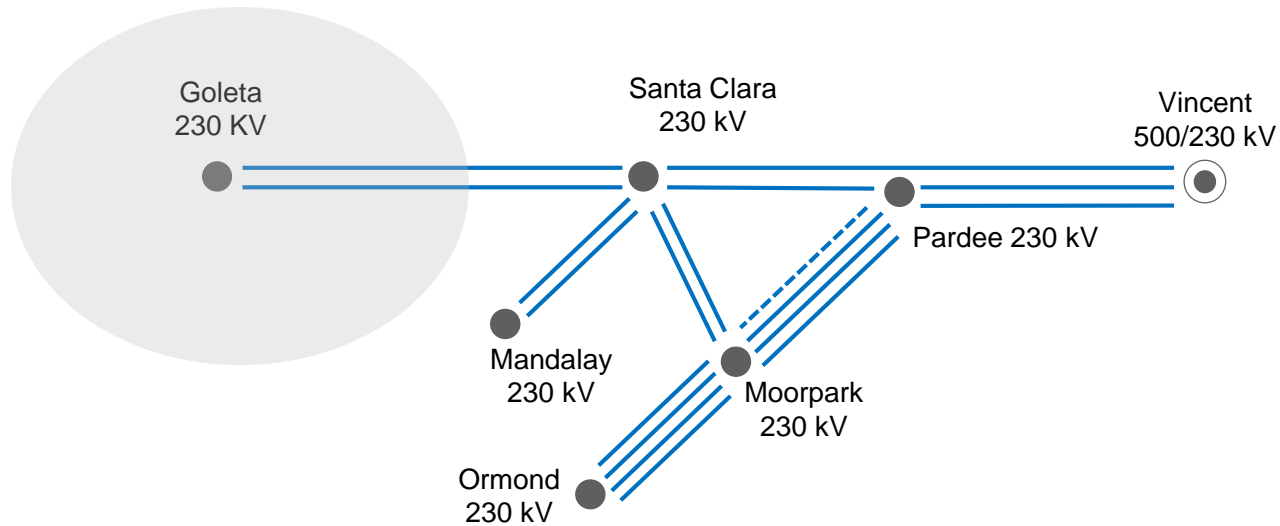
Vestal Sub-Area Requirements

Category	Limiting Facility	Contingency	LCR (MW)	
			2021	2025
P3/P6	Magunden–Springville #2 230 kV line	Magunden–Springville #1 230 kV line with Eastwood out of service	304	310



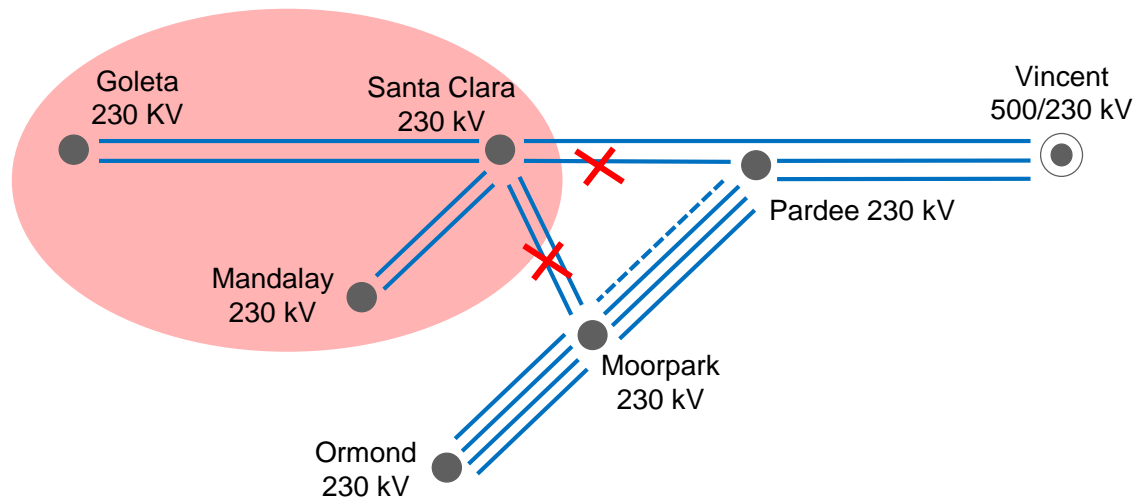
Goleta Sub-Area Requirements

Category	Limiting Facility	Contingency	LCR (MW)	
			2021	2025
	LCR for Goleta is satisfied by the LCR of the larger Santa Clara sub-area		0	0



