



California ISO
Shaping a Renewed Future

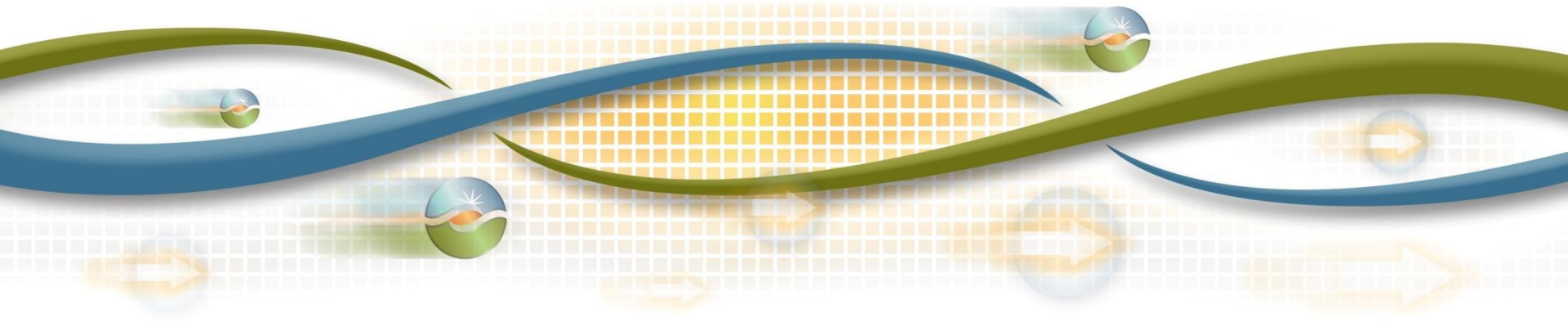
2013 Final LCR Study Results Fresno and Kern Local Areas

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Stakeholder Meeting

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Fresno and Kern LCR Areas



Kern Area Overview

Area Generation, Load and Transmission

Kern LCR Area

Total Generation and Load:

- Generation (NQC plus new unit): 584
- Load (1-in-10 Summer-Peak): **1311 MW**

Transmission Upgrades:

- Navy 35 load and self-gen transferred to Midway-Elk Hills 230 kV line.

New resources:

- One new generator (Q340)

Kern Area LCR

Kern PP Sub-Area

Limiting Contingencies:

Category B:

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

Category C:

- T-1: Kern PP 230/115 kV bank #5
- L-1: Kern PP – Double C Jct. 115 kV line

Constrained Elements:

