

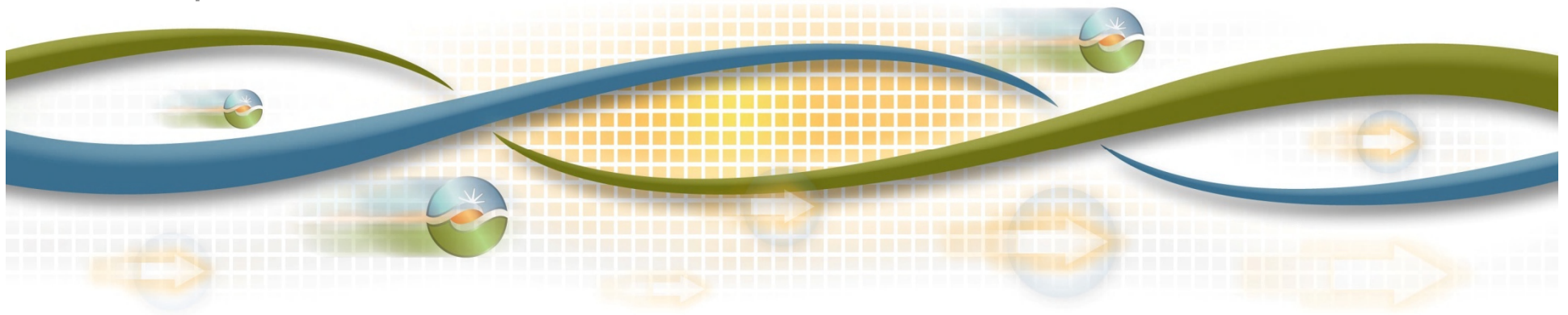
2013 Final LCR Study Results Humboldt and North Coast/ North Bay