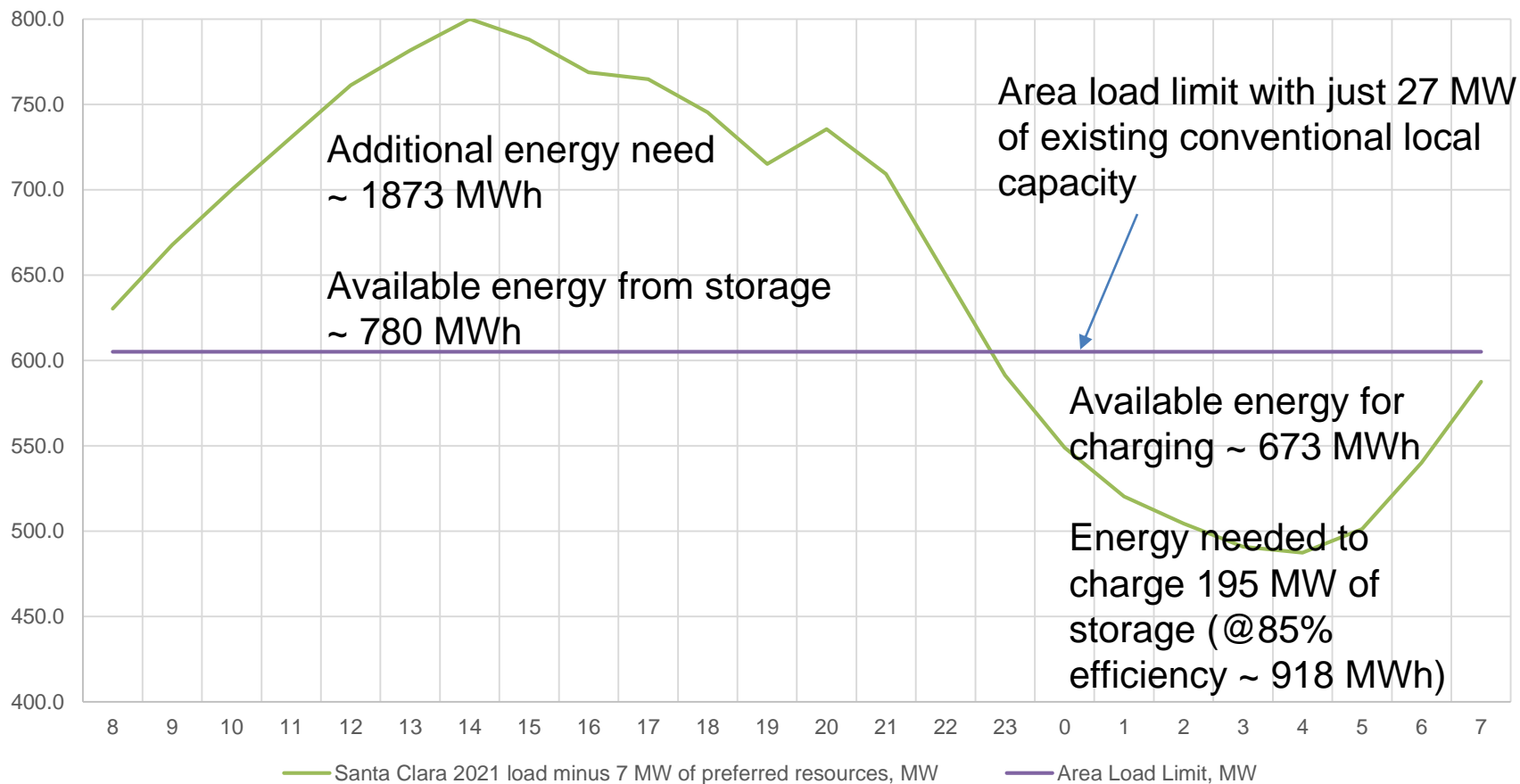
Santa Clara Sub-Area Requirements

Category	Limiting Facility	Contingency	LCR (MW)	
			2021	2025
Extreme	Voltage Collapse	Pardee–Santa Clara 230 kV line followed by Moorpark–Santa Clara #1 and #2 230 kV DCTL	229	225



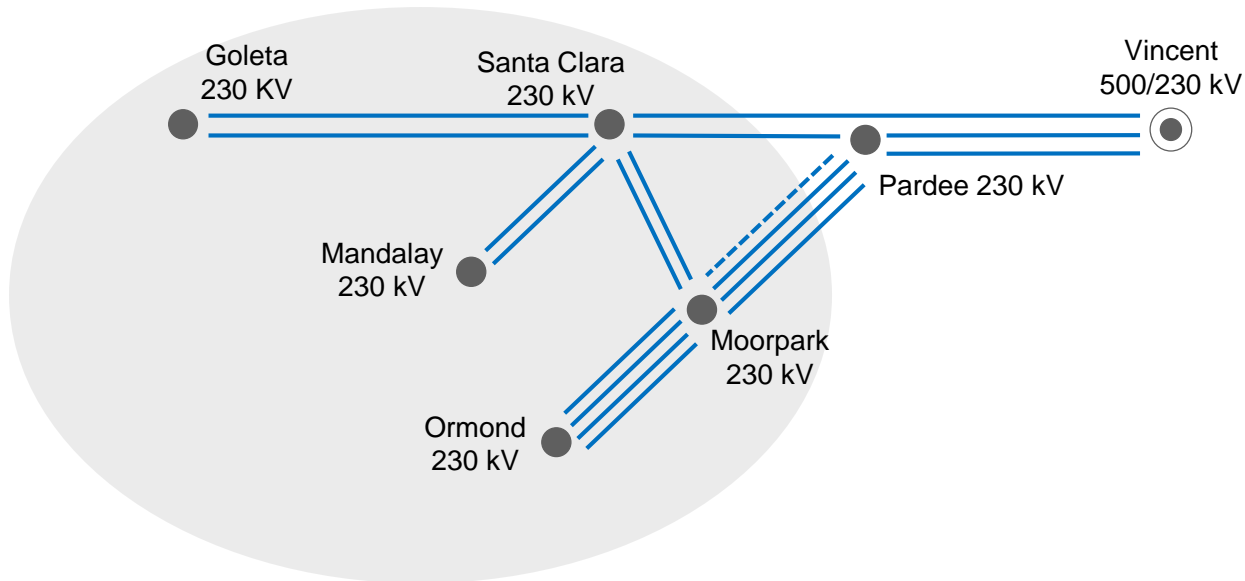
2021 Santa Clara sub-area local energy need and charging capability (based on 2019 recorded load shape)

