



California ISO
Shaping a Renewed Future

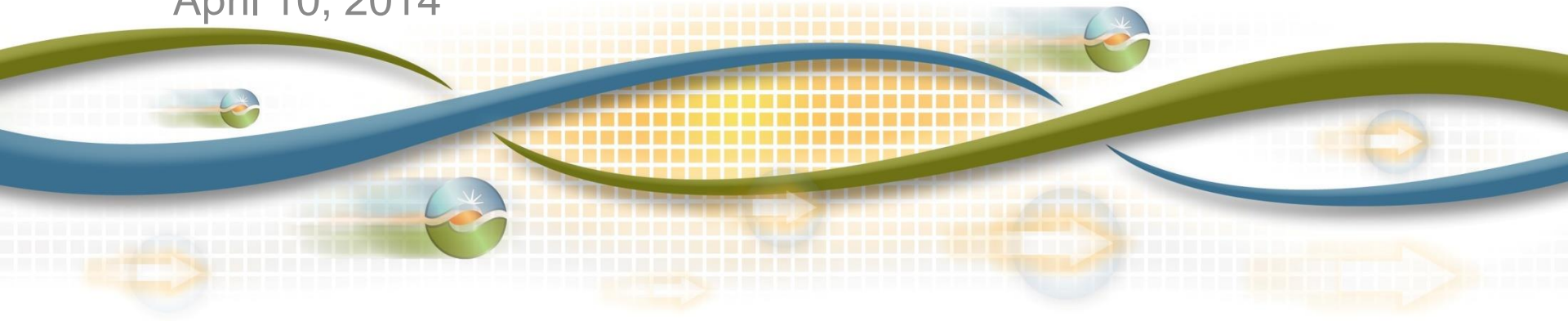
2015 and 2019 Final LCR Study Results - North Coast/ North Bay