Irina Green

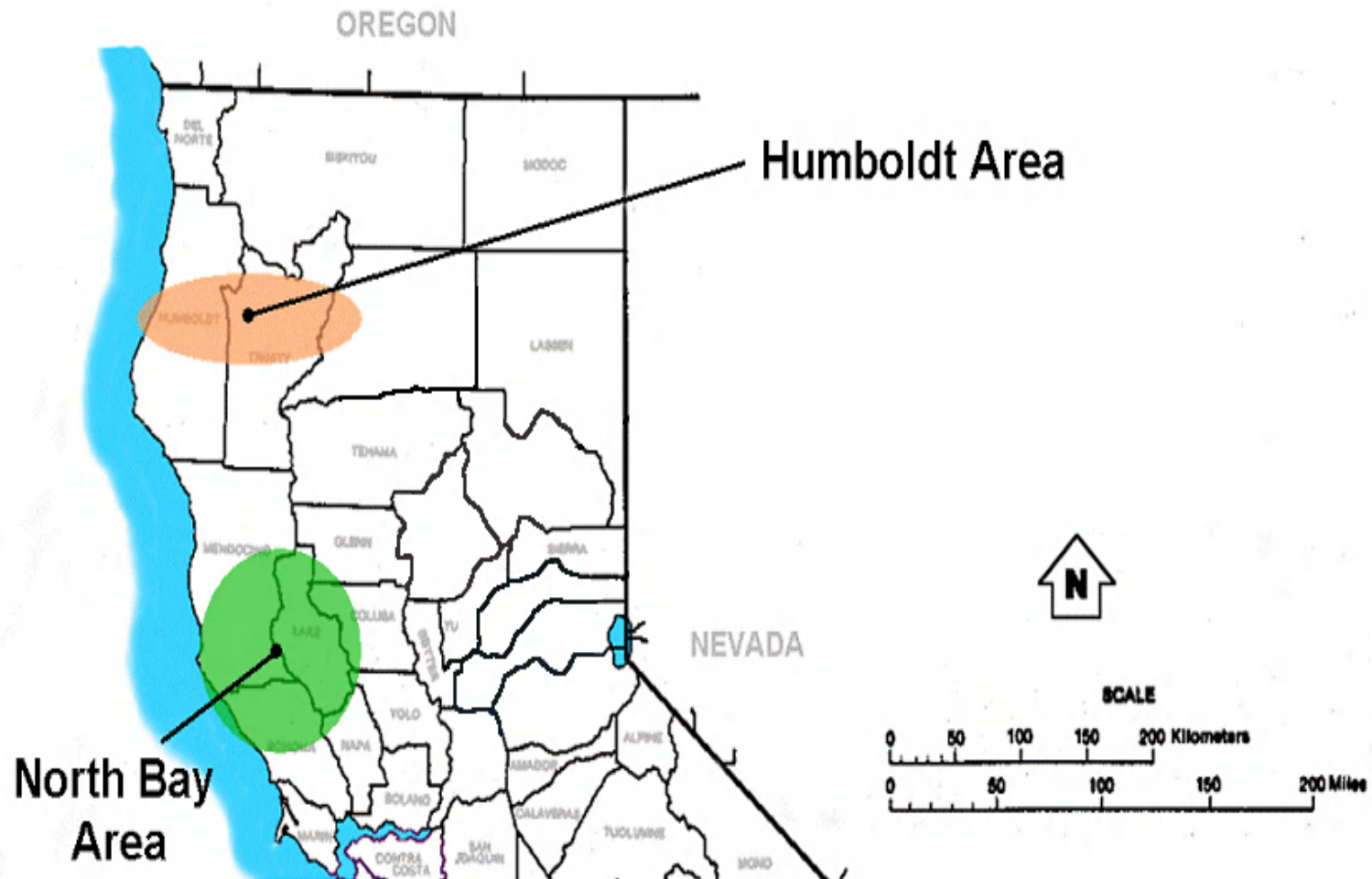
Regional Transmission Engineering Lead

Stakeholder Meeting

April 12, 2012



Humboldt and North Coast/North Bay



Humboldt Load and Resources (MW)

