



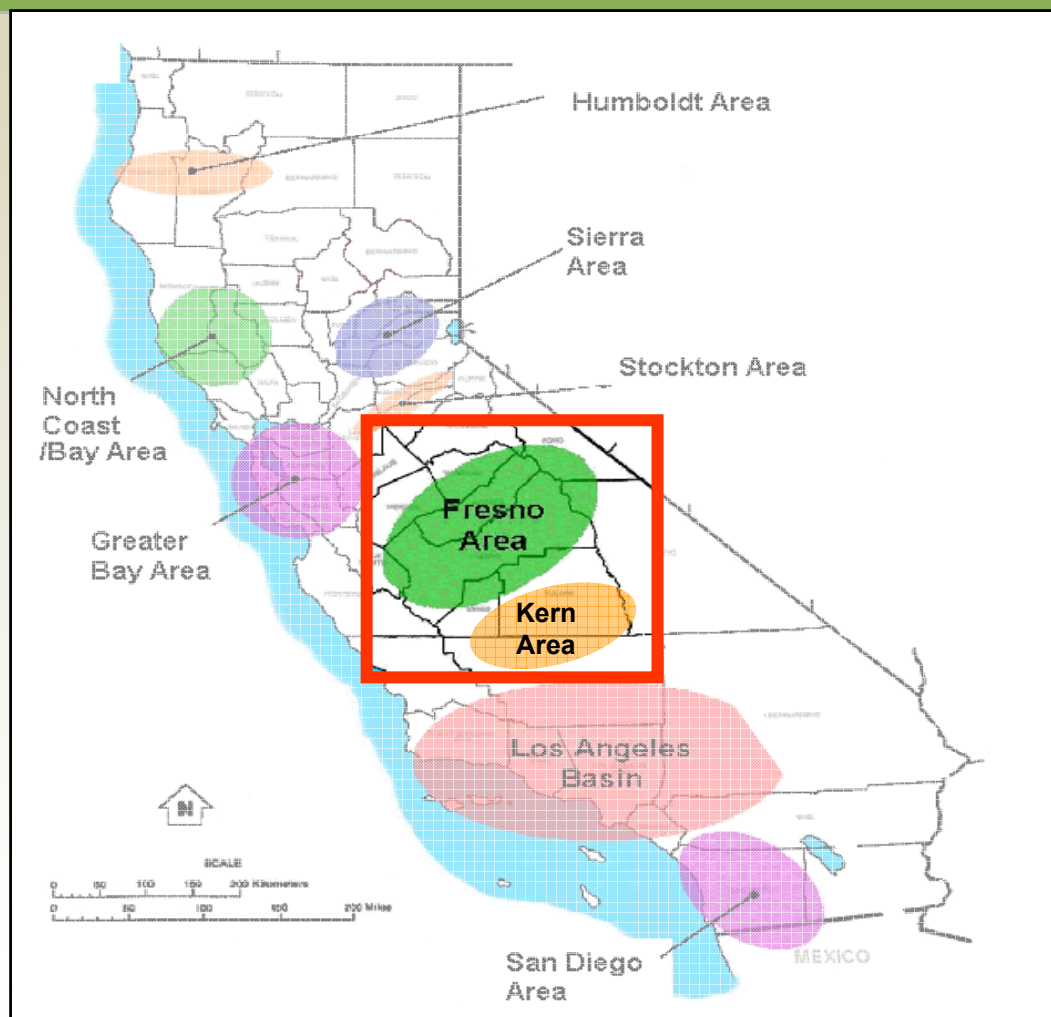
2011 Final LCR Study Results Fresno and Kern Local Areas

Wenjuan(Wendy) Zhang
Regional Transmission Engineer

Stakeholder Meeting

April 15, 2010

Fresno and Kern LCR Areas



Kern Area Overview

Area Generation, Load and Transmission

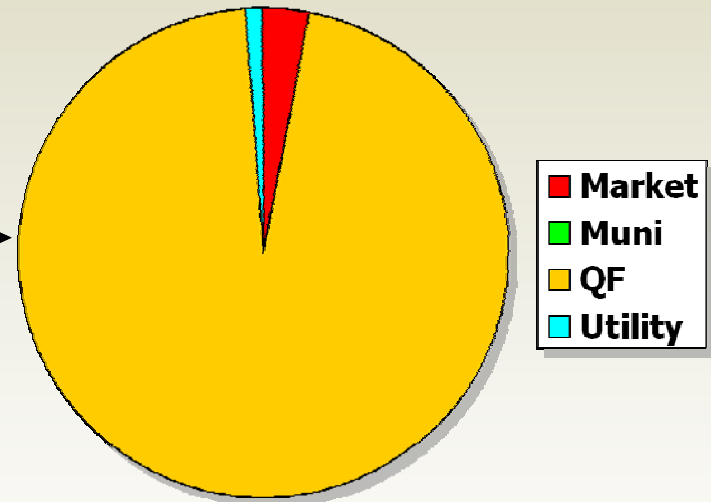
Kern LCR Area

Generation and Load:

- Generation (maximum capacity): **708 MW**
- Load (1-in-10 Summer-Peak): **1387 MW**

Network changes from 2010-2011:

- 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:

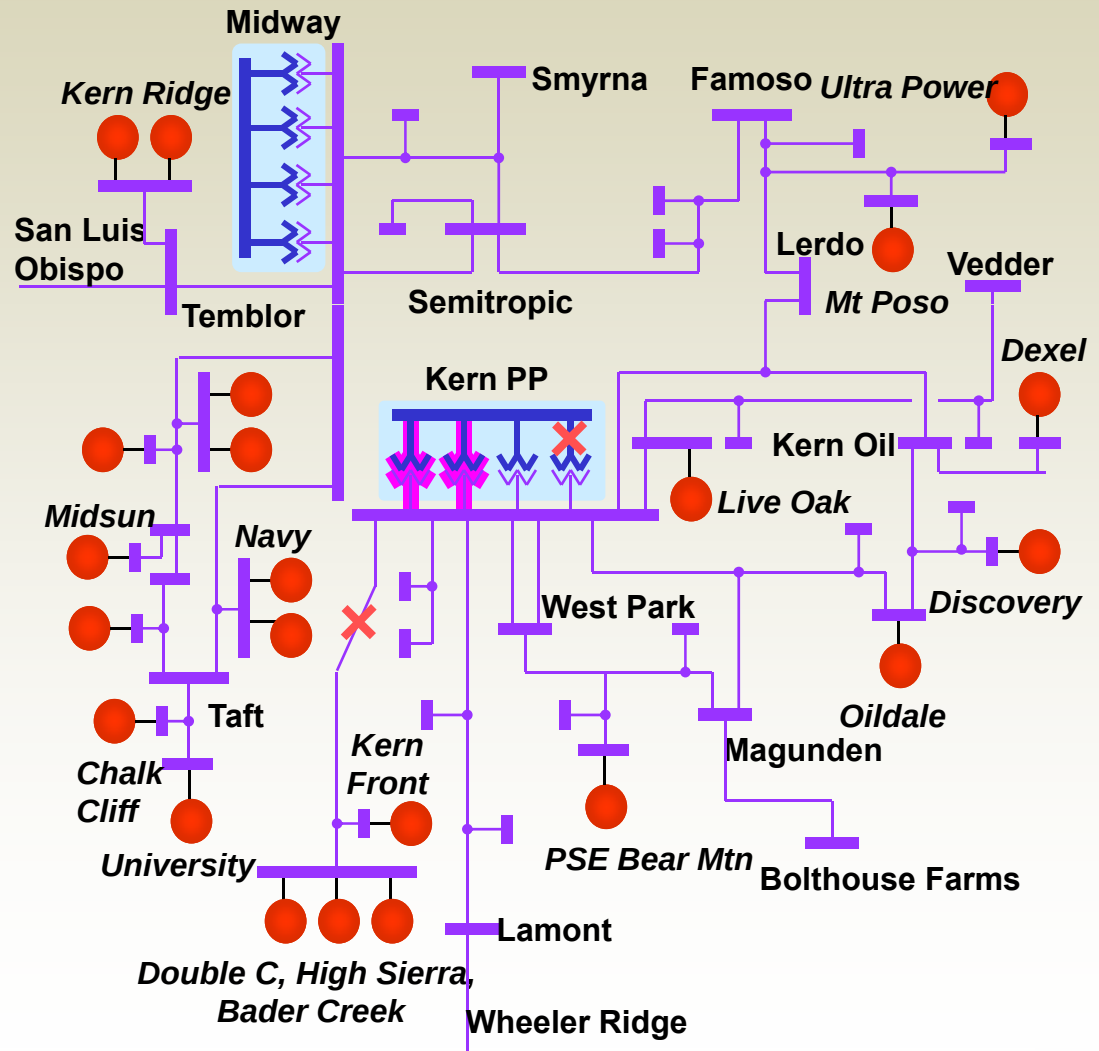
- Kern PP 230/115 kV bank #3
- Kern PP 230/115 kV bank #3a

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	243	416

Including:

QF	691	691
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:

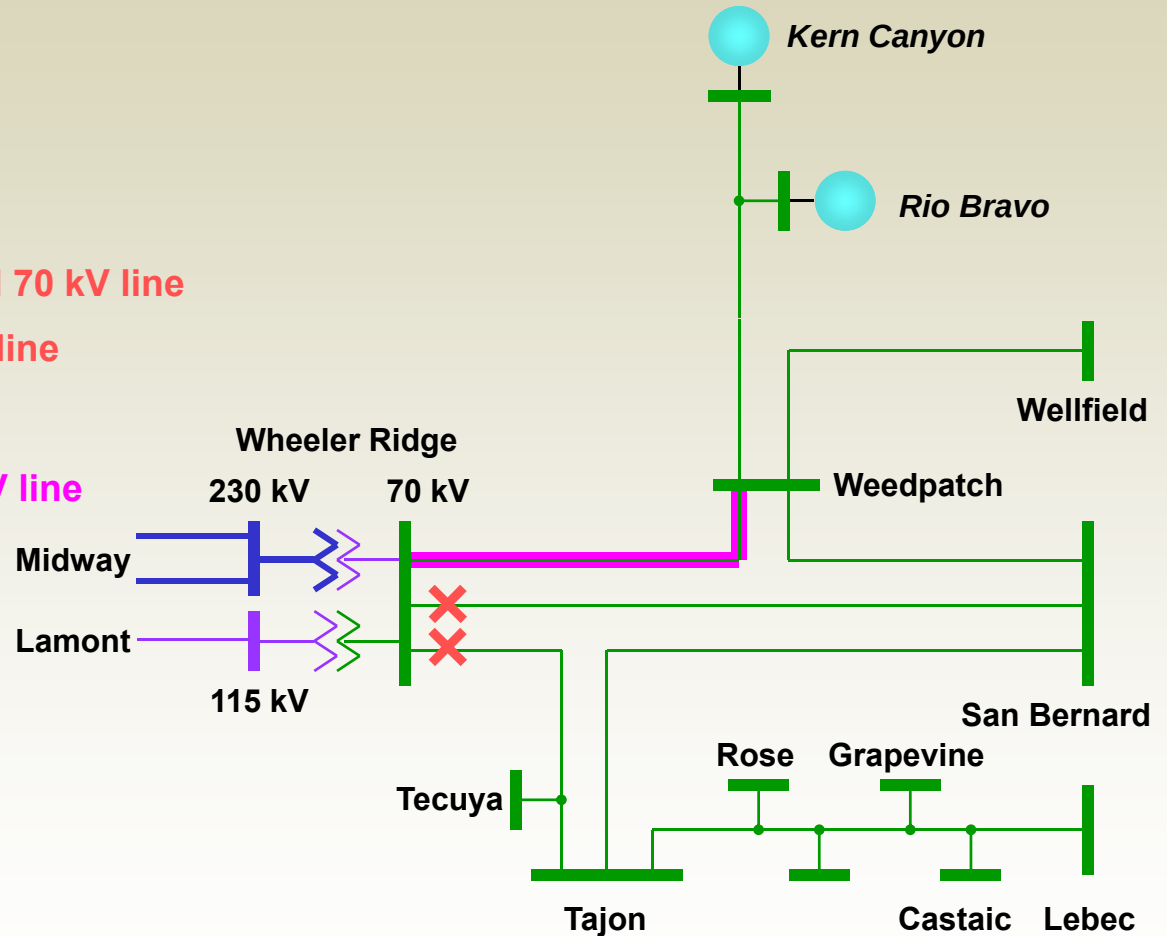
- Wheeler Ridge – Weedpatch 70 kV line

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	0	31

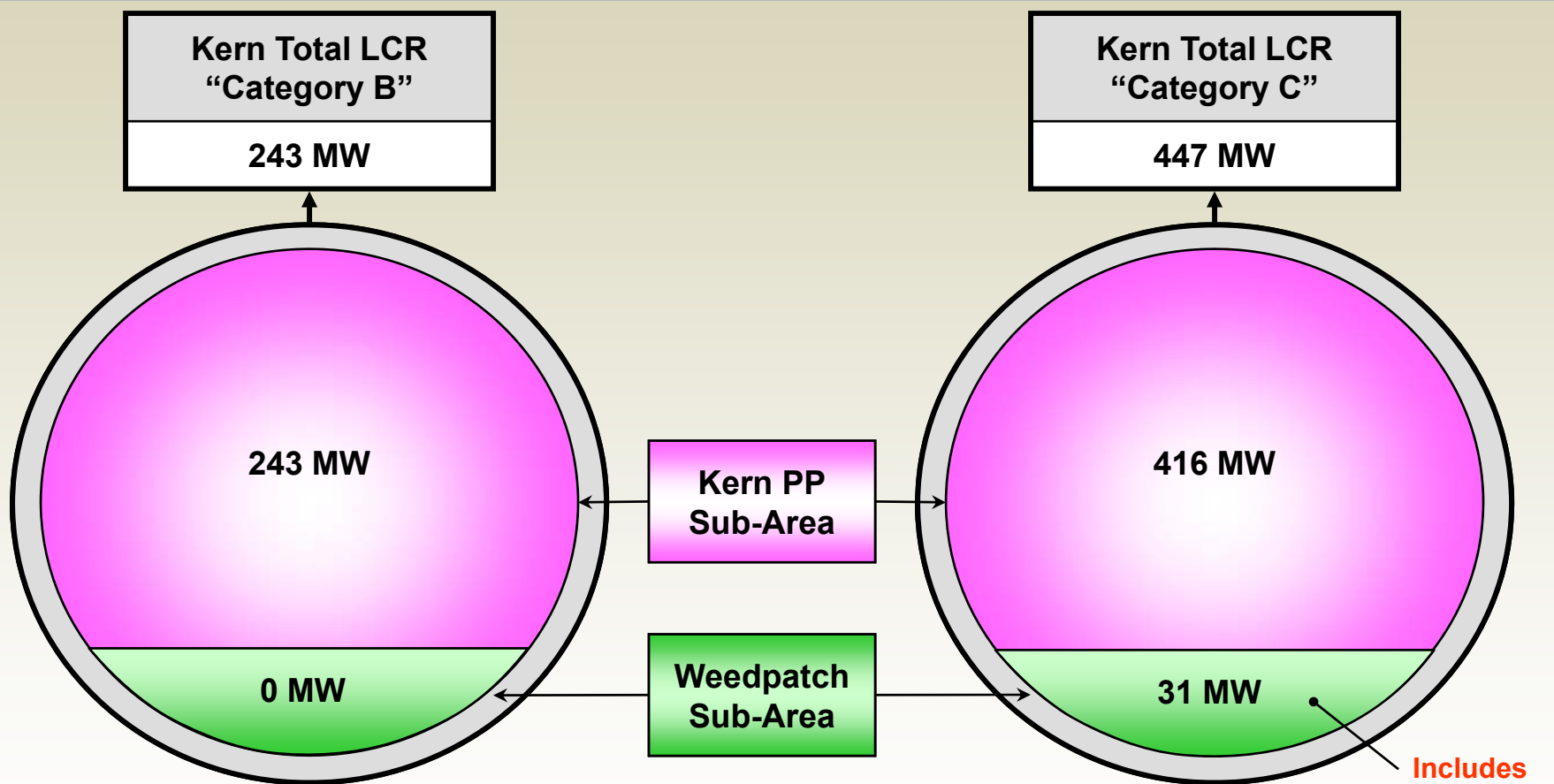
Including:

QF	0	8
Muni	0	0
Deficiency	0	13



Kern Area LCR

Summary of 2011 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.

Changes

Since our last stakeholder meeting:

- 1) Updated NQC

Since last year:

- 1) Load forecast is higher by 147 MW
- 2) Overall the LCR needs have increased by 43 MW
- 3) Enough resources are already under long-term contract

Your comments and questions are welcome.

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

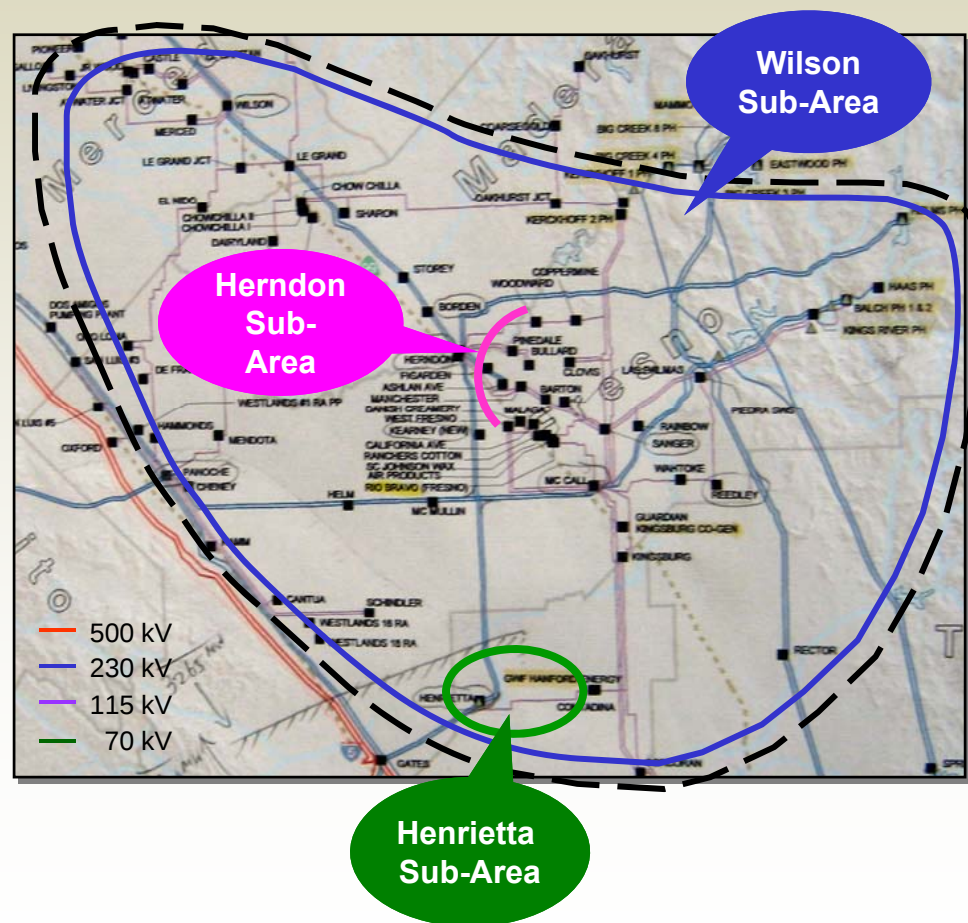
Greater Fresno Area

Electrical Boundaries and LCR Sub-Areas

Electrical Boundaries:

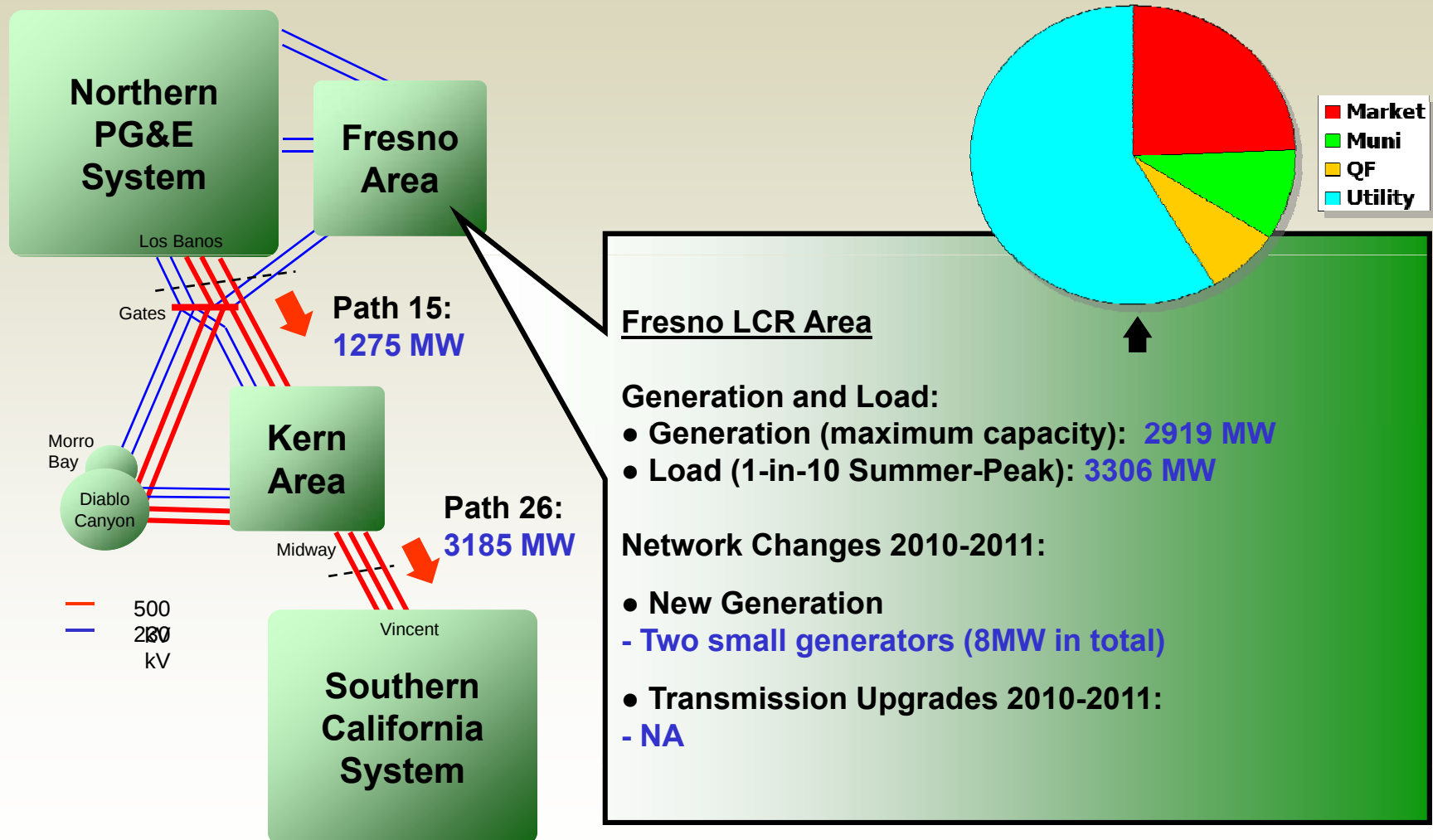
- Gates – McCall 230 kV line
- Gates – Gregg 230 kV line
- Gates 230/115 kV transformer #1
- Panoche 230/115 kV transformer #1
- Panoche 230/115 kV transformer #2
- Panoche – Kearney 230 kV line
- Panoche – Helm 230 kV line
- Warnerville – Wilson 230 kV line
- Melones – Wilson 230 kV line
- Los Banos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