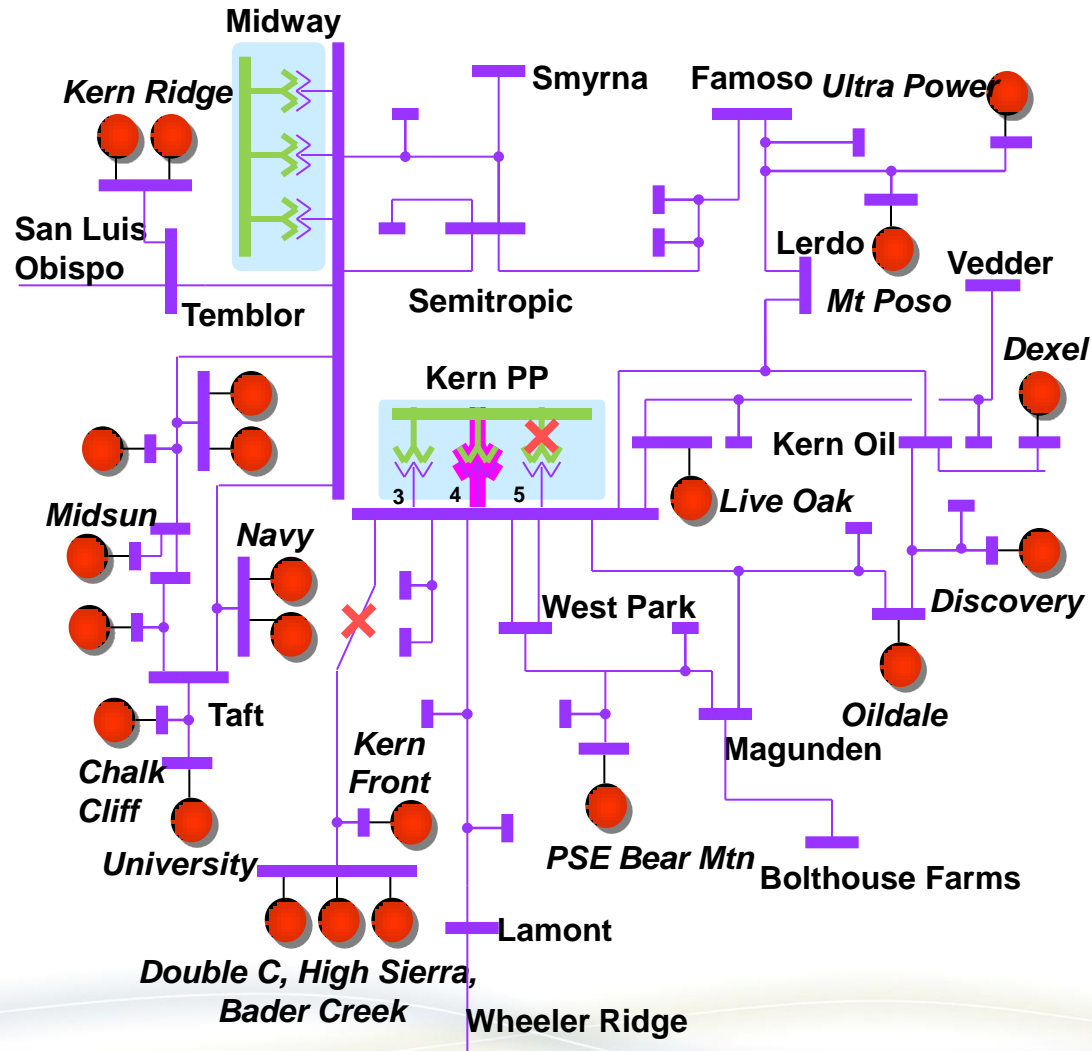
- Kern PP 230/115 kV bank #4

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	295	483

Including:

QF	584	584
Muni	0	0
Deficiency	0	0



Kern Area LCR

West Park Sub-Area

Limiting Contingencies:

Category B:

- None

Category C5

- L-1: Kern West Park # 1
- L-1: Kern West Park # 2

Constrained Elements:

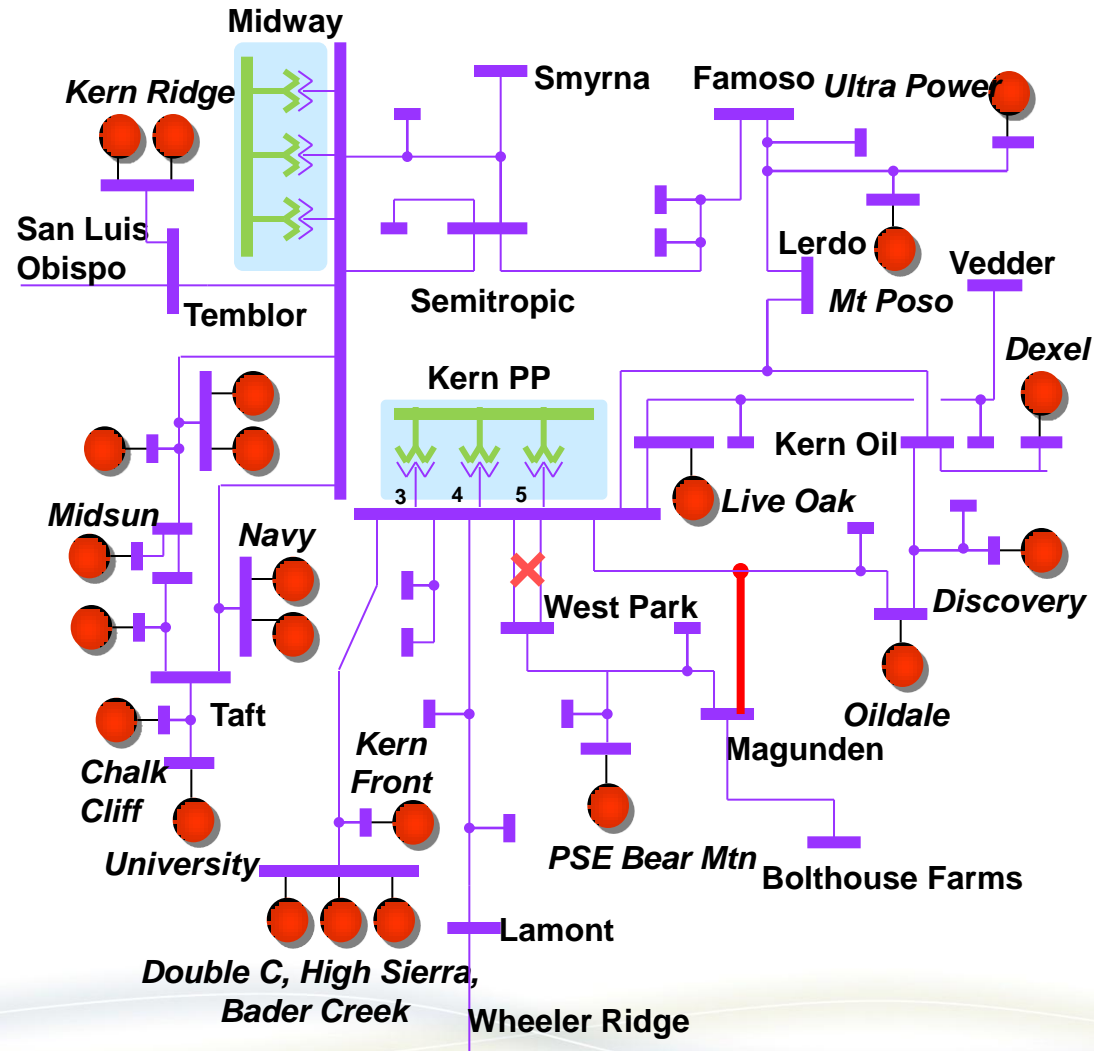
- **KERN-MAGUNDEN-WITCO - From 6/42 to Magunden Sub**