2013

Load = 200

Transmission Losses = 10

Total Load = **210**

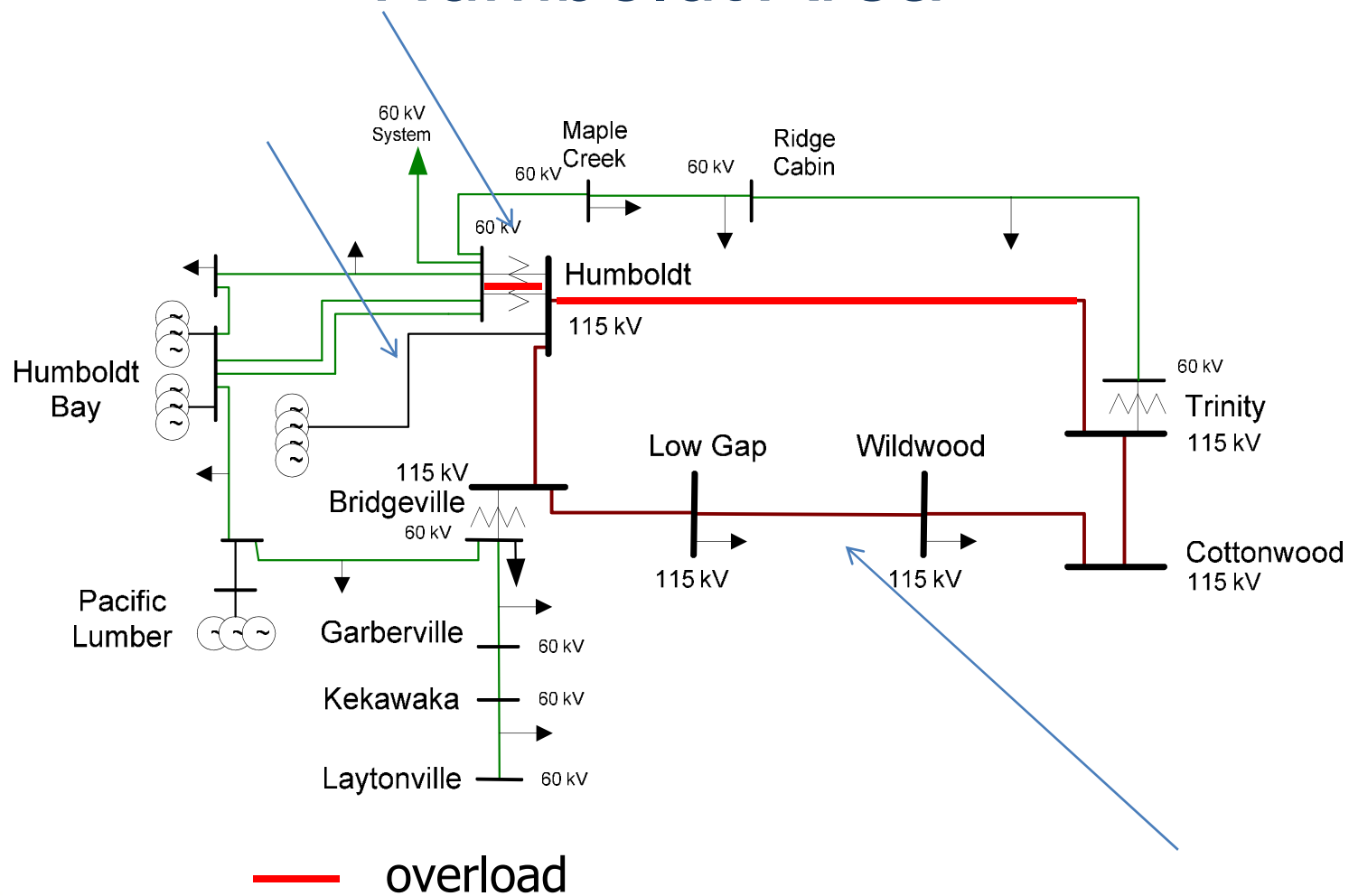
Market Generation = 162

Muni Generation = 0

QF/Self-Gen Generation = 55

Total Qualifying Capacity = **217**

Critical Contingencies Humboldt Area

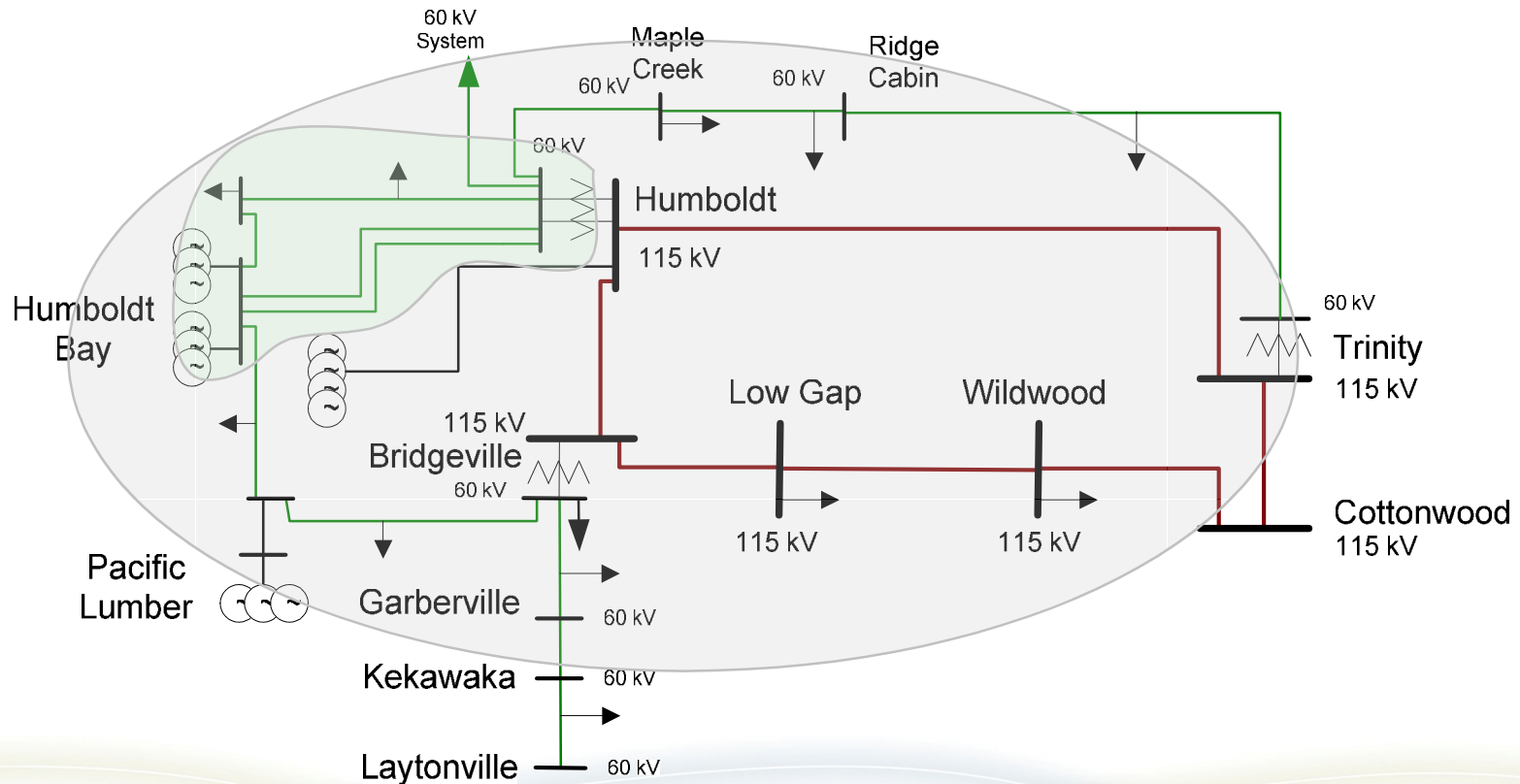


Critical Contingencies Humboldt Area

Two types of requirements:

Humboldt 60 kV Pocket

Entire Humboldt area



Critical Contingencies

Humboldt 60 kV Sub-area

Humboldt 60 kV Sub-area – Category B

Contingency: An outage of one Humboldt 115/60 kV Transformer

LCR need: 125 MW (including 55 MW of QF/Self generation)

Limiting component: Thermal overload on the parallel Humboldt 115/60 kV Transformer

Humboldt 60 kV Sub-area – Category C

Contingency: An outage of one Humboldt 115/60 kV Transformer and one of the 60 kV tie-lines connecting Humboldt Bay units

LCR need: 174 MW (including 55 MW of QF/Self generation and 22 MW of deficiency)

Limiting component: Thermal overload on the parallel Humboldt 115/60 kV Transformer

Critical Contingencies Humboldt Area

Humboldt Overall – Category B

Contingency: An outage of Cottonwood-Bridgeville 115 kV line with one of the Humboldt PP units out of service

LCR need: 143 MW (including 55 MW of QF/Self generation)

Limiting component: Thermal overload on the Humboldt
-Trinity 115 kV line

Humboldt Overall – Category C

Contingency: An outage of Cottonwood – Bridgeville 115 kV line overlapping with an outage of the 115 kV tie-line connecting the Humboldt Bay Units

LCR need: 190 MW (including 55 MW of QF/Self generation)

Limiting component: Thermal overload on the Humboldt – Trinity 115kV Line

Changes

Since last year:

- 1) Load forecast is the same
- 2) LCR need is the same
- 3) Garberville reactive support project

Since last stakeholder meeting:

- 1) Updated NQC

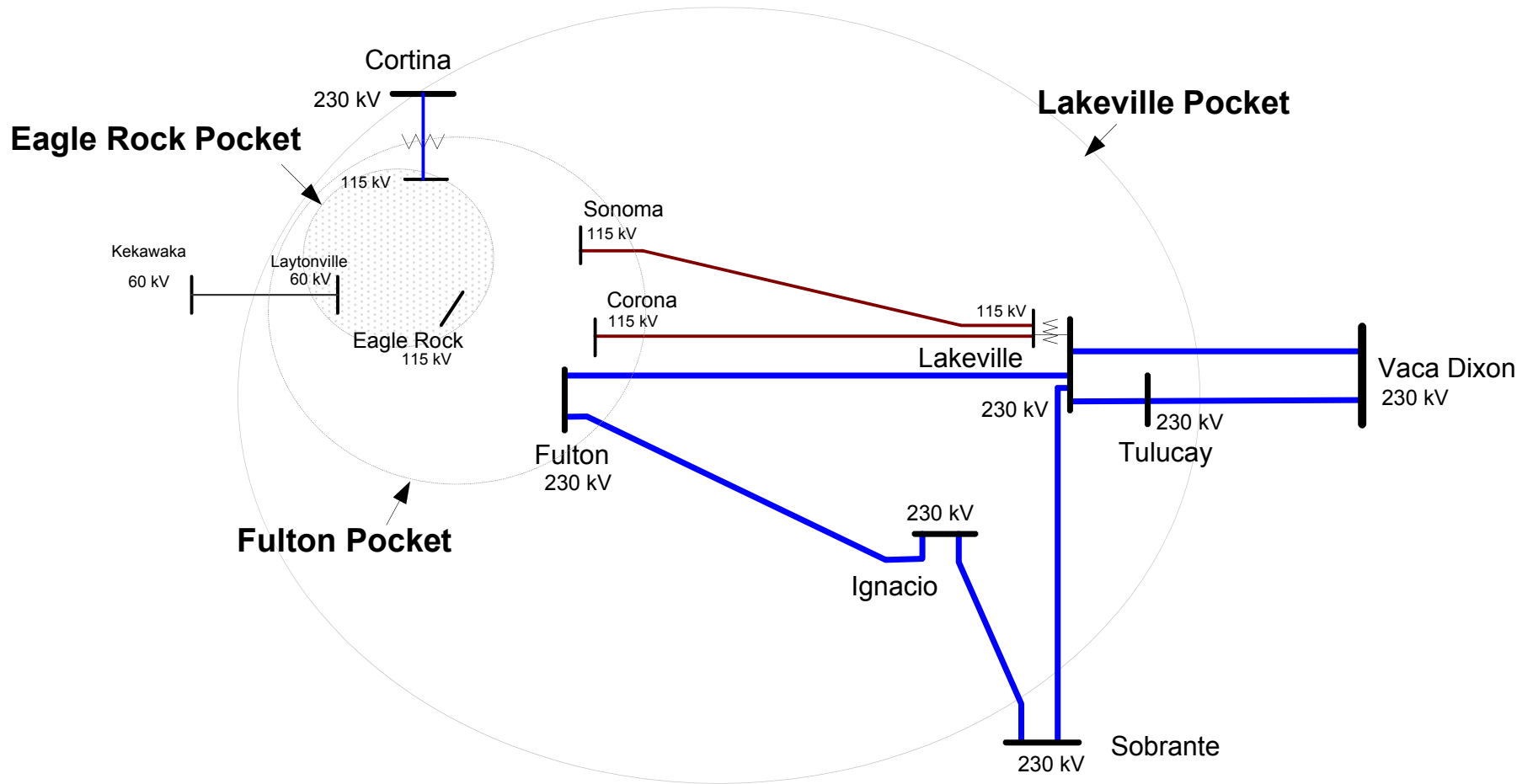
Your comments and questions are welcomed

Please send written comments to:
RegionalTransmission@caiso.com

North Coast/Bay Load and Resources (MW)

		2013
Load	=	1442
Transmission Losses	=	37
Total Load	=	1479
Market Generation	=	739
Muni Generation	=	113
QF Generation	=	17
Total Qualifying Capacity	=	869

North Coast and North Bay



Eagle Rock Sub-Area

Eagle Rock Sub-area – Category B

Contingency: Cortina-Mendocino 115 kV, with Geyser #11 unit out

LCR need: 215 MW (includes 2 MW of QF/Muni generation)