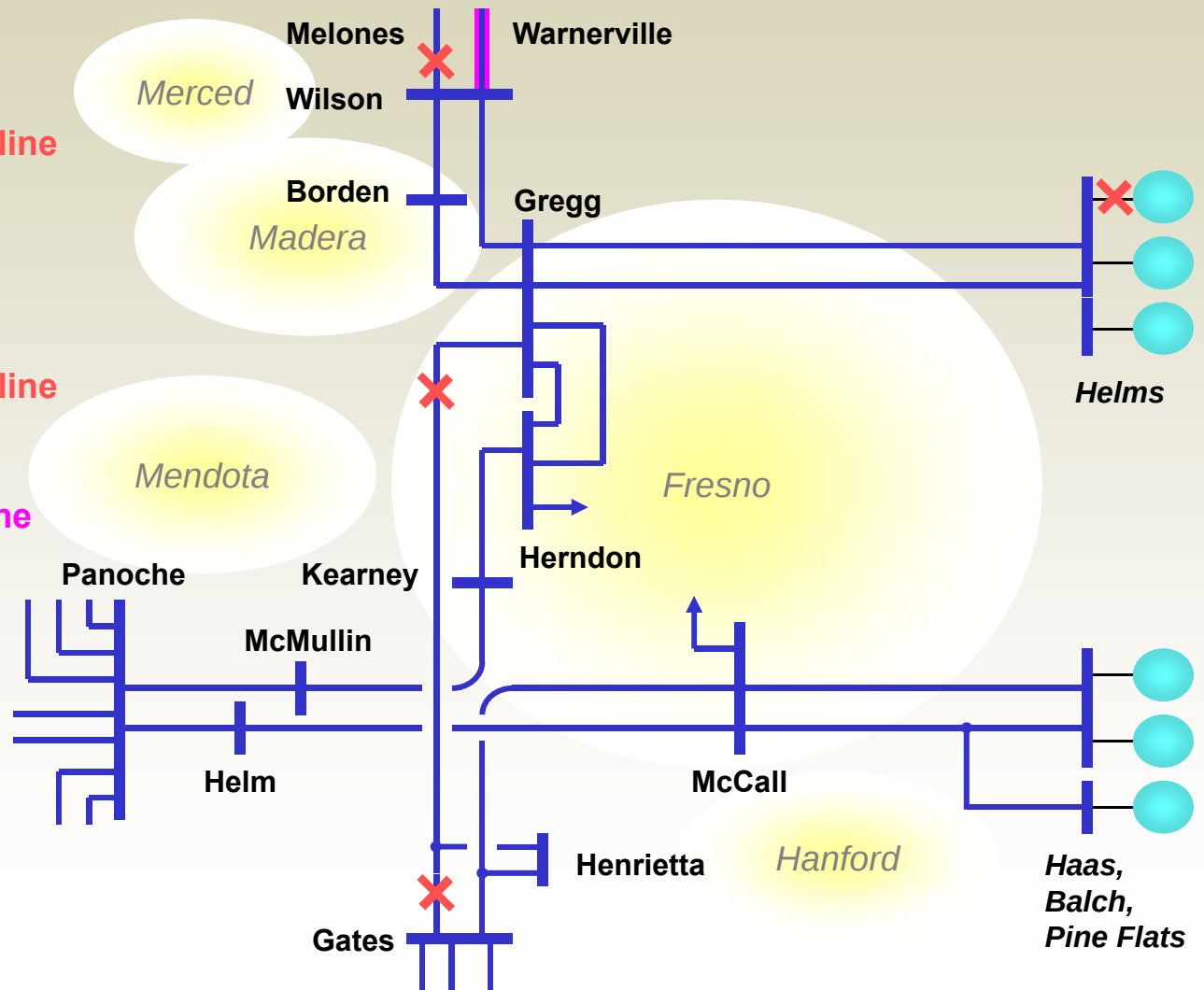
- Warnerville – Wilson 230 kV line

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	1977	1977

Including:

QF	207	207
Muni	278	278
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:

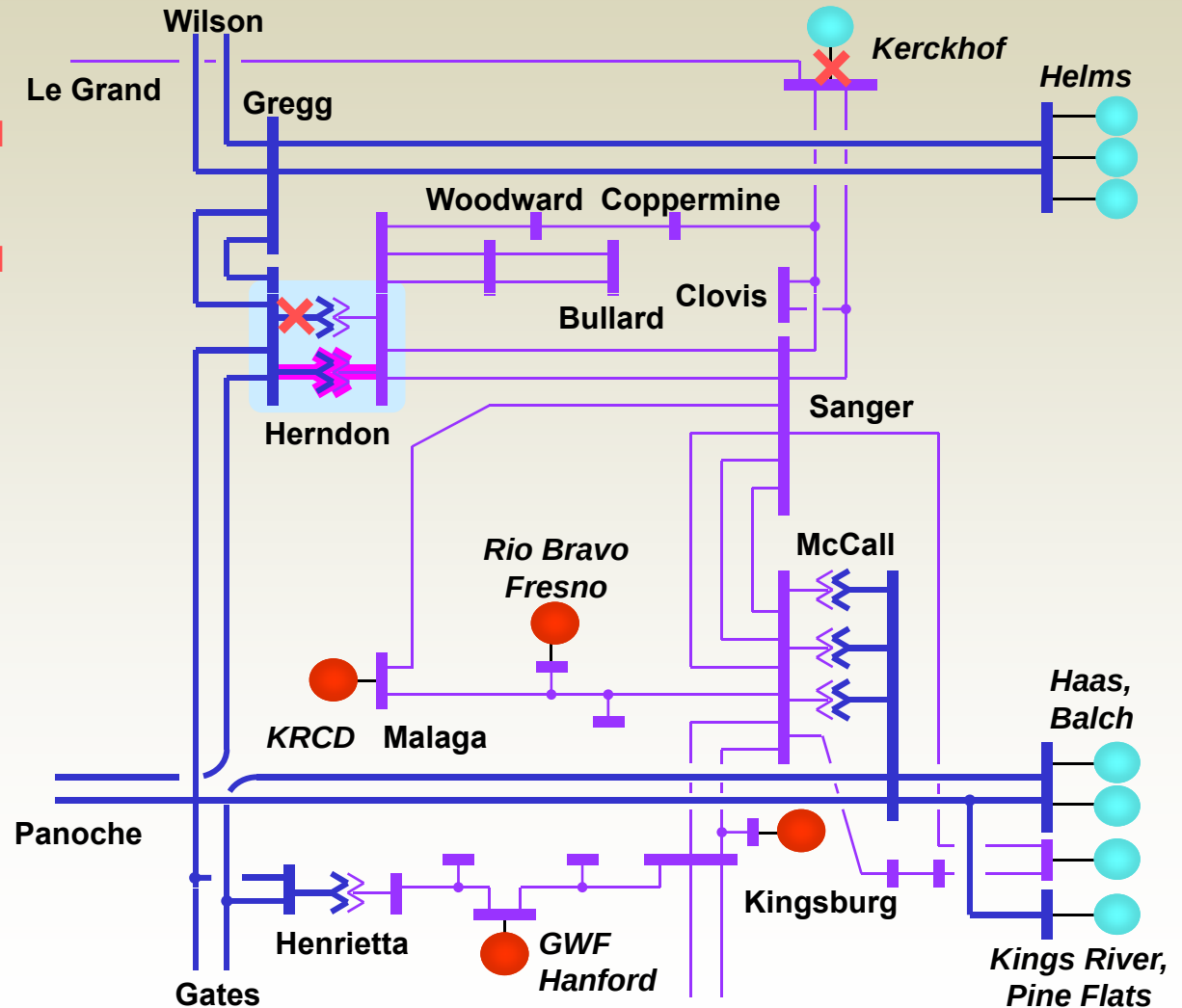
- Herndon 230/115 kV bank #2

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	840	1132

Including:

QF	51	51
Muni	210	210
Deficiency	0	0



Fresno Area LCR

Henrietta Sub-Area

Limiting Contingencies:

Category B:

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

Category C1:

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

- **G-1: GWF Power Unit**

Category C2:

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

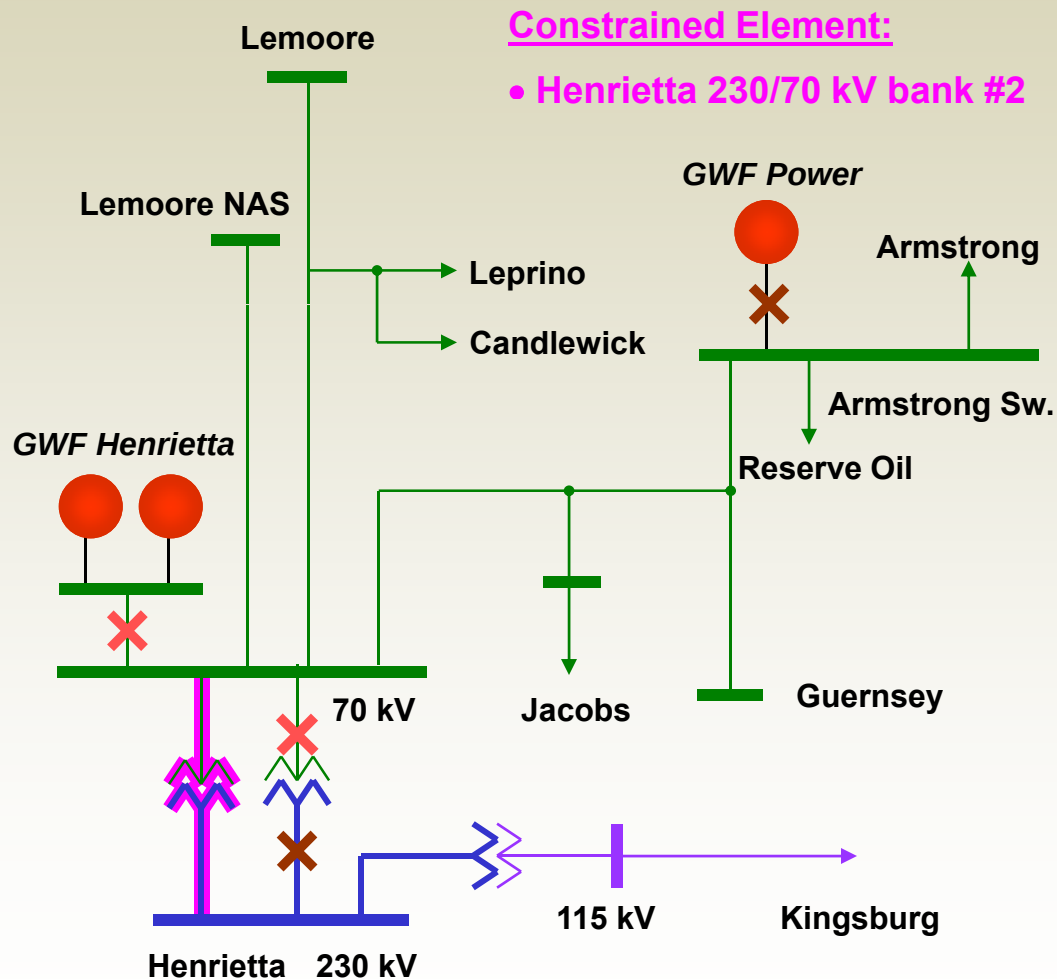
- **L-1: Henrietta – GWF Henrietta line**