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	0	115

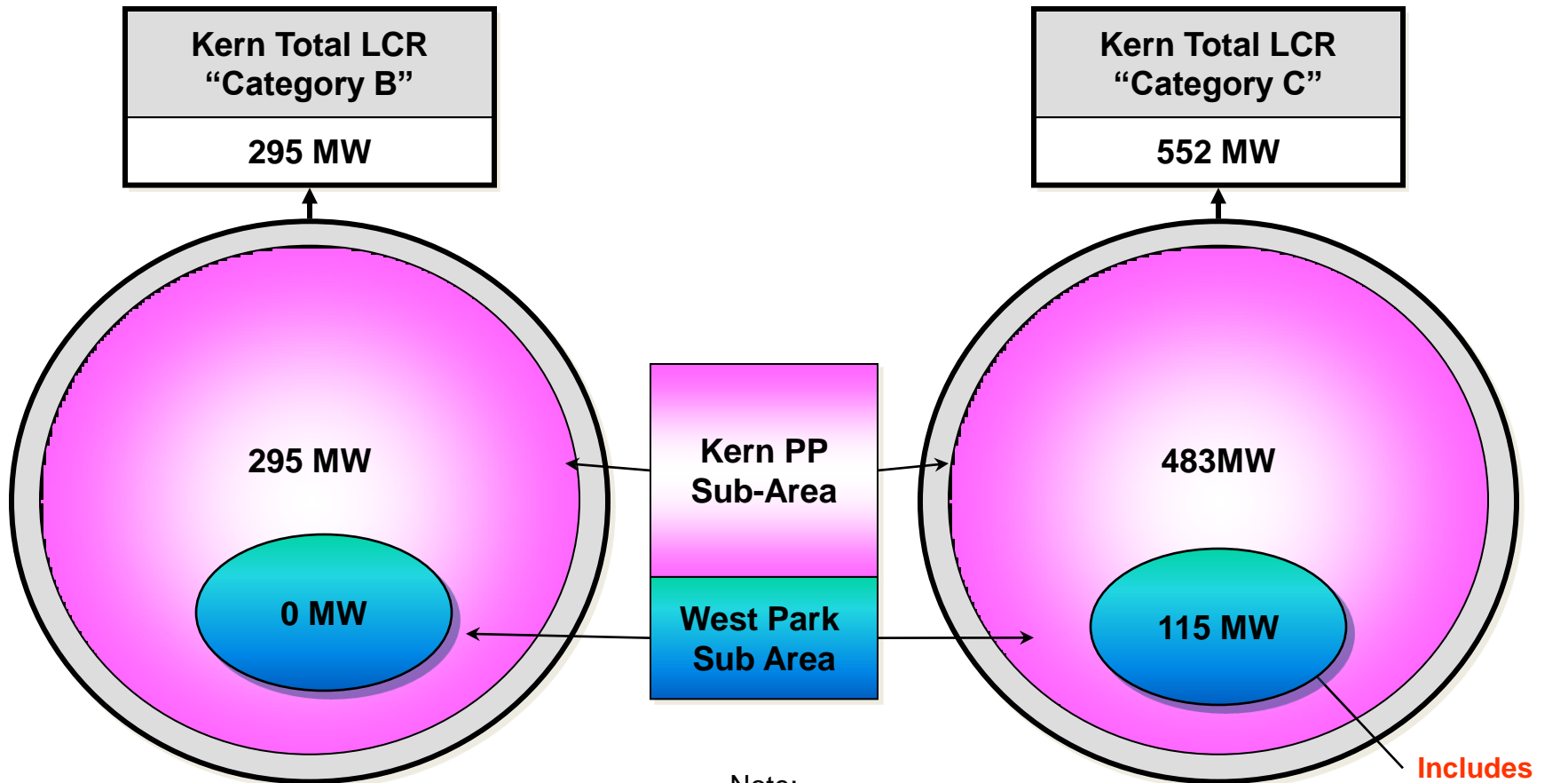
Including:

QF	46	46
Muni	0	0
Deficiency	0	69



Kern Area LCR

Summary of 2013 LCR



Note:

In the Kern area, due to overlapping of LCR sub-areas, the "Kern Total LCR" is *not* a simple sum, but rather an aggregated sum of LCR in individual sub-areas.

Includes
69 MW
deficiency

Changes

Since last year:

- 1) Load forecast is higher by 201 MW
- 2) Overall the LCR needs have increased by 227 MW

Since last stakeholder meeting:

- 1) Updated NQC

Your comments and questions are welcome.

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

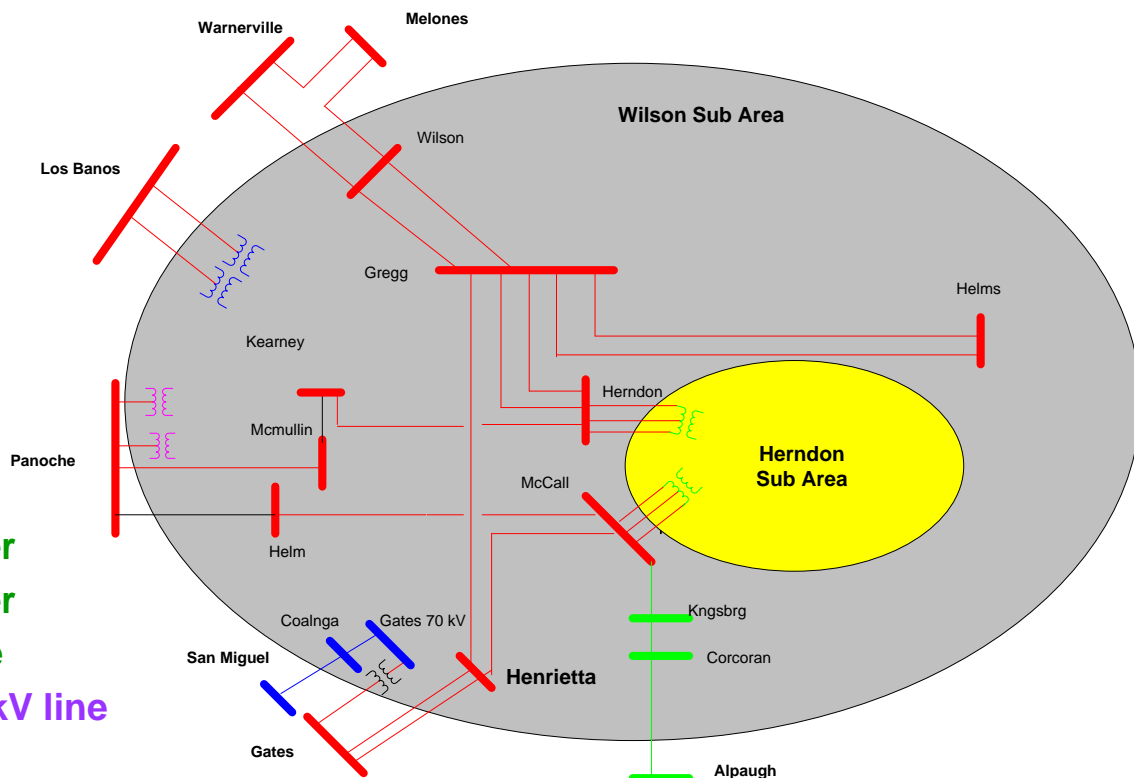
Greater Fresno Area

Electrical Boundaries and LCR Sub-Areas

Electrical Boundaries:

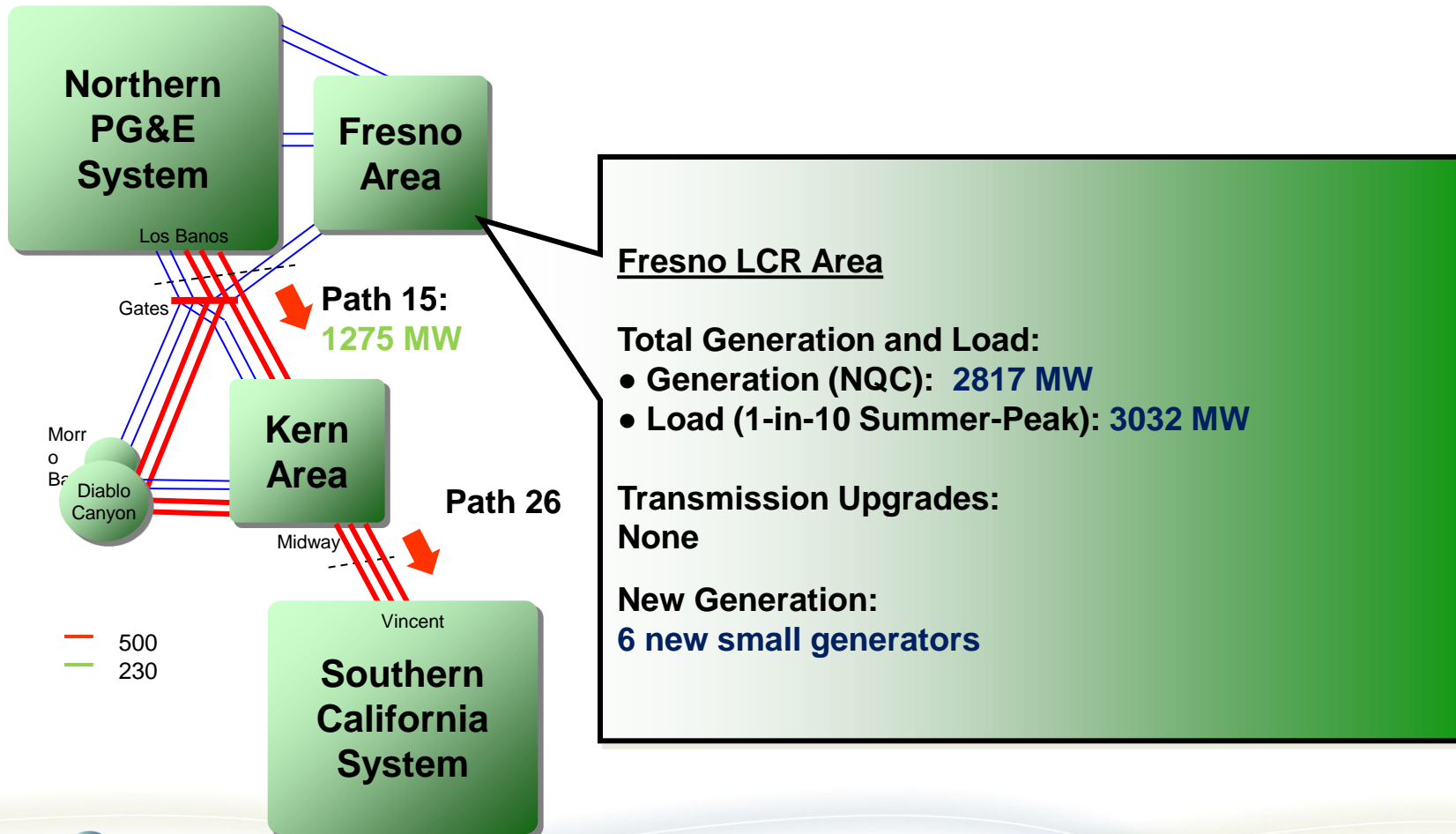
- Gates – McCall 230 kV line
- Gates – Gregg 230 kV line
- Gates 230/70 kV transformer #1
- Panoche 230/115 kV transformer #1
- Panoche 230/115 kV transformer #2
- Panoche – Kearney 230 kV line
- Panoche – Helm 230 kV line
- Warnerville – Wilson 230 kV line
- Melones – Wilson 230 kV line
- Los Banos #3 230/70 kV transformer
- Los Banos #4 230/70 kV transformer
- San Miguel – Coalinga #1 70 kV line
- Smyrna – Alpaugh – Corcoran 115 kV line