Limiting component: Thermal overload on Eagle Rock-Cortina 115 kV line

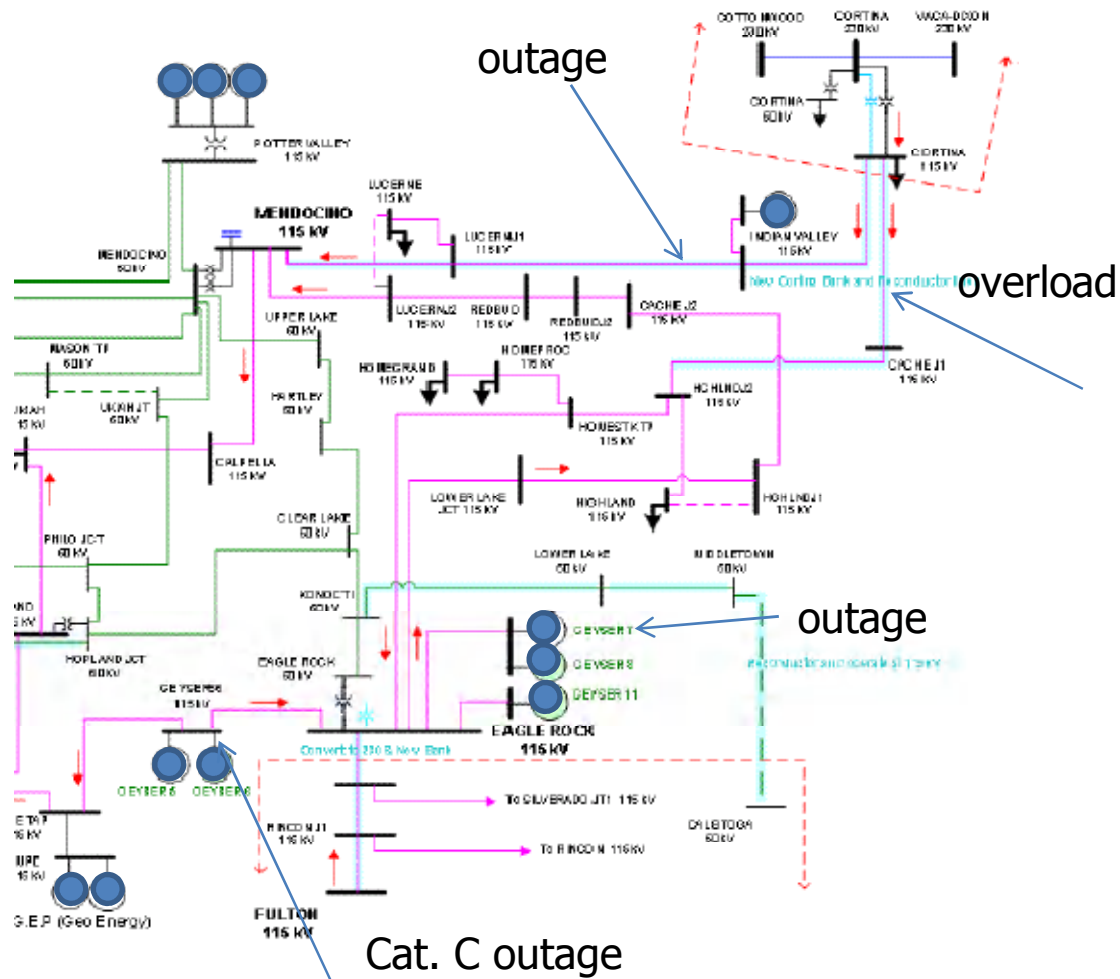
Eagle Rock Sub-area – Category C

Contingency: Cortina-Mendocino 115 kV and Geysers #3-Geysers #5 115 kV line

LCR need: 235 MW (includes 2 MW of QF/Muni generation)

