



2010 LCR Study 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

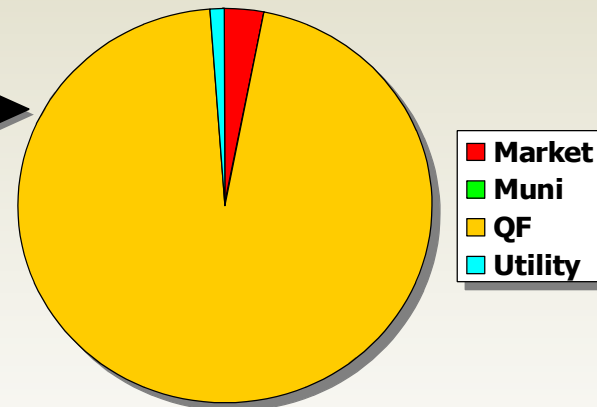
Kern LCR Area

Generation and Load:

- Generation (maximum capacity): **813 MW**
- Load (1-in-10 Summer-Peak): **1240 MW**

Network changes from 2009-2010:

- New Generation: **None**
- Transmission Upgrades: **None**



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 – Kern Front 115 kV line

Constrained Elements:

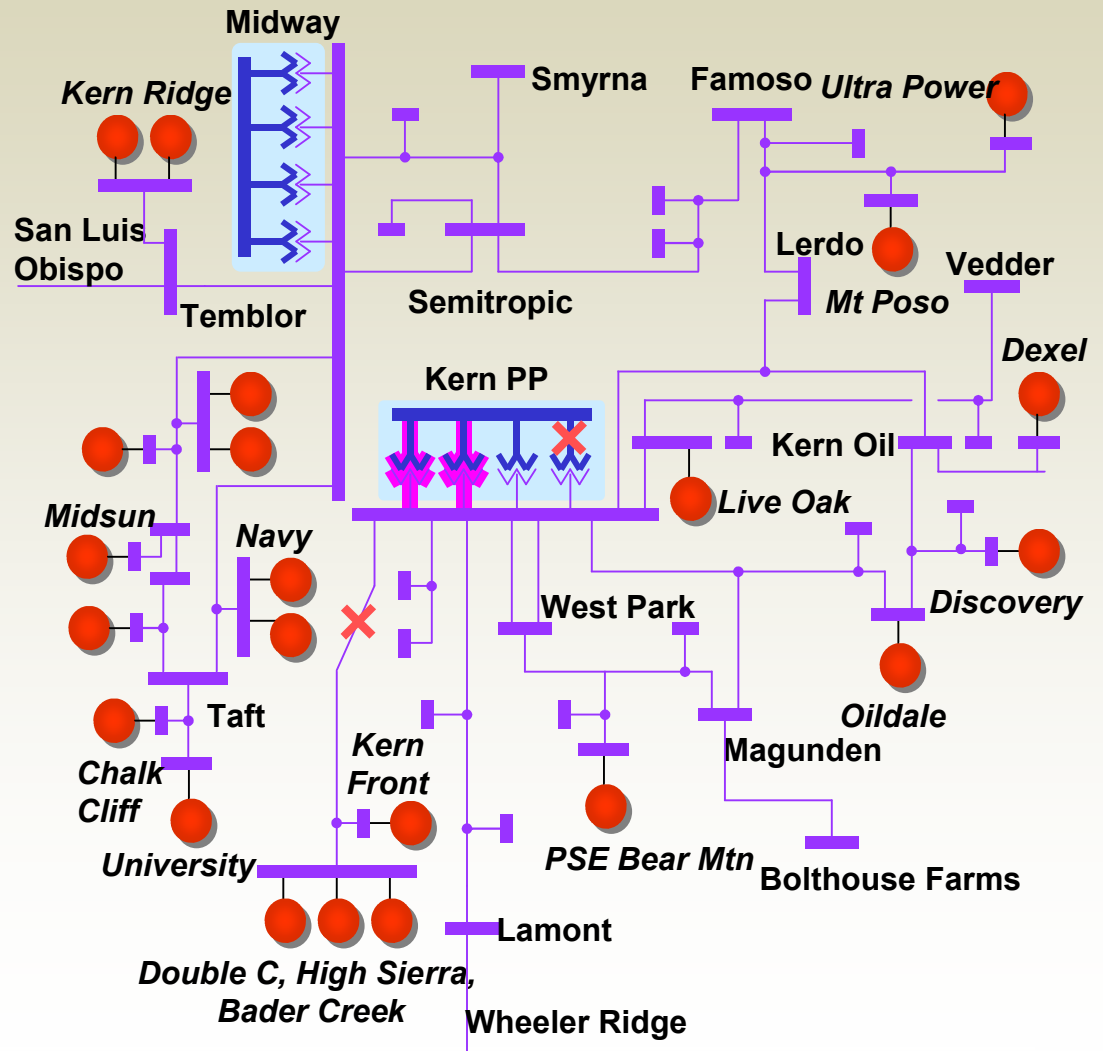
- Kern PP 230/115 kV bank #3
- Kern PP 230/115 kV bank #3a