Irina Green

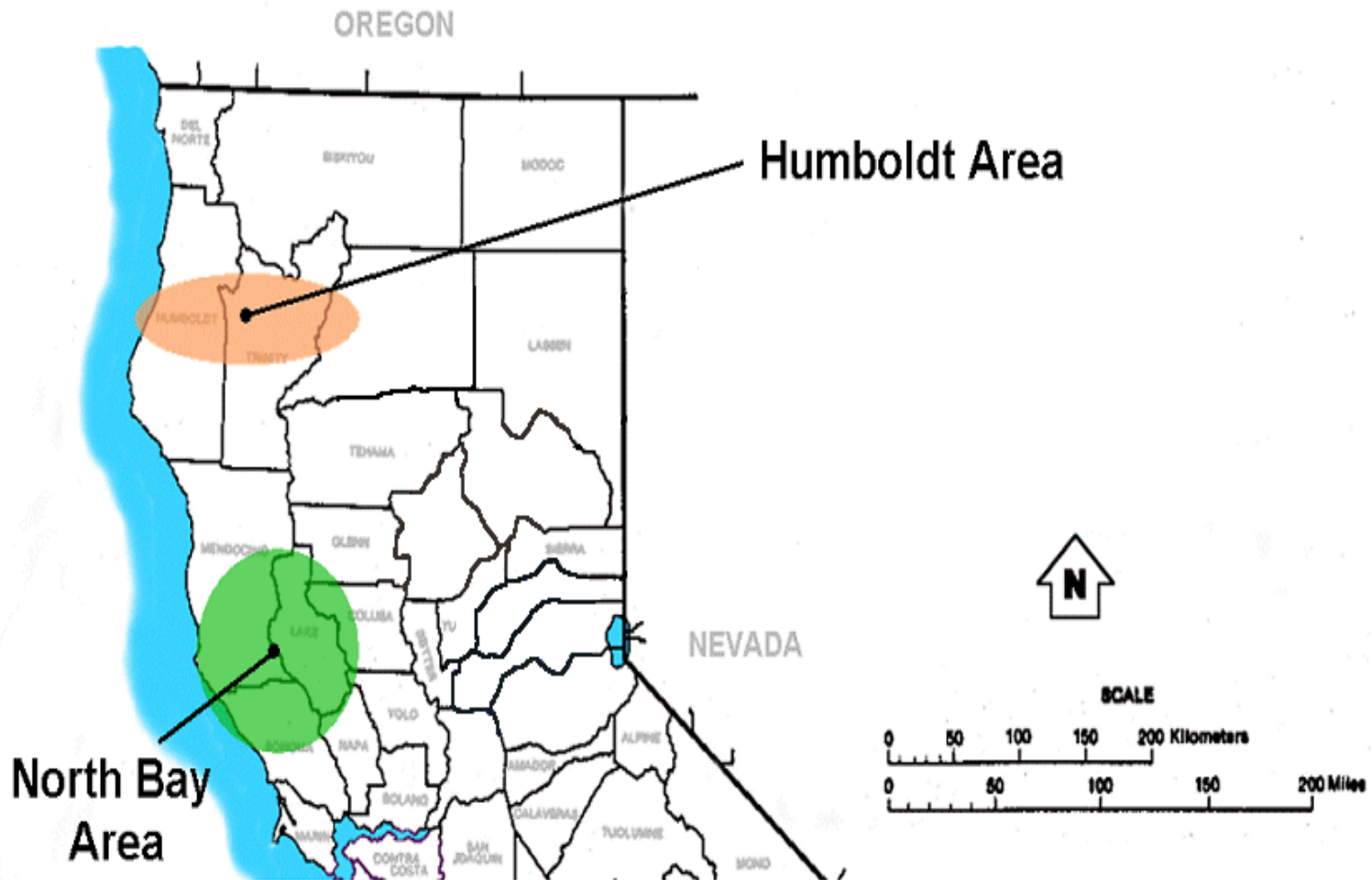
Regional Transmission Lead Engineer

Stakeholder Web Conference

April 10, 2014



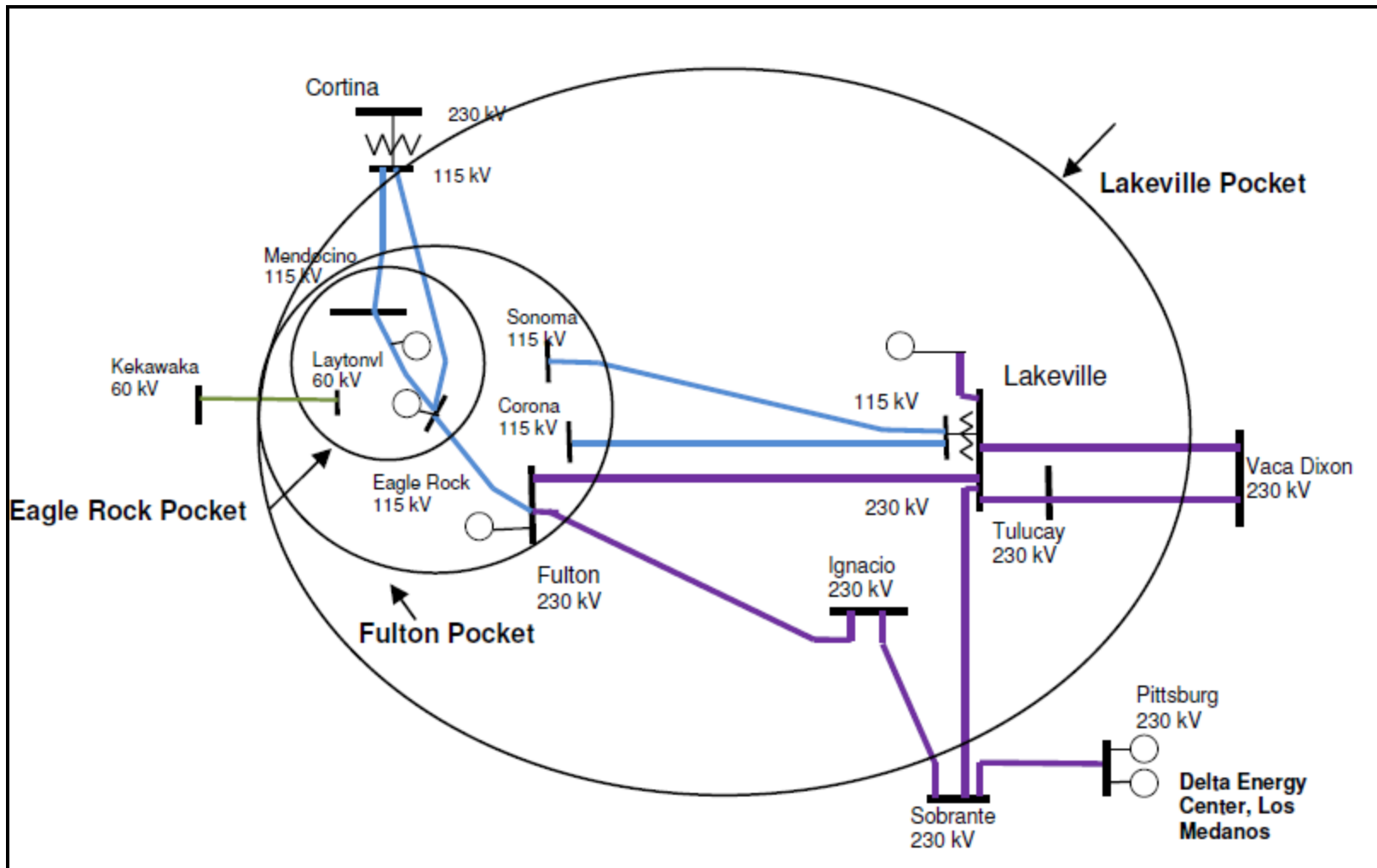
Humboldt and North Coast/North Bay



North Coast/North Bay Load and Resources (MW)

		2015	2019
Load	=	1419	1447
Transmission Losses	=	39	37
Total Load	=	1458	1484
Market Generation	=	771	771
Wind Generation	=	0	0
Muni Generation	=	113	113
QF Generation	=	17	17
Total Qualifying Capacity	=	901	901