Limiting component: Thermal overload on Eagle Rock-Cortina 115 kV line

Eagle Rock Sub-Area



Fulton Sub-area

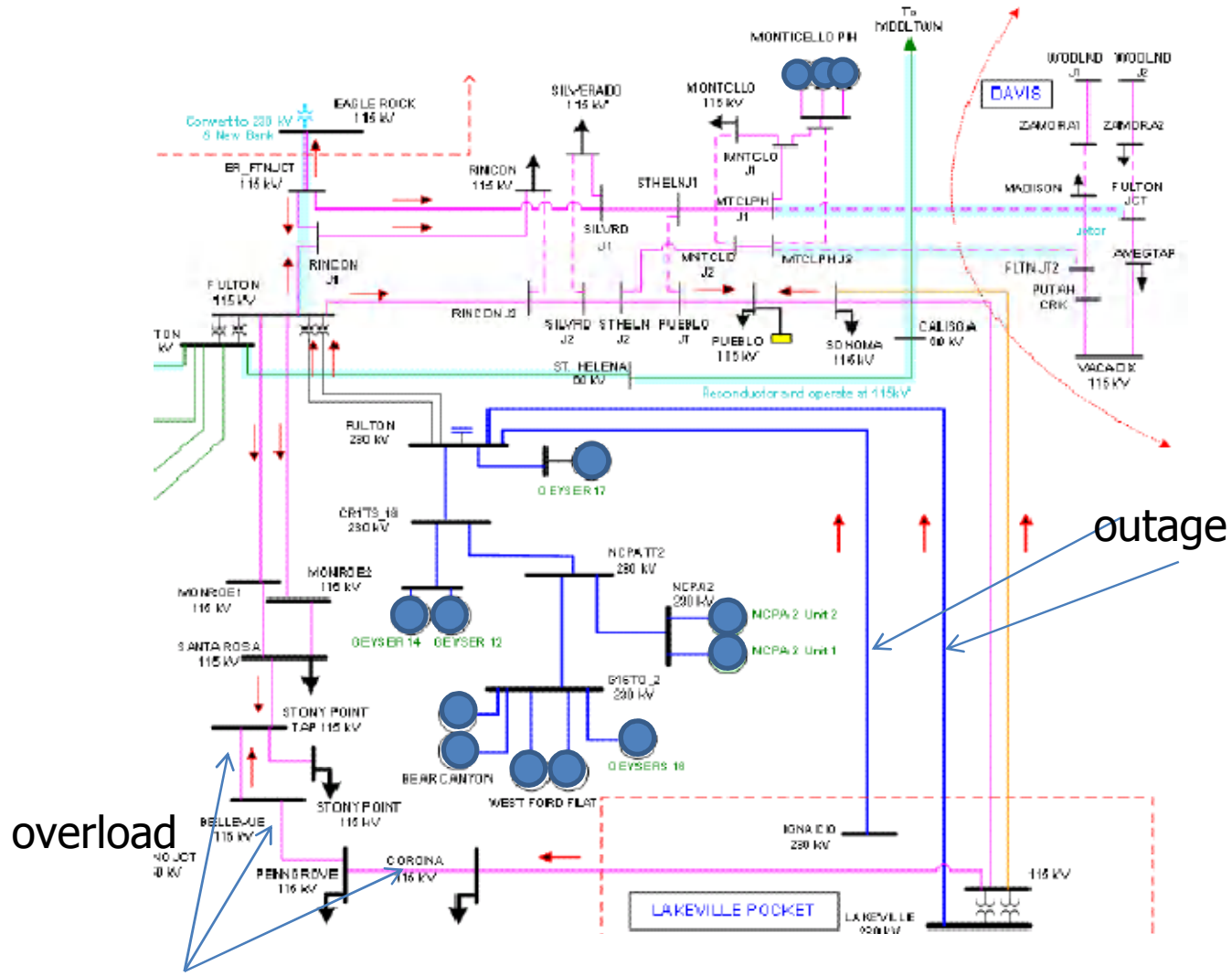
Fulton Sub-area – Category C

Contingency: Fulton-Lakeville 230 kV and Fulton-Ignacio 230 kV

LCR need: 301 MW (includes of 16 MW QF and 54 MW of Muni generation)

Limiting component: Thermal overload on Santa Rosa-Corona 115kV line

Fulton Sub-area



Lakeville Sub-area

Lakeville Sub-area (NC/NB Overall) – Category B

Contingency: Vaca Dixon-Tulucay 230 kV line with Delta Energy Center power plant out of service