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	187	386

Including:

QF	779	779
Muni	0	0
Deficiency	0	0



Kern Area LCR

Weedpatch Sub-Area

Limiting Contingencies:

Category B:

None

Category C:

- L-1: Wheeler Ridge – San Bernard 70 kV line
- L-1: Wheeler Ridge – Tejon 70 kV line

Constrained Element:

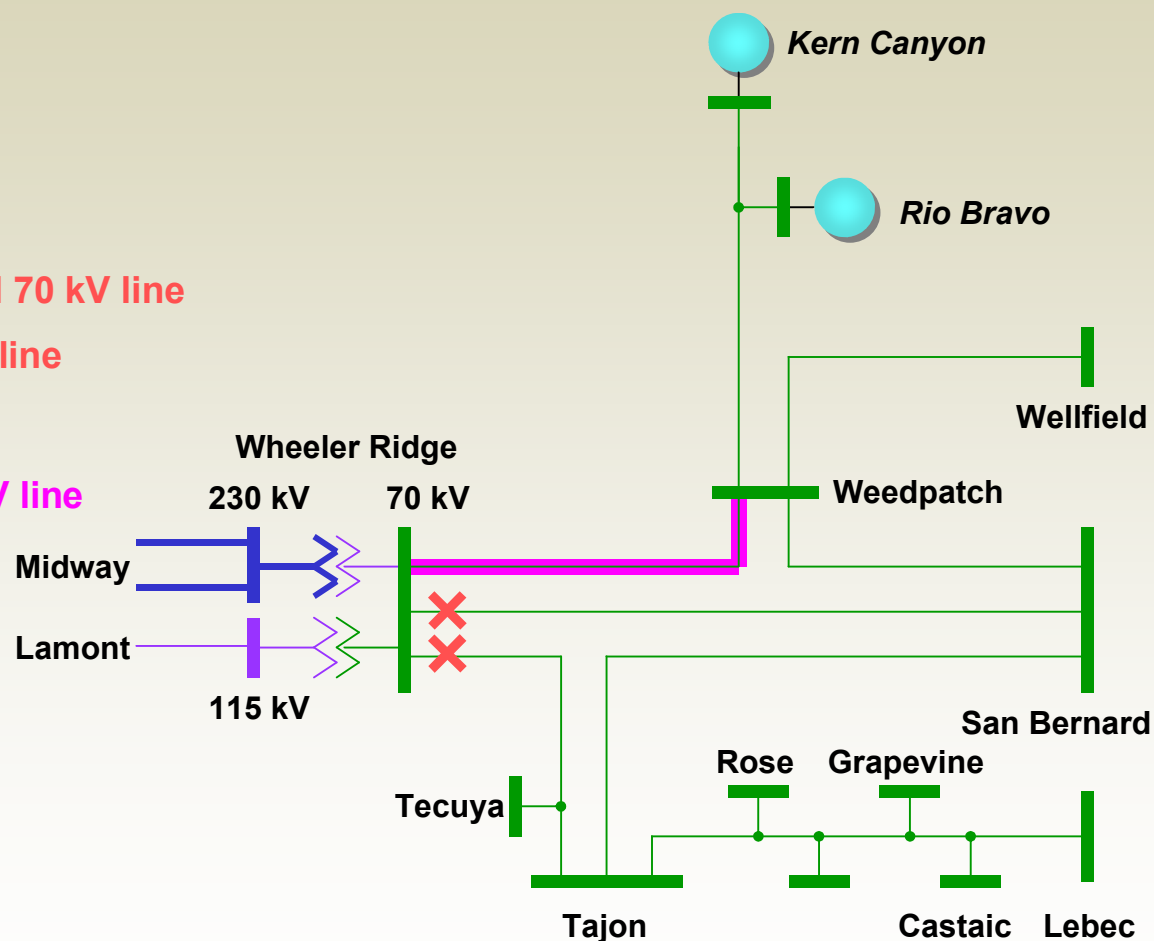
- Wheeler Ridge – Weedpatch 70 kV line

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	0	18

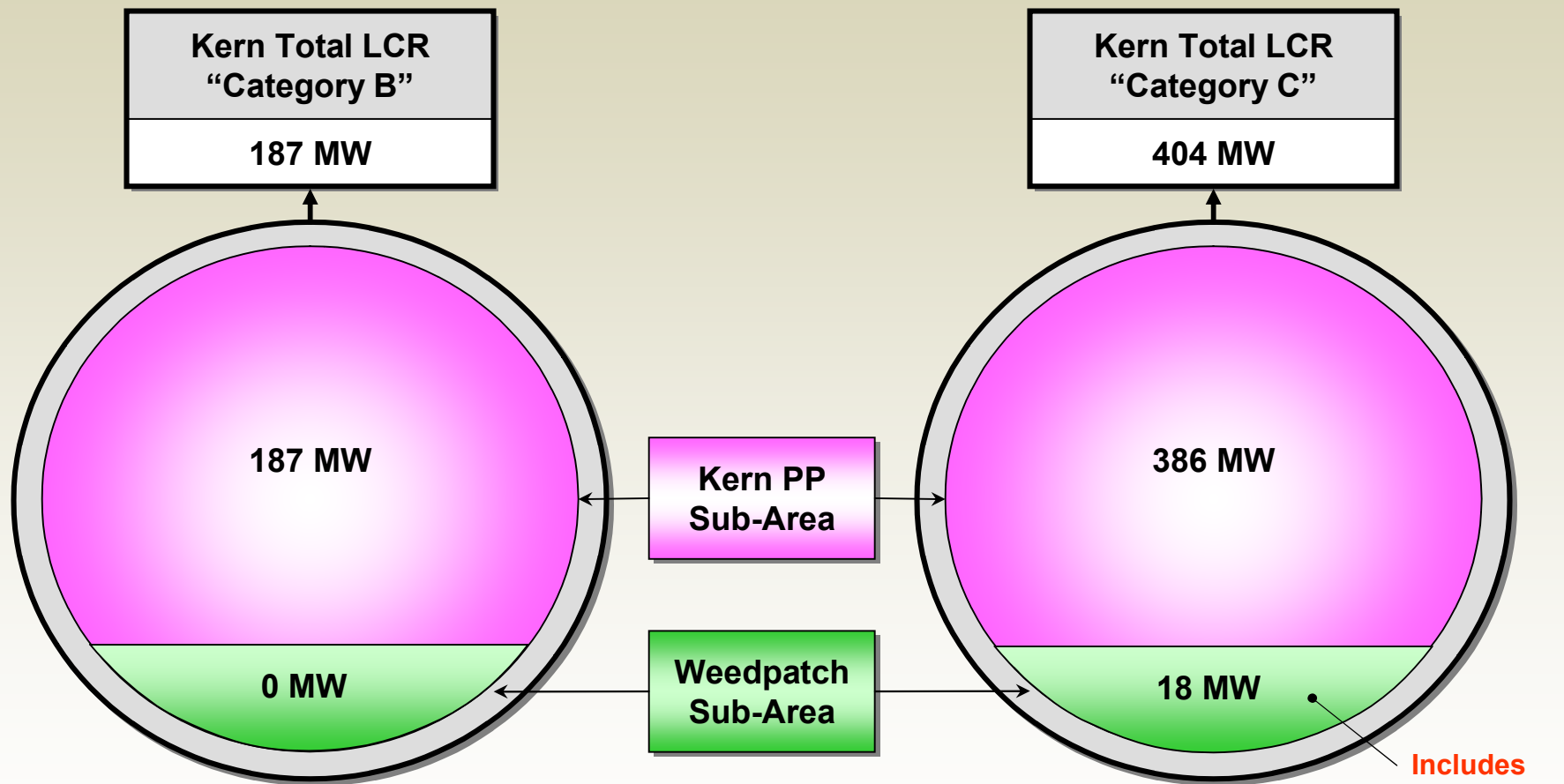
Including:

QF	0	6
Muni	0	0
Deficiency	0	3



Kern Area LCR

Summary of 2009 LCR



Note:

In Kern area, since the two sub-areas are not overlapping, the "Kern Total LCR" is the simple sum of the LCR of the two sub-areas.

Includes
3 MW
deficiency

Changes since the 2009 LCR study

Total LCR Need has decreased

The load forecast is lower by 76 MW.

The total LCR need has decreased by 18 MW.

No new generation or transmission projects.

Enough resources already under long-term contract.