North Coast and North Bay



Eagle Rock Sub-Area

Eagle Rock Sub-area – Category B

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

2015 LCR need: 165 MW (includes 3 MW of QF/Muni generation)

2019 LCR need: 201 MW (includes 3 MW of QF/Muni generation)

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

Eagle Rock Sub-area – Category C

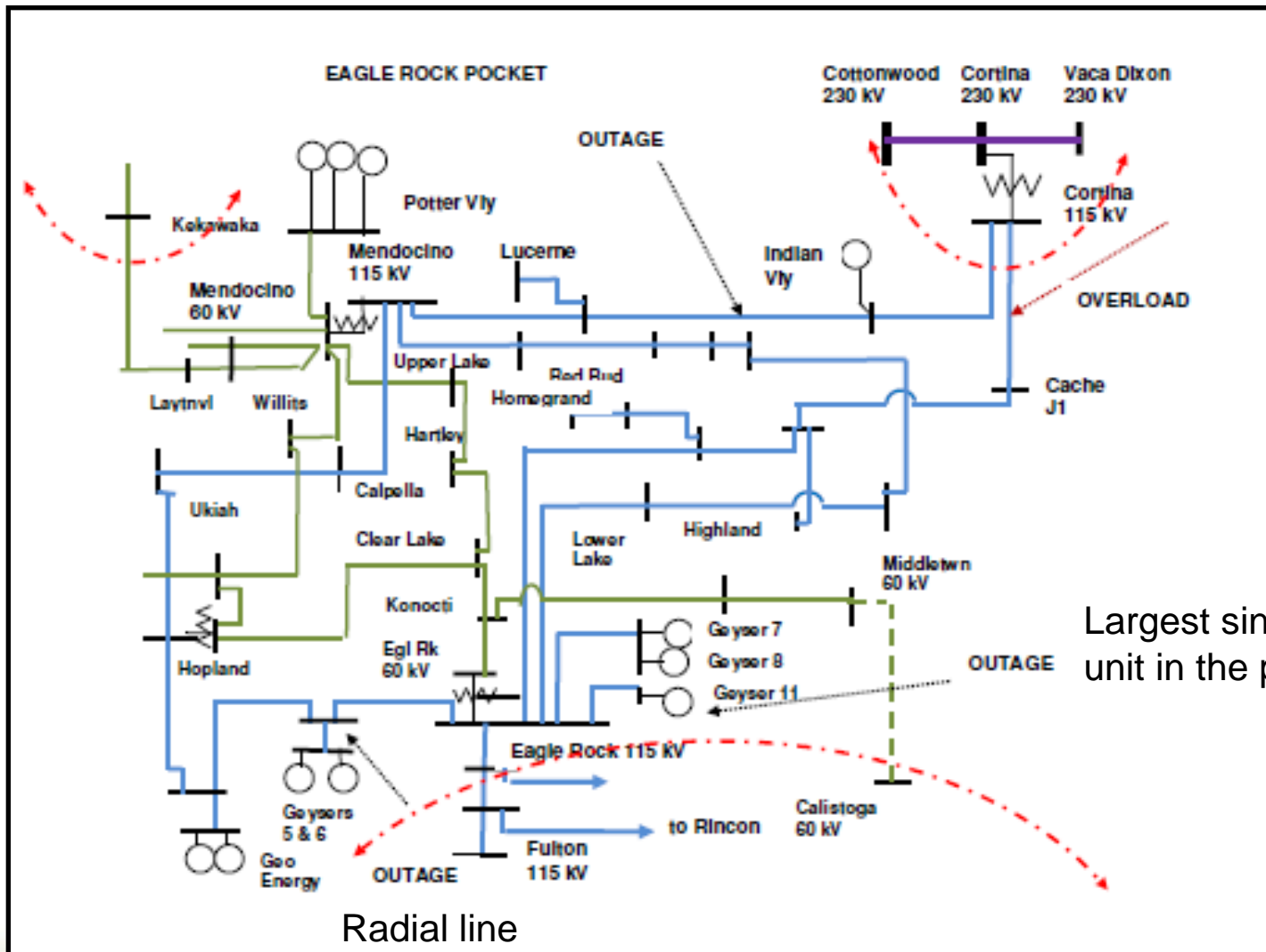
Contingency: Cortina-Mendocino and Geysers #3-Geysers #5 115 kV lines

