

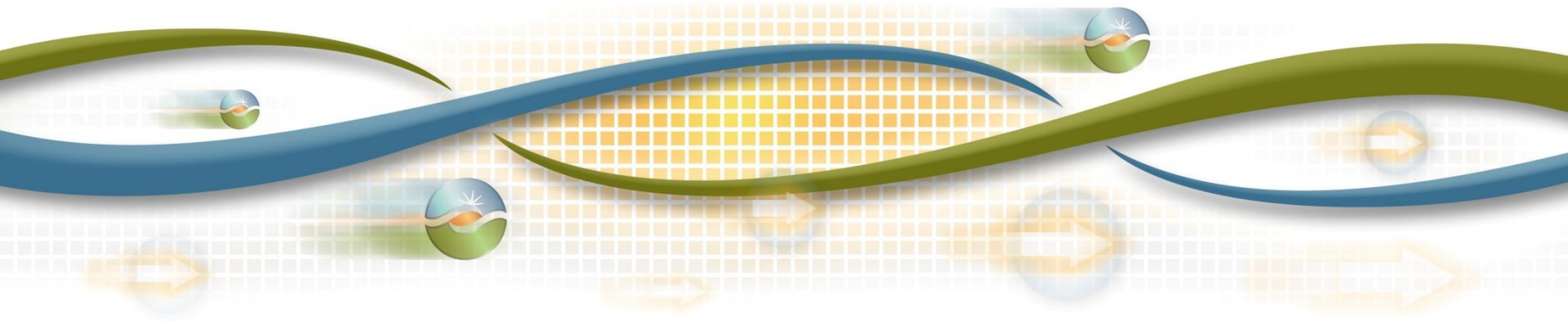
2016 and 2020 Final LCR Study Results - Kern

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Stakeholder Teleconference

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Fresno and Kern LCR Areas



Kern Load and Resources (MW)

		2016	2020
Load	=	853	282
AAEE	=	-9	-4
Transmission Losses	=	7	1
Total Load	=	851	279
Market Generation/Net Seller	=	302	99
New Market/Unit Generation	=	128	20
Muni Generation	=	0	0
QF/Self Generation	=	99	55
Total Qualifying Capacity	=	529	174

Kern Area LCR

2016 West Park Sub-Area

Limiting Contingencies:

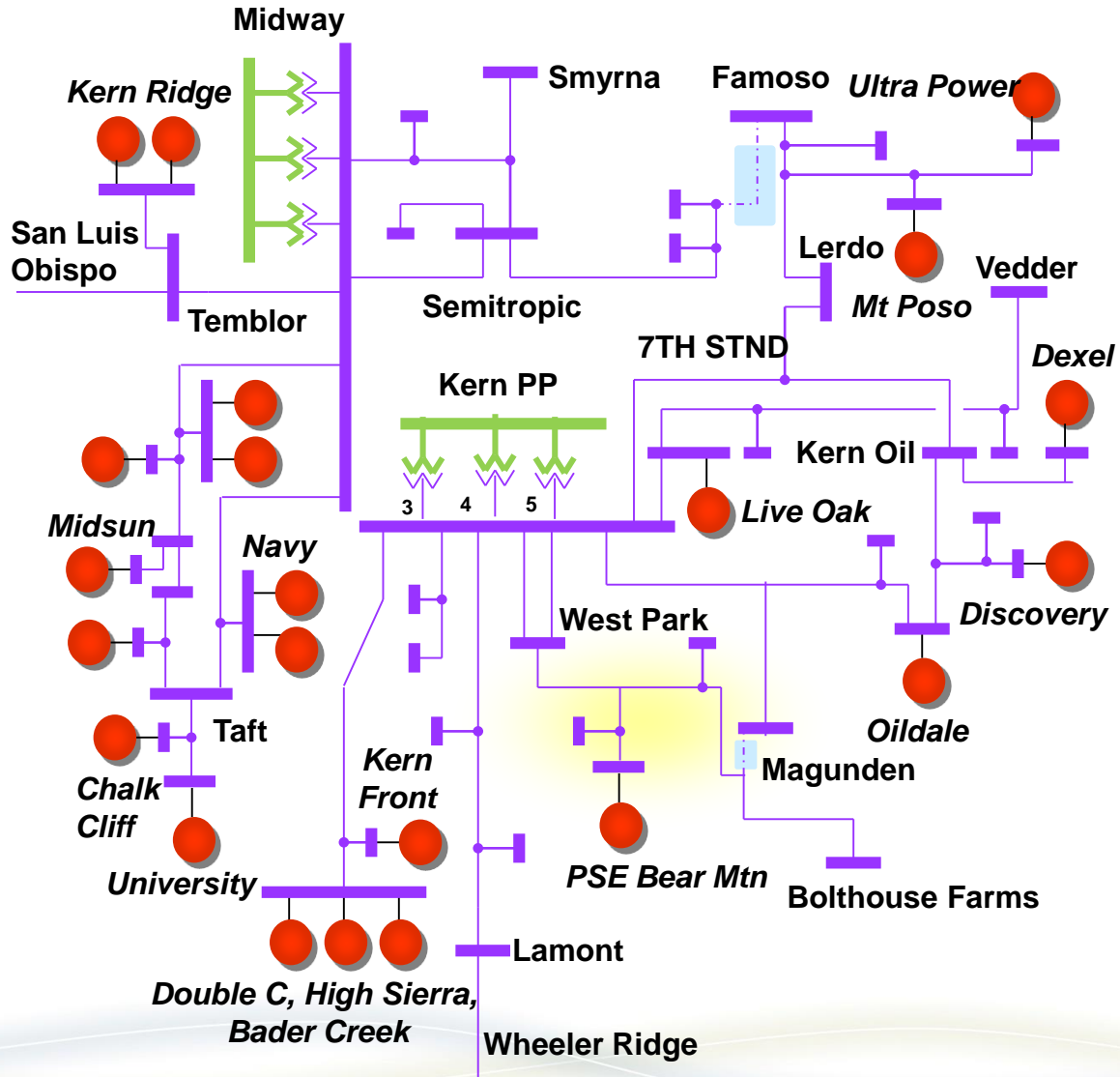
- West Park - No longer exists
- Due to Normally Open Magunden CB 122

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	0	0

Including:

QF	0	0
Muni	0	0
Deficiency	0	0



Kern Area LCR

2016 Kern Oil Sub-Area

Limiting Contingencies:

Category B:

- G-1/L-1: Kern PP-Magunden-Witco 115 kV with PSE Live Oak generation out of service
- Constraint: Kern PP-Live Oak 115 kV

Category C:

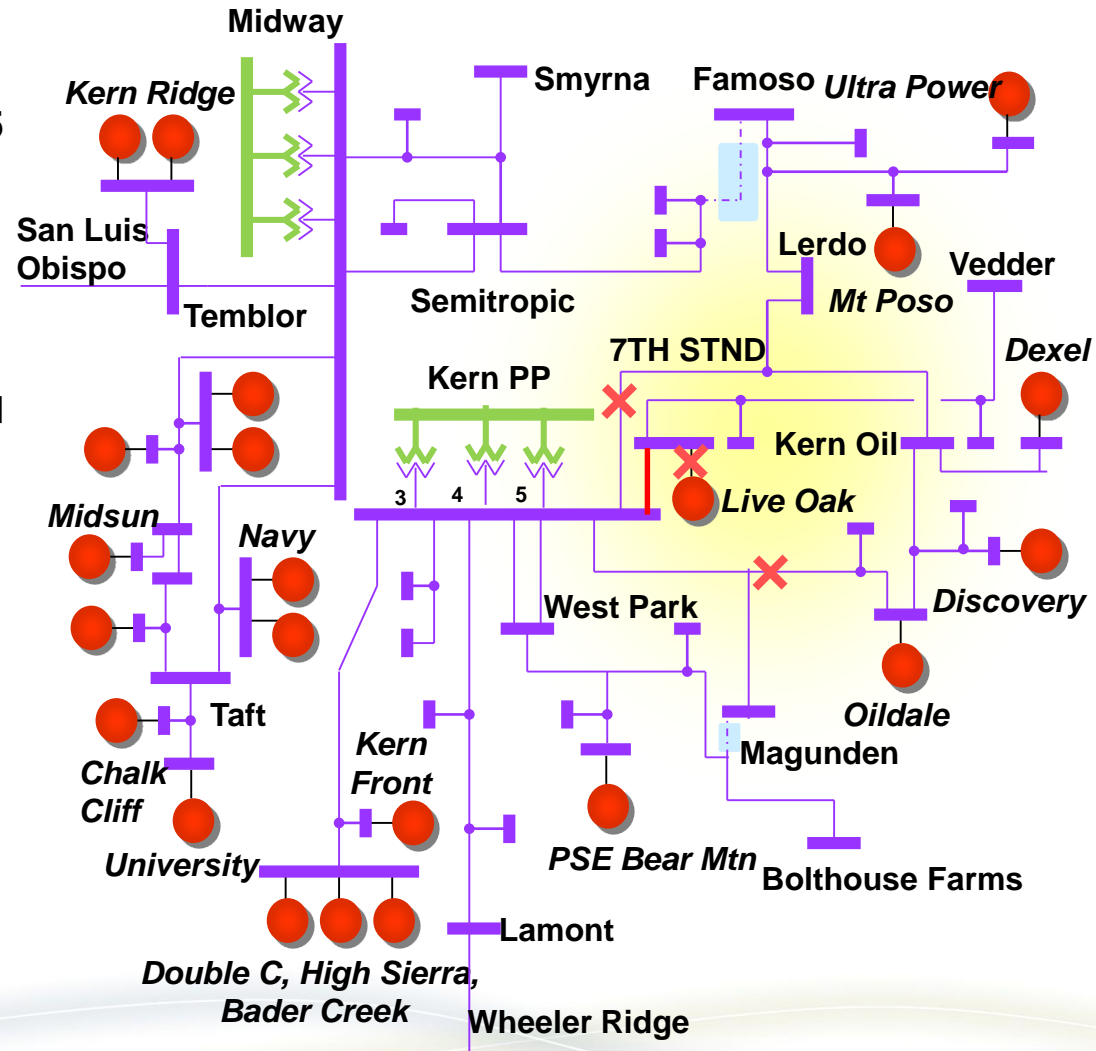
- L-1/L-1: Kern PP-Magunden-Witco and Kern PP-7th Standard 115 kV lines
- Constraint: Kern PP-Live Oak 115 kV

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	133	135

Including:

QF	55	55
Muni	0	0
Deficiency	0	0



Kern Area LCR

2016 South Kern PP Sub-Area

Limiting Contingencies:

Category B:

- T-1: Kern PP #5 230/115 kV
- Constraint: Kern #4 230/115 kV

Category C:

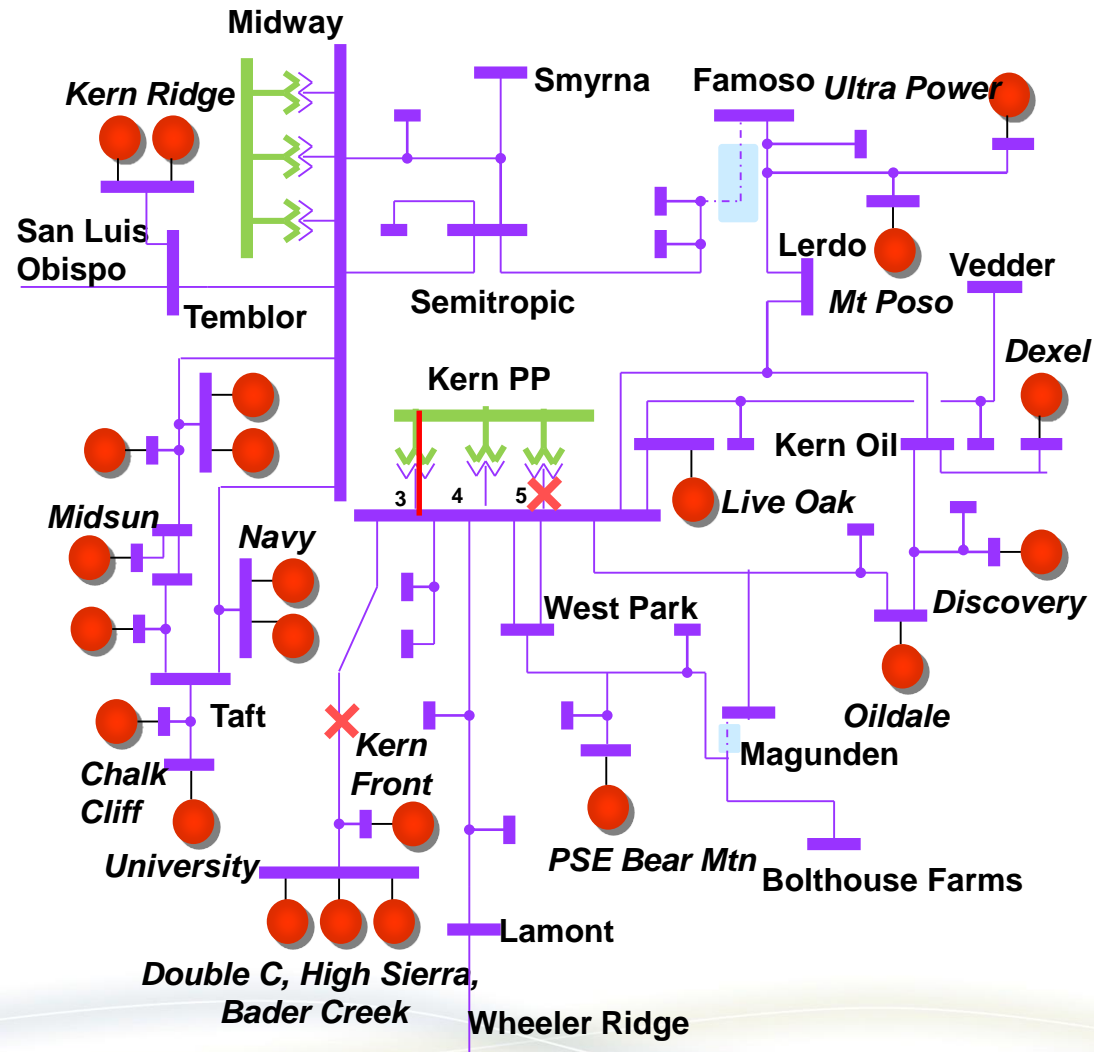
- L-1/T-1 Kern-Kern Front 115 kV & Kern PP #5 230/115 kV
- Constraint: Kern PP #3 230/115 kV

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	214	400

Including:

QF	99	99
Muni	0	0
Deficiency	0	0



Kern Area LCR

2020 West Park Sub-Area

Limiting Contingencies:

None.