LCR Sub-Areas:



Fresno Area Overview

Area Generation, Load, Transmission and Path Flows



Fresno Area LCR

Wilson Sub-Area

Limiting Contingencies:

Category C:

- L-1: Melones – Wilson 230 kV line
- G-1: Helms unit #3

Category B:

- G-1: Helms unit #3
- L-1: Melones – Wilson 230 kV line

Constrained Elements:

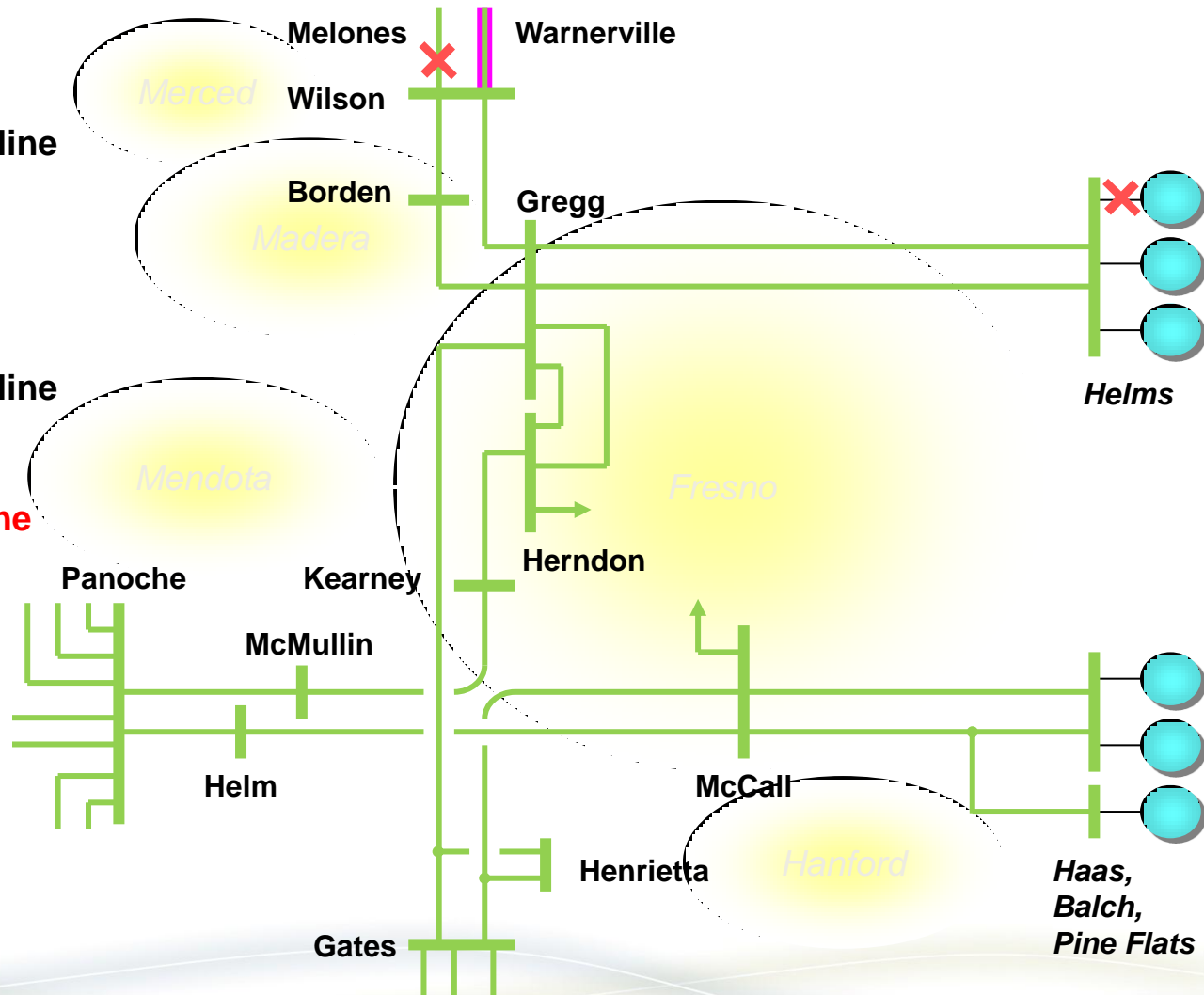
- Warnerville – Wilson 230 kV line

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	1786	1786

Including:

QF	163	163
Muni	151	151
Deficiency	0	0



Fresno Area LCR

Herndon Sub-Area

Limiting Contingency:

Category B:

- None

Category C:

- L-1: Helm-Mccall 230 kV Line
- L-1: Gates-Mccall 230 kV line

Constrained Element:

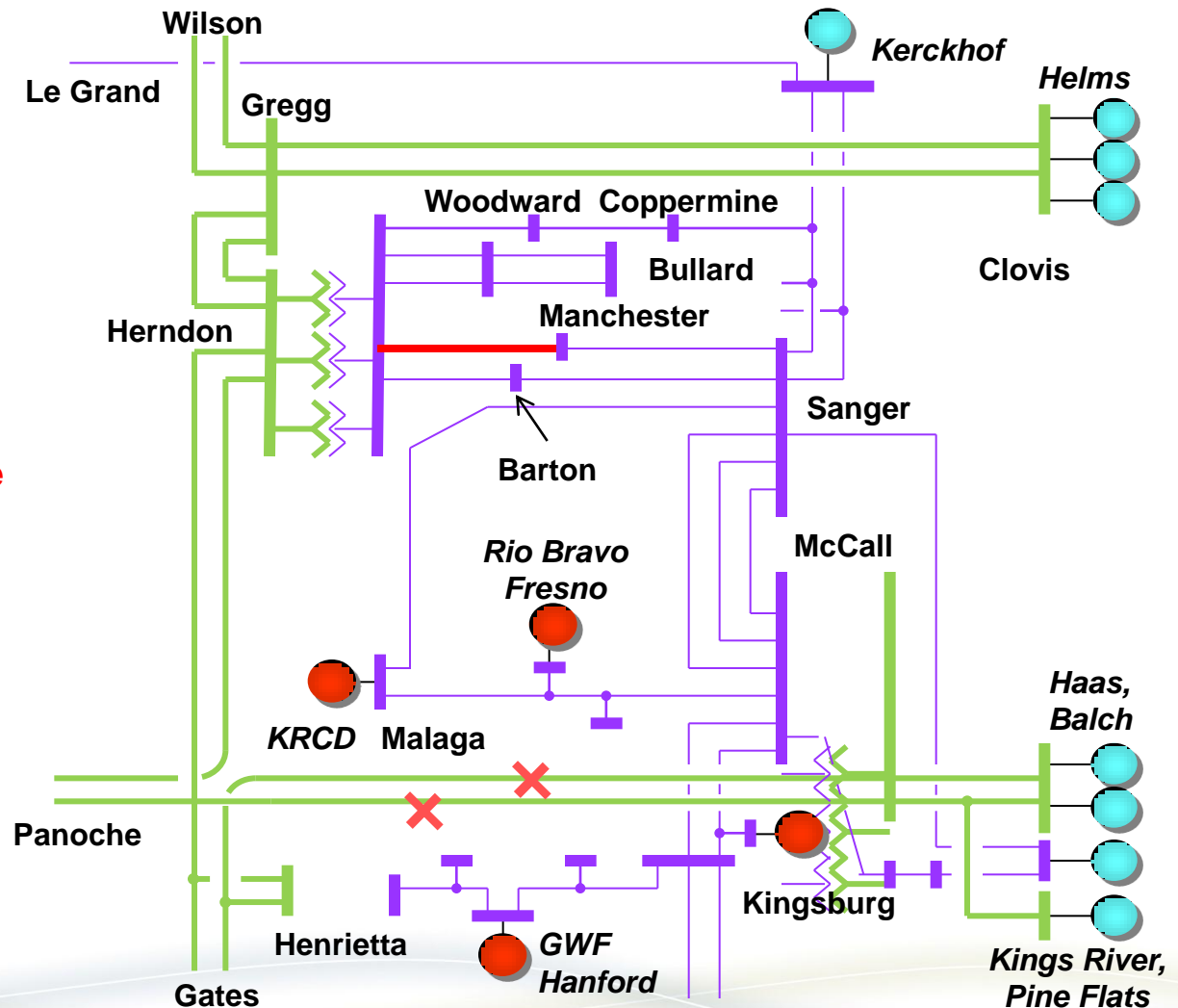
- Herndon-Manchester 115 kV line

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	0	372

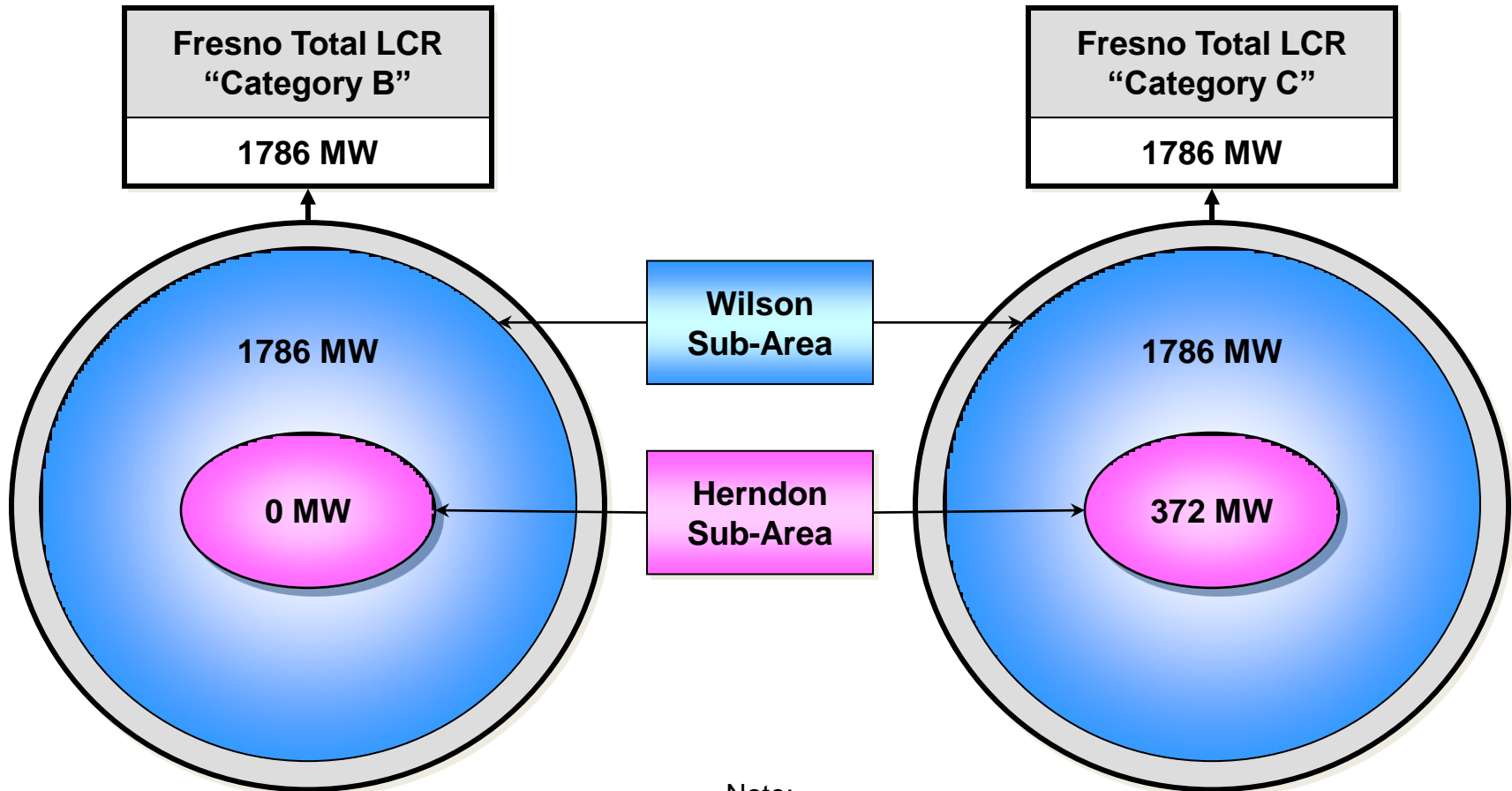
Including:

QF	42	42
Muni	83	83
Deficiency	0	0



Fresno Area LCR

Summary of 2013 LCR



Note:

In the Fresno area, due to overlapping of LCR sub-areas, the "Fresno Total LCR" is *not* a simple sum, but rather an aggregated sum of LCR in individual sub-areas.

Changes

Since last year:

- 1) Load has decreased by 88 MW
- 2) Overall LCR reduced by 121 MW

Since last stakeholder meeting:

- 1) Updated NQC

Your comments and questions are welcome.

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