2015 LCR need: 180 MW (includes 3 MW of QF/Muni generation)

2019 LCR need: 218 MW (includes 3 MW of QF/Muni generation)

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

Eagle Rock Sub-Area



Largest single unit in the pocket

Radial line connecting two units

Fulton Sub-area

Fulton Sub-area – Category C

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

2015 LCR need: 268 MW (includes 70 MW of QF/Muni generation)

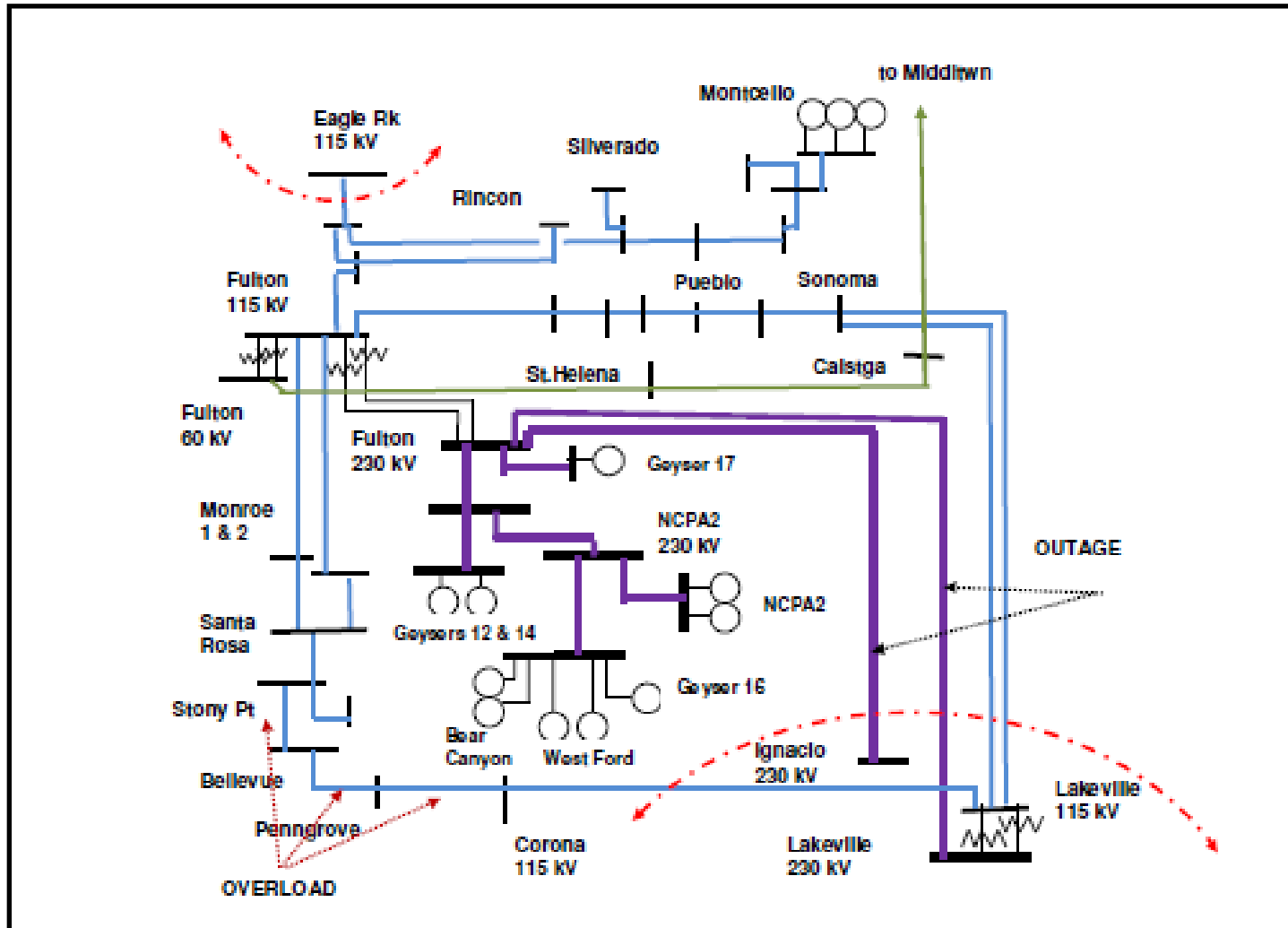
2019 LCR need: 310 MW (includes 70 MW of QF/Muni generation)

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

Fulton Sub-area – Category B

No requirement.

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

2015 LCR need: 550 MW (includes 130 MW of QF/Muni generation)

2019 LCR need: not limiting due to the system upgrades, same as Fulton sub-area: 310 MW (includes 70 MW of QF/Muni generation)