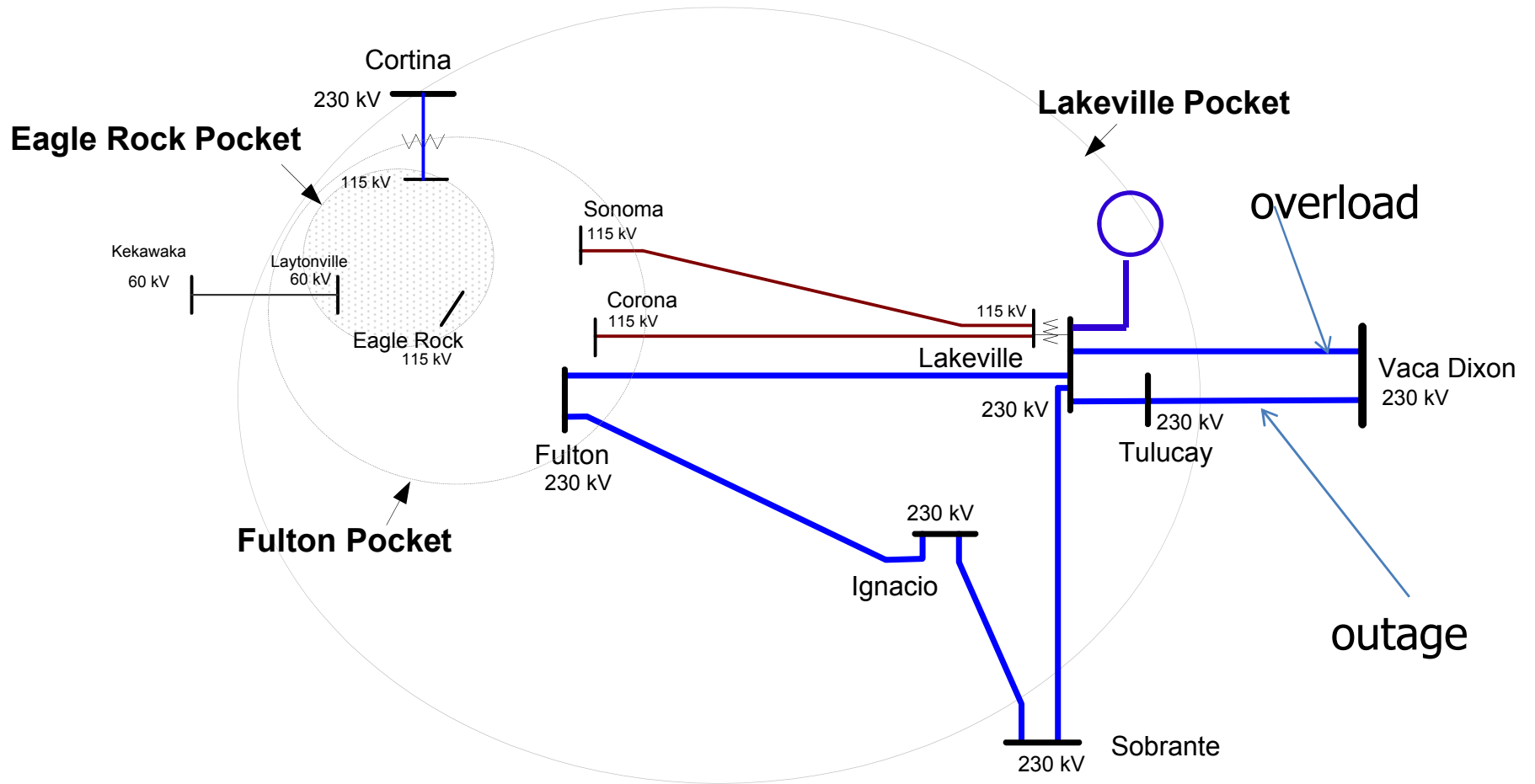
LCR need: 629 MW (includes 17 MW QF and 113 MW of Muni generation)

Limiting component: Thermal overload on the Vaca Dixon-Lakeville 230 kV line

Lakeville Sub-area (NC/NB Overall) – Category C

Same as Category B

Lakeville Sub-area



Changes

Since last year:

1. North Coast and North Bay area load and losses in 2013 are 59 MW (4%) higher than in 2012
2. One new renewable project (10 MW biomass)
3. Total LCR need has increased by 16 MW mainly due to the load growth and resource requirements in the Bay Area (Pittsburg/Oakland sub-area)

Since last stakeholder meeting:

- 1) Updated NQC

Your comments and questions are welcomed

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