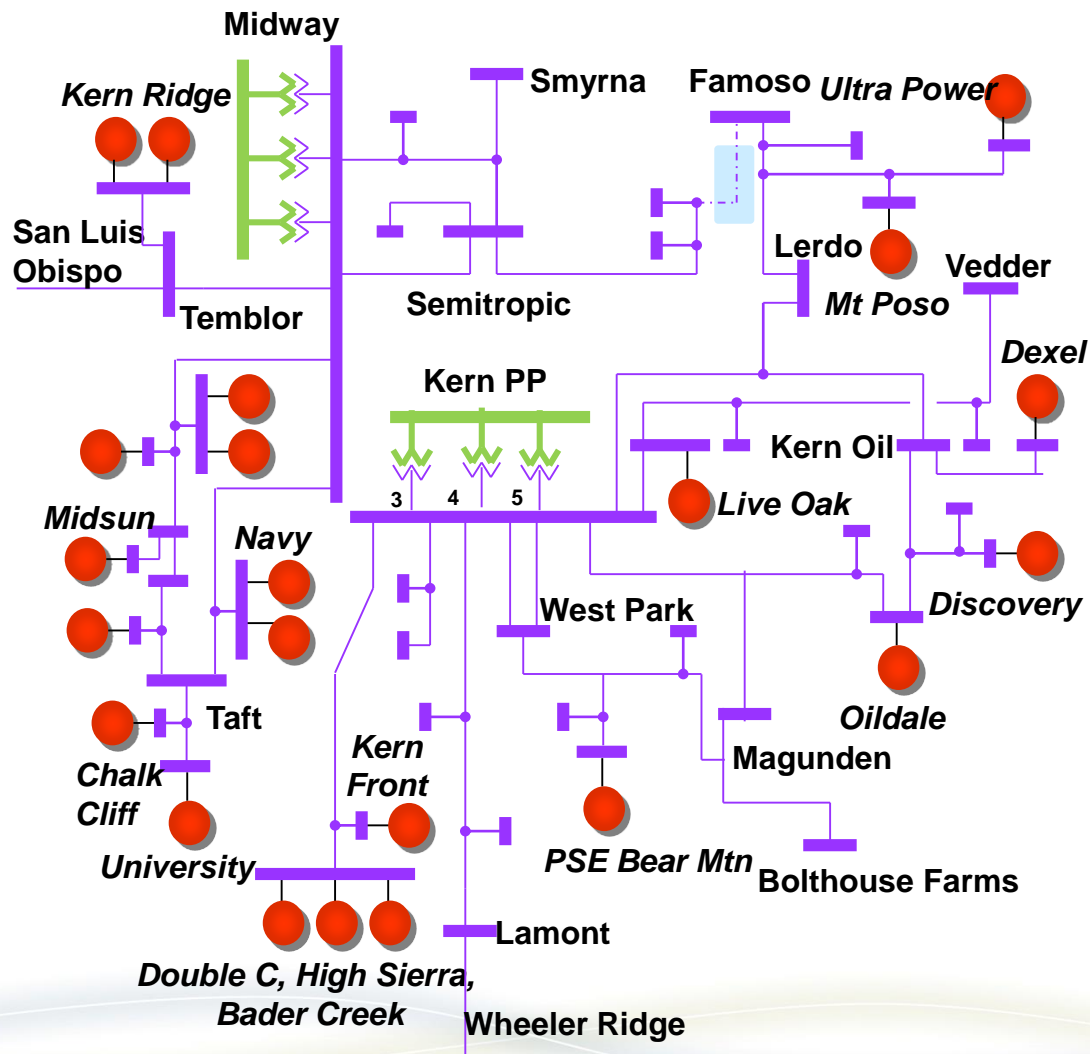
Eliminated due to Kern PP 115 kV area reinforcement.

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	0	0

Including:

QF	0	0
Muni	0	0
Deficiency	0	0



Kern Area LCR

2020 Kern Oil Sub-Area

Limiting Contingencies:

Category B:

- G-1/L-1: Kern PP-Magunden-Witco 115 kV with PSE Live Oak generation out of service
- Constraint: Kern PP-Live Oak 115 kV

Category C:

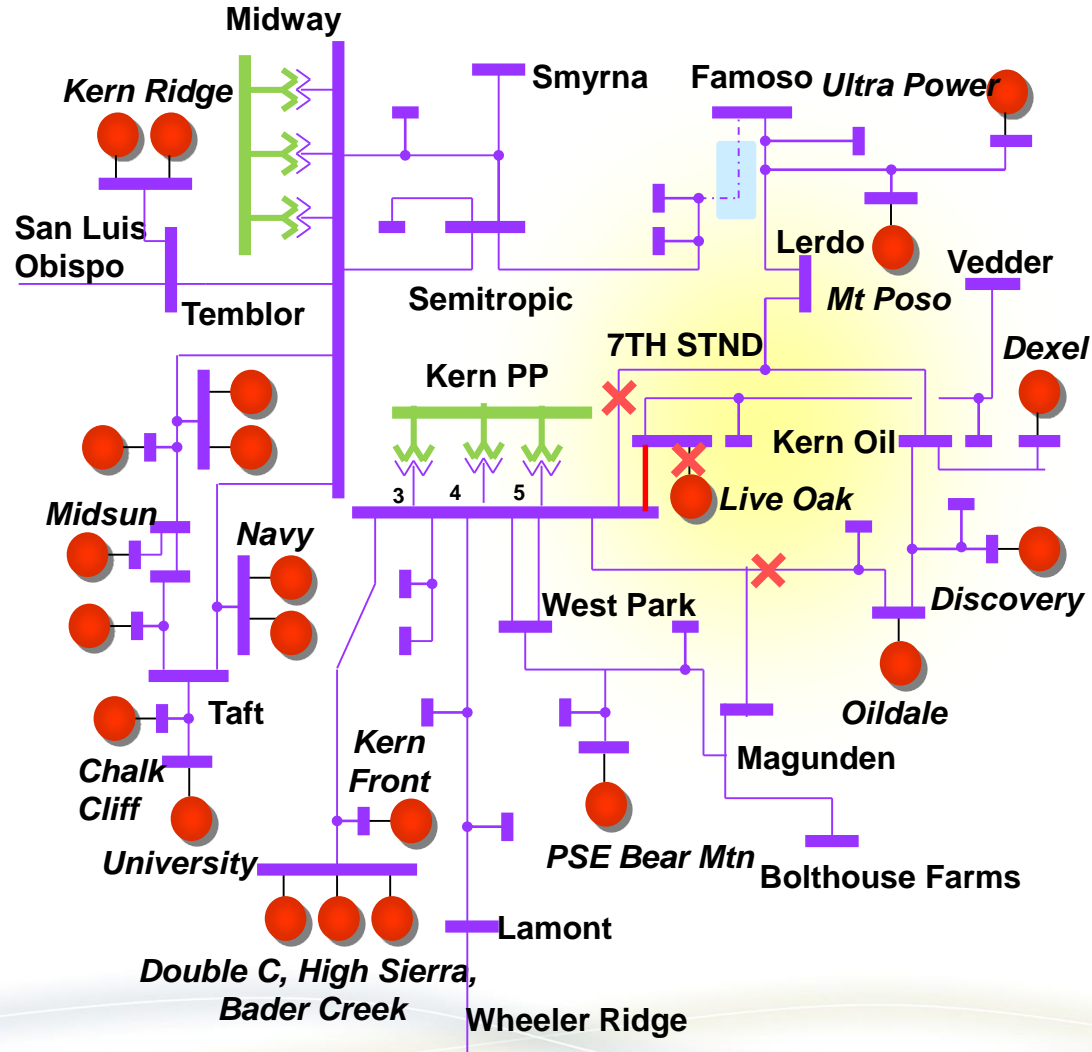
- L-1/L-1: Kern PP-Magunden-Witco and Kern PP-7th Standard 115 kV lines
- Constraint: Kern PP-Live Oak 115 kV

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	132	135

Including:

QF	55	55
Muni	0	0
Deficiency	0	0



Kern Area LCR

2020 South Kern PP Sub-Area

No additional LCR is needed. Area is now redefined and includes just the new Kern Oil Sub-area

Limiting Contingencies:

Category B:

- T-1: Kern PP #5 230/115 kV Bank
- Constraint: Kern PP #3 230/115 kV

Category C:

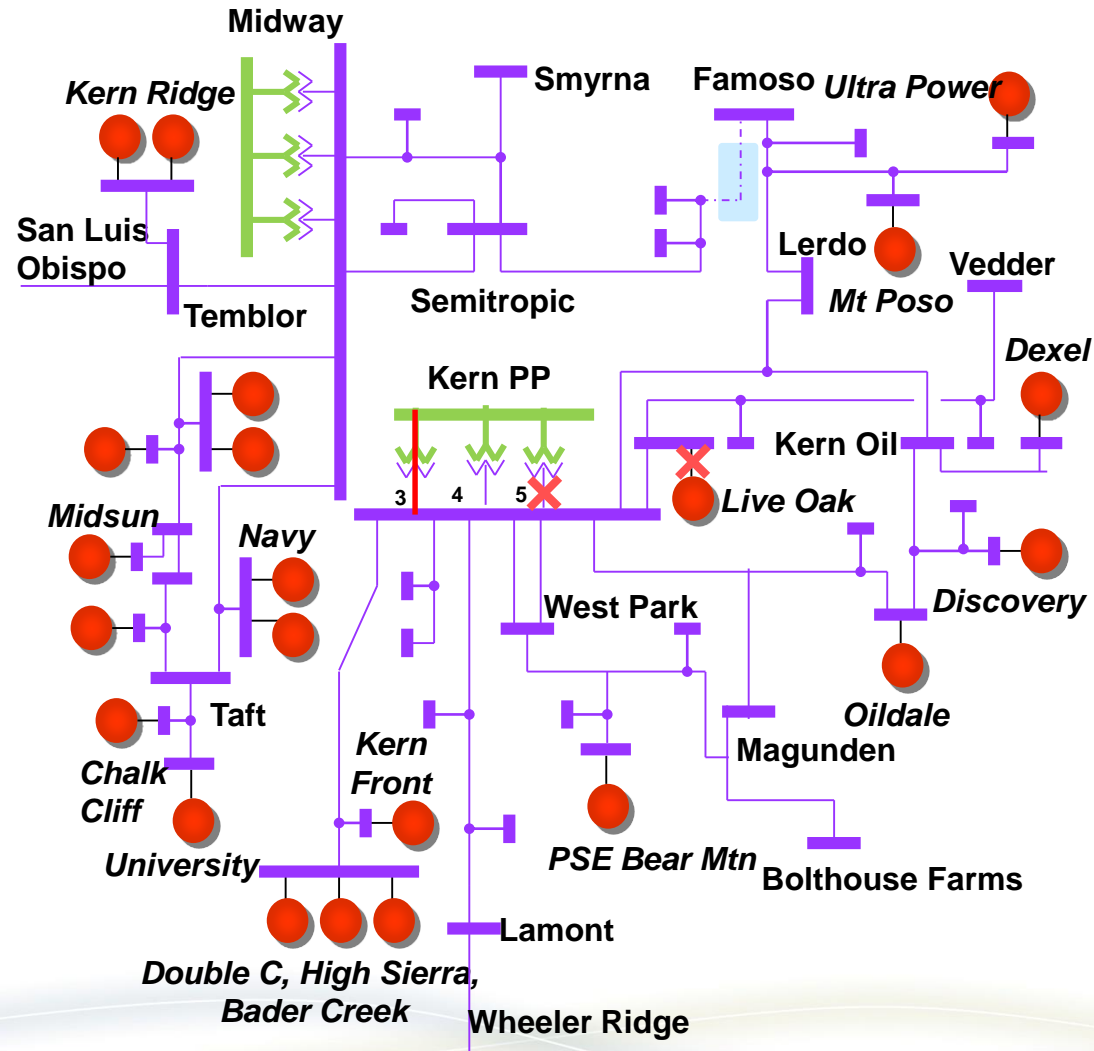
- G-1/T-1 Kern PP #5 230/115 kV Bank with PSE Live Oak generation out of service
- Constraint: Kern PP #3 230/115 kV Bank

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	36	80

Including:

QF	99	99
Muni	0	0
Deficiency	0	0



Changes

Since last year:

- 1) West Park-Magunden 115 kV normally opened at Magunden (CB 122)
- 2) Identified a new Kern Oil sub-area
- 3) 2016 area load has increased by 120 MW from 2015
- 4) 2016 LCR has decreased by 37 MW from 2015 due to the Kern PP #4 230/115 kV transformer upgrade
- 5) Due to pocket redefinition the 2020 load total is down by 466 MW
- 6) 2020 LCR has decreased by 58 MW from 2019 due to area redefinition resulting from new transmission projects in the area

Since last stakeholder meeting:

- 1) Updated NQC
- 2) Before June 1, 2016 in-service date for the Kern PP #4 230/115 kV transformer upgrade

Your comments and questions are welcome.

For written comments, please send to: RegionalTransmission@caiso.com