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

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

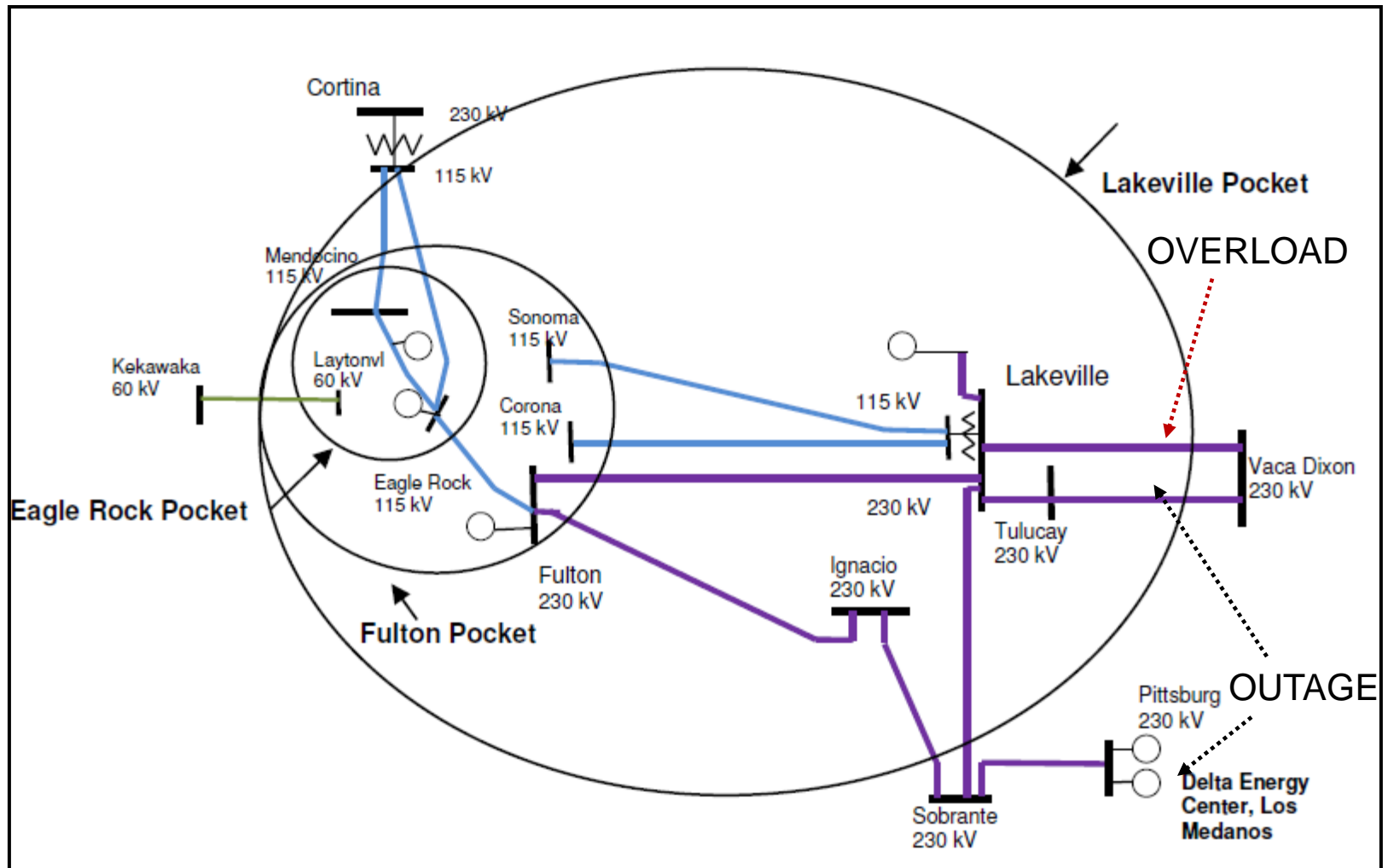
2015 LCR need: Same as above

2019 Contingency: Vaca Dixon-Tulucay and Vaca Dixon-Lakeville 230 kV lines

2019 LCR need: 516 MW (includes 130 MW of QF/Muni generation)

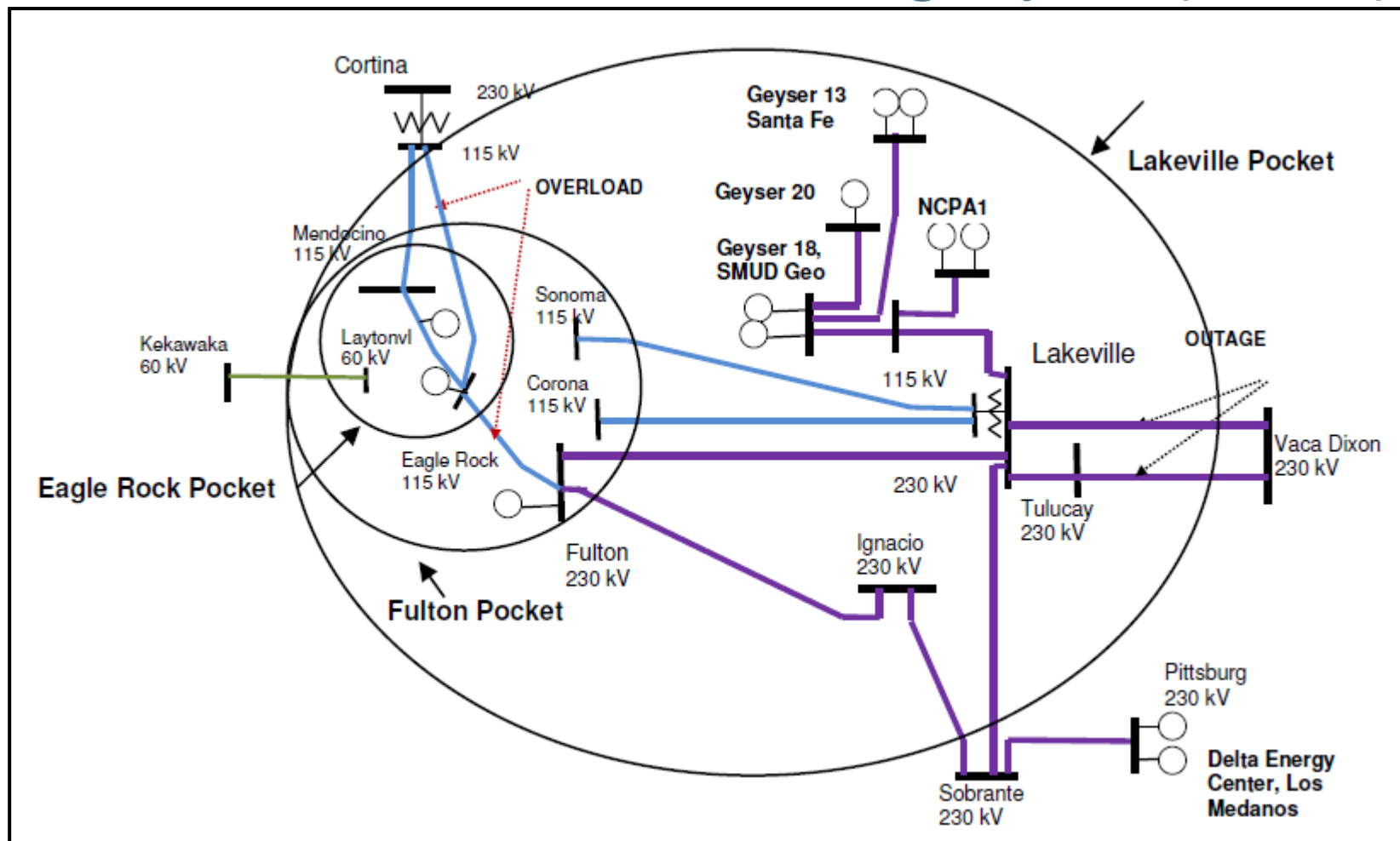
Limiting component: Thermal overload on the Eagle Rock-Cortina and Eagle Rock-Fulton 115 kV lines

Lakeville Sub-area Category B (2015)



No overload in 2019 due to the line reconductoring.

Lakeville Sub-area Category C (2019)



LCR need depends on the generation in the Pittsburg area.

Changes

Since last year:

1. 2015 load forecast has decreased by 7 MW vs. 2014
2. LCR need has decreased by 73 MW due to lower load forecast and higher Pittsburg area generation in the Bay Area
3. Renewable projects: 2015 - small geothermal (32 MW)
4. Vaca Dixon-Lakeville 230 kV Reconductoring Project – 2/2017
5. 2019 load forecast has decreased by 77 MW vs. 2018
6. Long-term LCR need has decreased by 84 MW

Since last stakeholder meeting:

1. Updated NQC

Your comments and questions are welcomed

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