LCR Results (MW):

Contingency	Cat. B	Cat. C
LCR	28	57

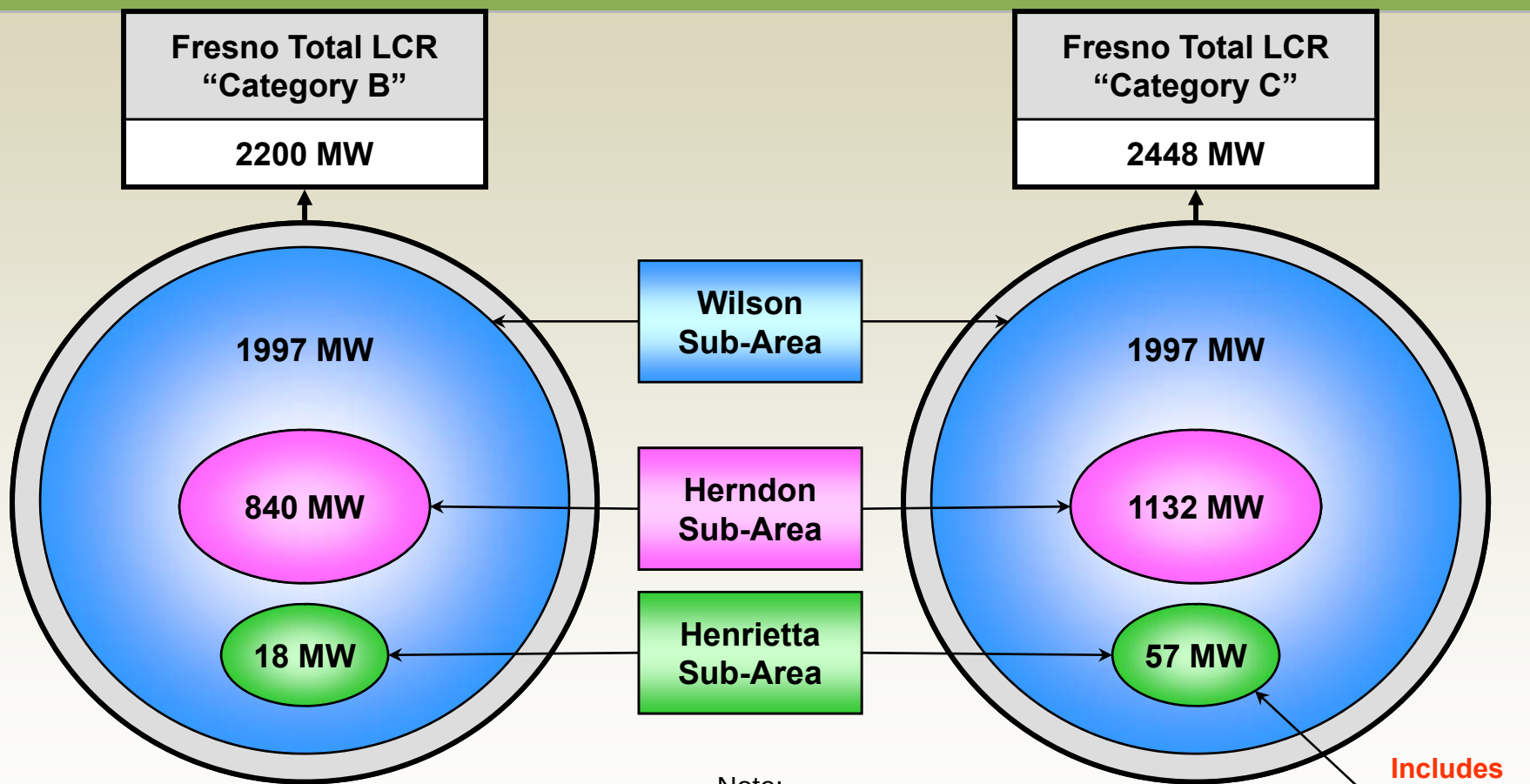
Including:

QF	25	25
Muni	0	0
Deficiency	0	4



Fresno Area LCR

Summary of 2011 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.

Includes
4 MW
deficiency

Changes

Since our last stakeholder meeting:

- 1) Updated NQC

Since last year:

- 1) Load has decreased by 71 MW
- 2) Two new small peakers (8 MW in total)
- 3) Small re-dispatch between sub-areas has resulted in LCR decrease by 200 MW

Your comments and questions are welcome.

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