Your comments and questions are welcome

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

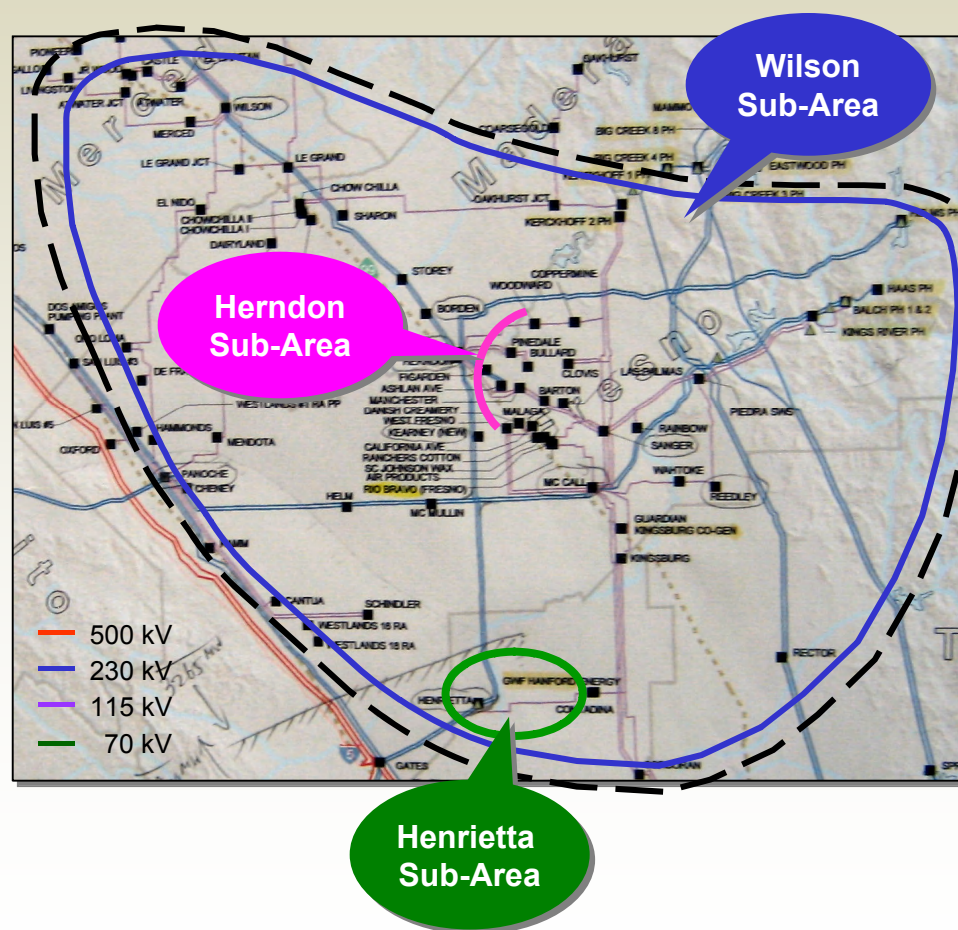
Greater Fresno Area

Electrical Boundaries and LCR Sub-Areas

Electrical Boundaries:

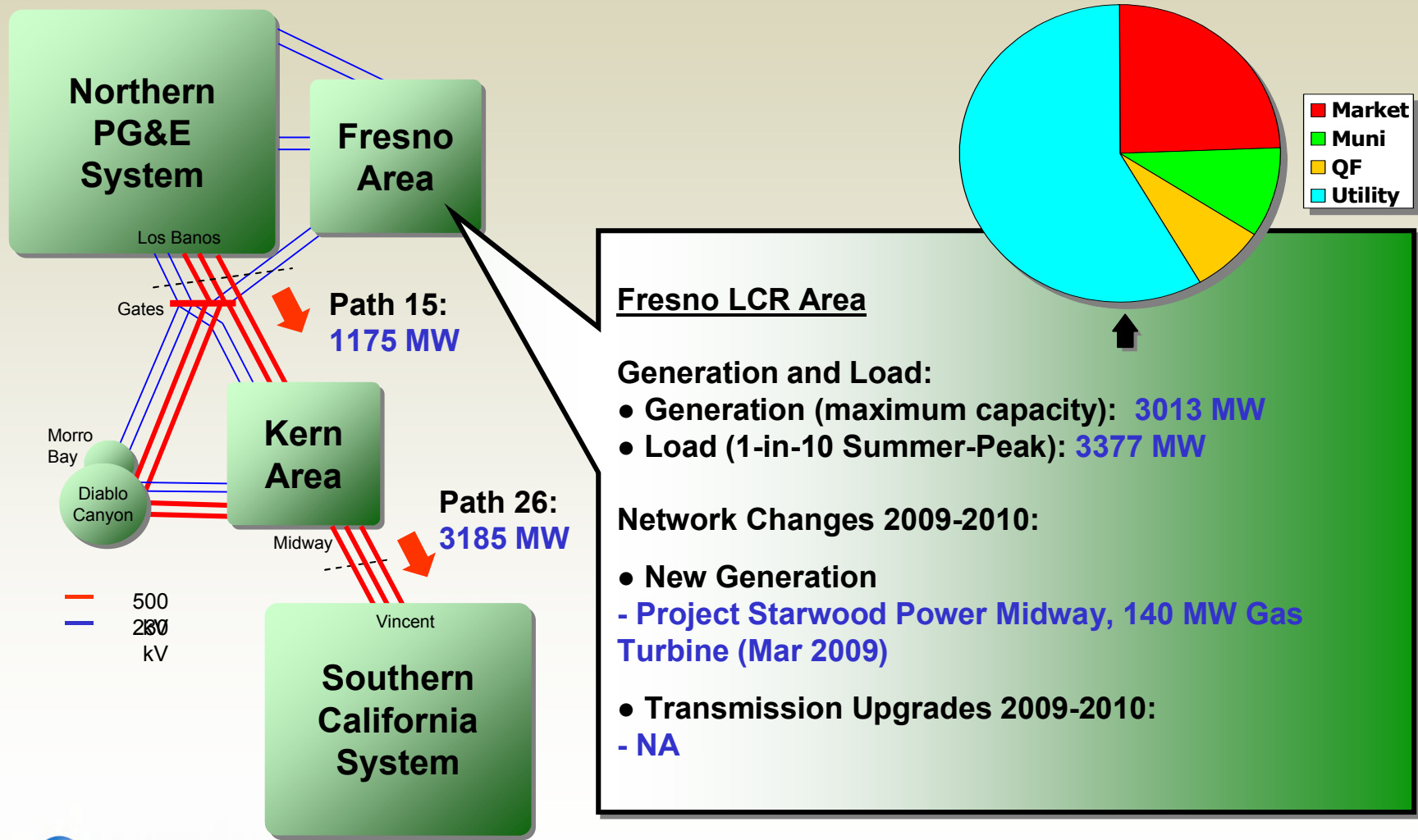
- Gates – McCall 230 kV line
- Gates – Gregg 230 kV line
- Gates 230/115 kV transformer #1
- Panoche 230/115 kV transformer #1
- Panoche 230/115 kV transformer #2
- Panoche – Kearney 230 kV line
- Panoche – Helm 230 kV line
- Warnerville – Wilson 230 kV line
- Melones – Wilson 230 kV line
- Los Banos #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 B:

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

Category C:

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

Constrained Elements:

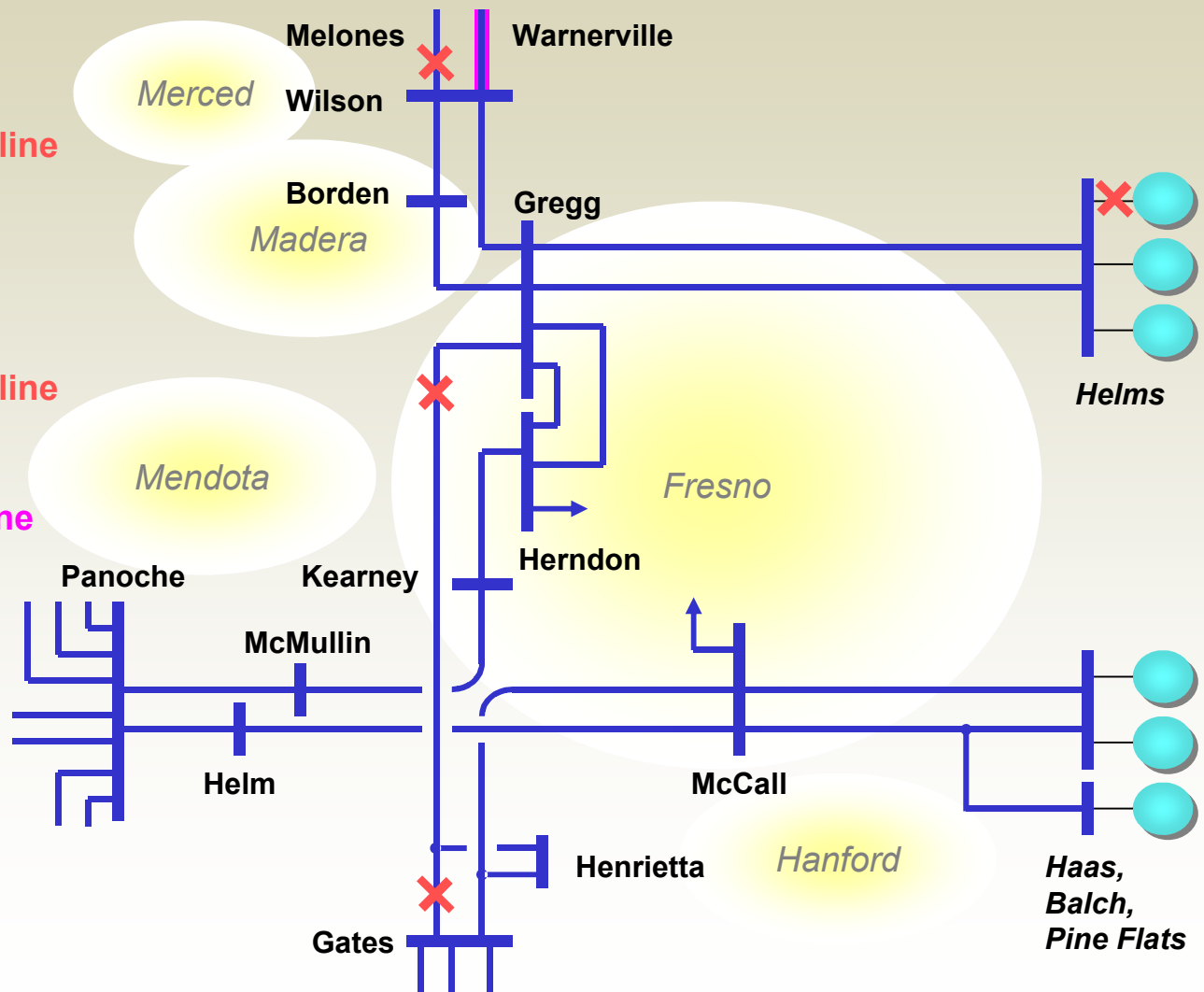
- Warnerville – Wilson 230 kV line

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	2017	2017

Including:

QF	191	191
Muni	81	81
Deficiency	0	0



Fresno Area LCR Herndon Sub-Area

Limiting Contingency:

Category B:

- T-1: Herndon 230/115 kV bank #1

Category C:

- T-1: Herndon 230/115 kV bank #1

- **G-1: Kerckhoff II unit**

Constrained Element:

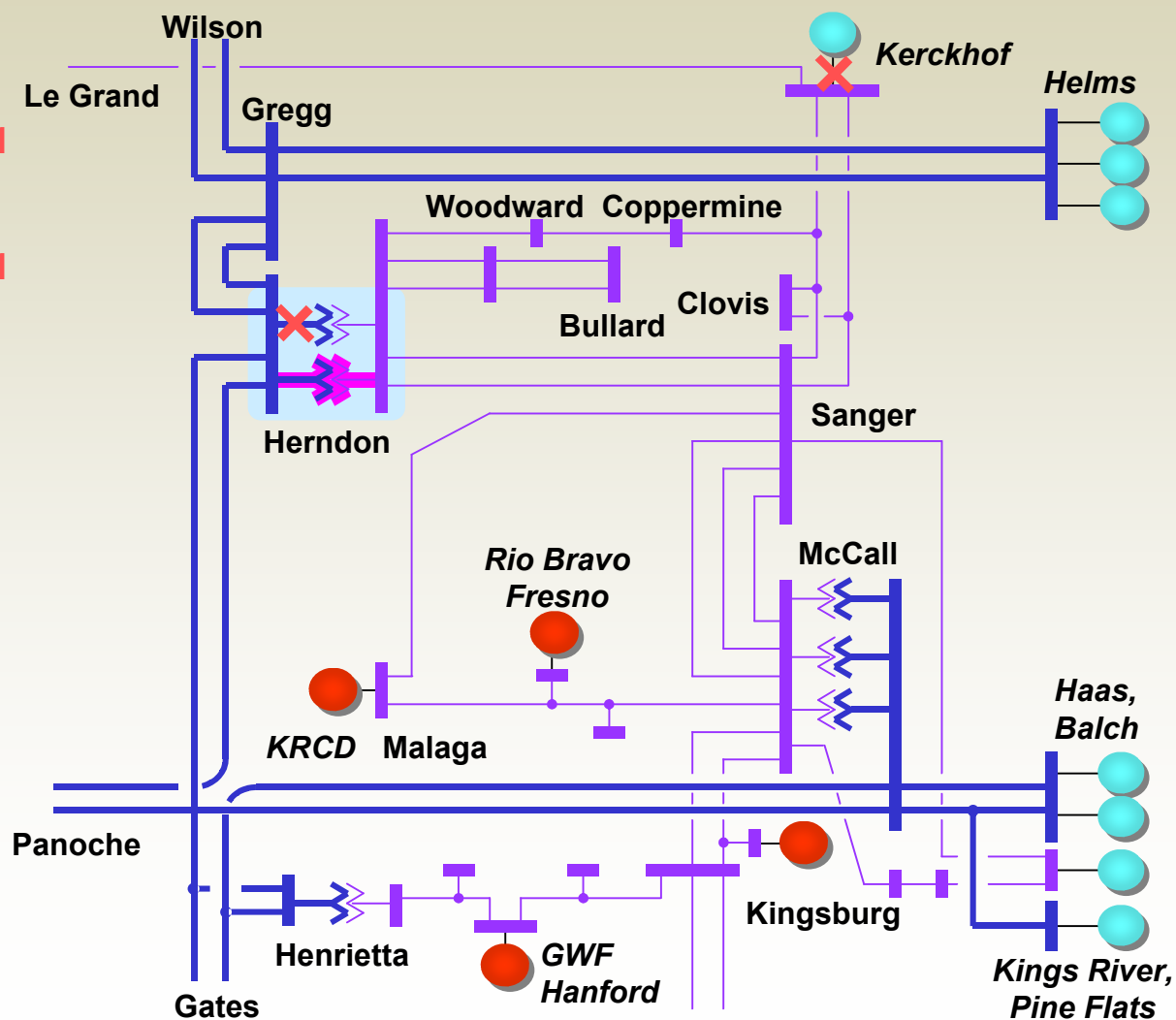
- Herndon 230/115 kV bank #2

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	1055	1175

Including:

QF	81	81
Muni	225	225
Deficiency	0	0



Fresno Area LCR

Henrietta Sub-Area

Limiting Contingencies:

Category B:

- T-1: Henrietta 230/70 kV bank #4

Category C:

- T-1: Henrietta 230/70 kV bank #4
- L-1: Henrietta – GWF Henrietta line

Constrained Element:

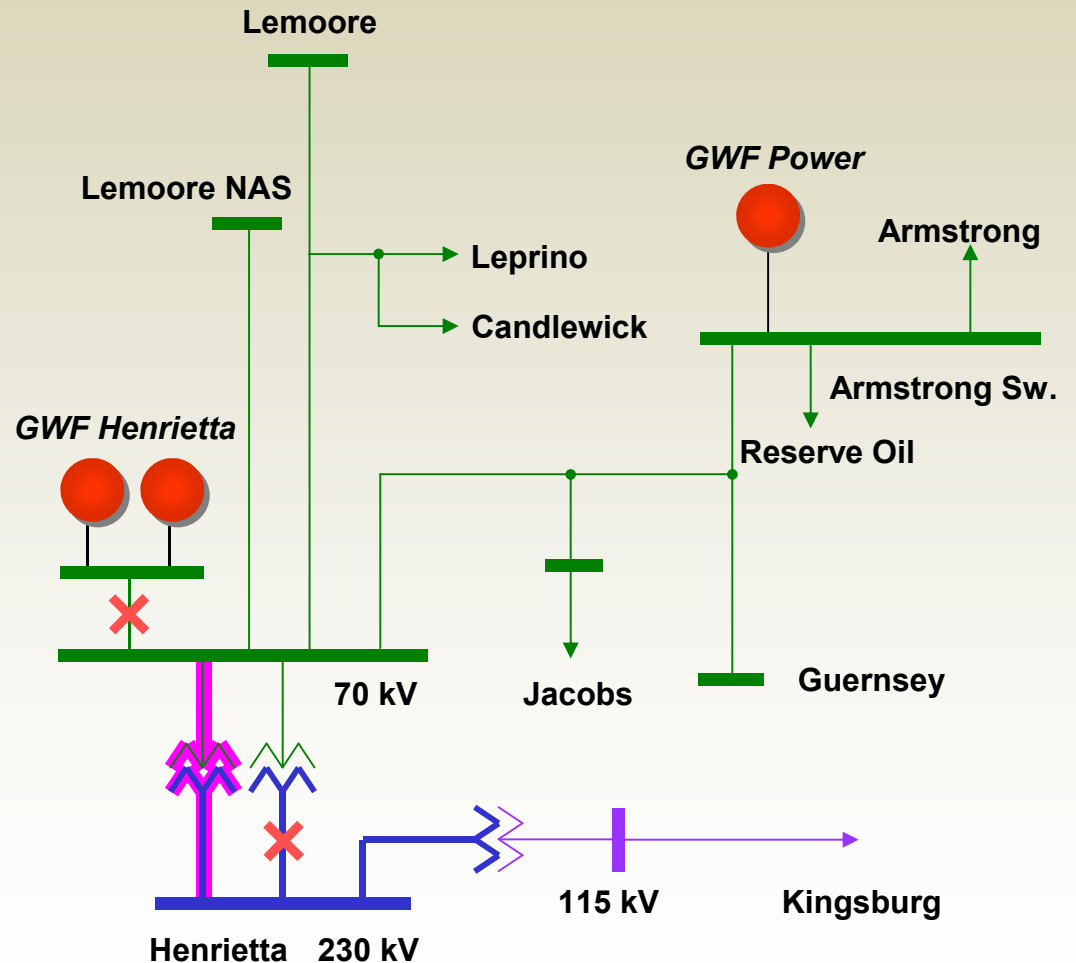
- **Henrietta 230/70 kV bank #2**

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	15	31

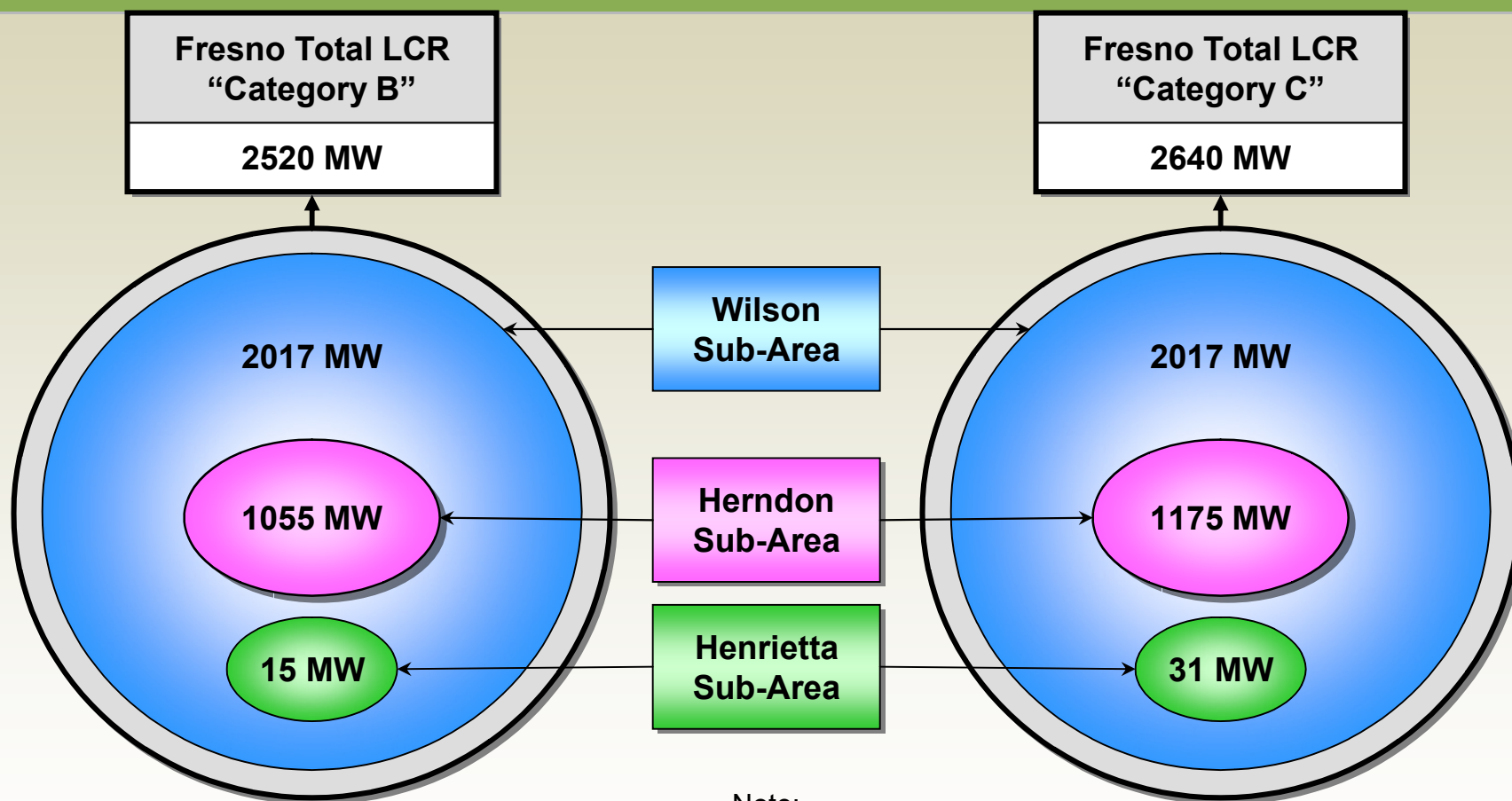
Including:

QF	15	23
Muni	0	0
Deficiency	0	0



Fresno Area LCR

Summary of 2009 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 the 2009 LCR study

Total LCR Need has decreased

The load forecast is lower by 4 MW.

Path 15 Flow is lower by 100 MW (1175 MW N-S).

The total LCR need has decreased by 40 MW.

No new generation or transmission projects.

Your comments and questions are welcome

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