- Shows scenario where 229 MW LCR is to be filled with 195 MW of contracted storage, 7 MW of existing preferred resources and the remainder 26 MW with gas



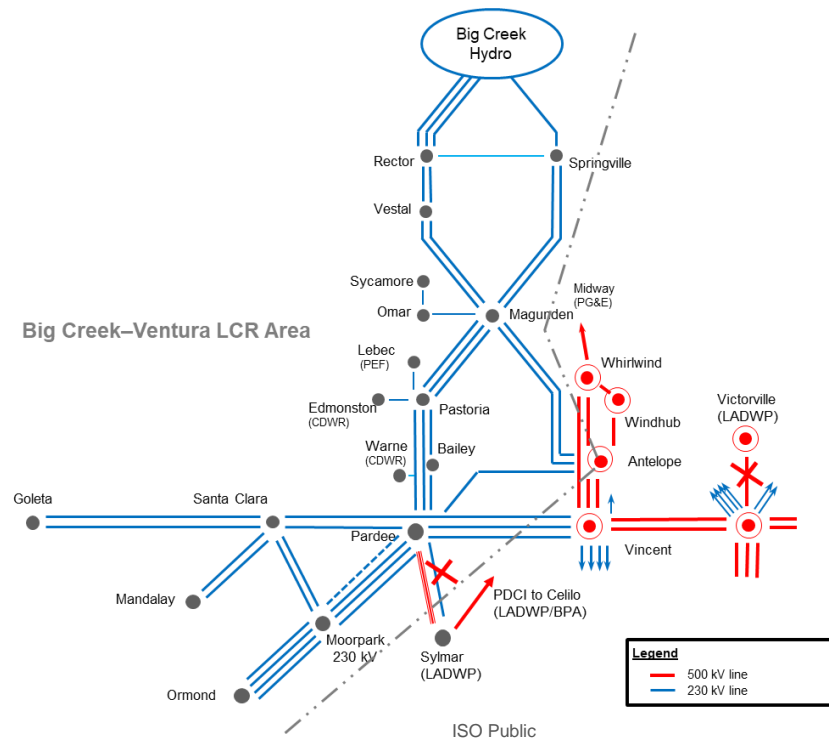
Moorpark Sub-Area Requirements

Category	Limiting Facility	Contingency	LCR (MW)	
			2021	2025
	None identified	None	0	0



Overall Big Creek-Ventura Area Requirements

Category	Limiting Facility	Contingency	LCR (MW)	
			2021	2025
P6	Sylmar-Pardee #1 or #2 230 kV line	Overlapping outage of Lugo-Victorville 500 kV line and one Sylmar-Pardee 230 kV line	2,296	2,468



Big Creek Area Total LCR Need

2021 LCR Need	Existing Generation Capacity Needed (MW)	Deficiency (MW)	Total MW Need
Category P6	2,296	0	2,296

2025 LCR Need	Existing Generation Capacity Needed (MW)	Deficiency (MW)	Total MW Need
Category P6	2,468	0	2,468

Changes Compared to Last year's LCR Results - 2021

Sub-Area	2020		2021		Reason for LCR Change
	Load (MW)	LCR (MW)	Load (MW)	LCR (MW)	
Rector	810	-	722	-	
Vestal	1,315	425	1,184	304	Load decreased
Goleta	320	-	242	-	
Santa Clara	898	288-298	807	229	Load decreased
Moorpark	1,780	514	1,532	0	Moorpark–Pardee 230 kV Project
Overall Big Creek Ventura	4,956	2,410	4,386	2,296	Load decreased

* Load values do not include losses

Changes Compared to Last Year's LCR Results - 2025

Sub-Area	2024		2025		Reason for LCR Change
	Load (MW)	LCR (MW)	Load (MW)	LCR (MW)	
Rector	810	-	737	-	
Vestal	1,307	461	1,199	310	Load decreased
Goleta	316	27	244	0	Load decreased
Santa Clara	891	309-348	793	225	Load decreased
Moorpark	1767	-	1,492	-	
Overall Big Creek Ventura	4,888	2,577	4,370	2,468	Load decreased

* Load values do not include losses