



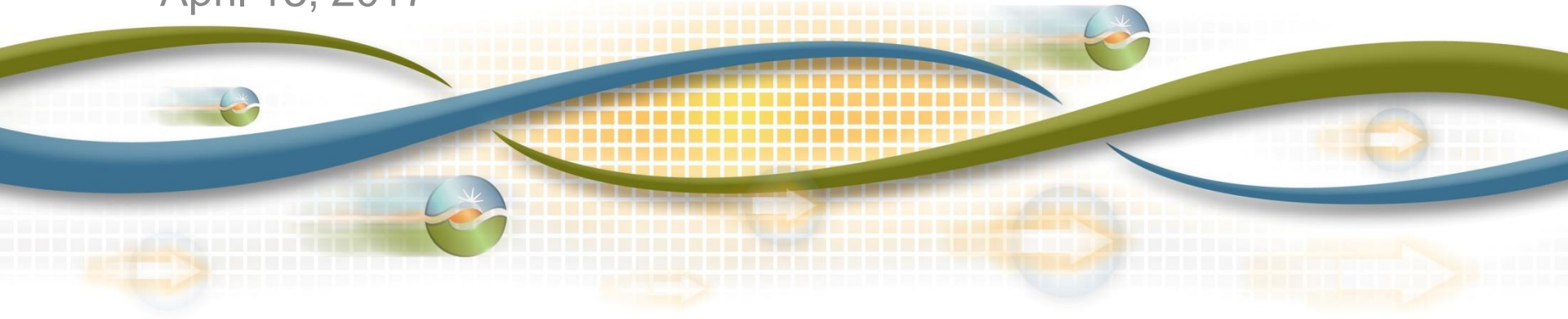
2018 & 22 Final LCR Study Results North Coast/ North Bay Area

Irina Green

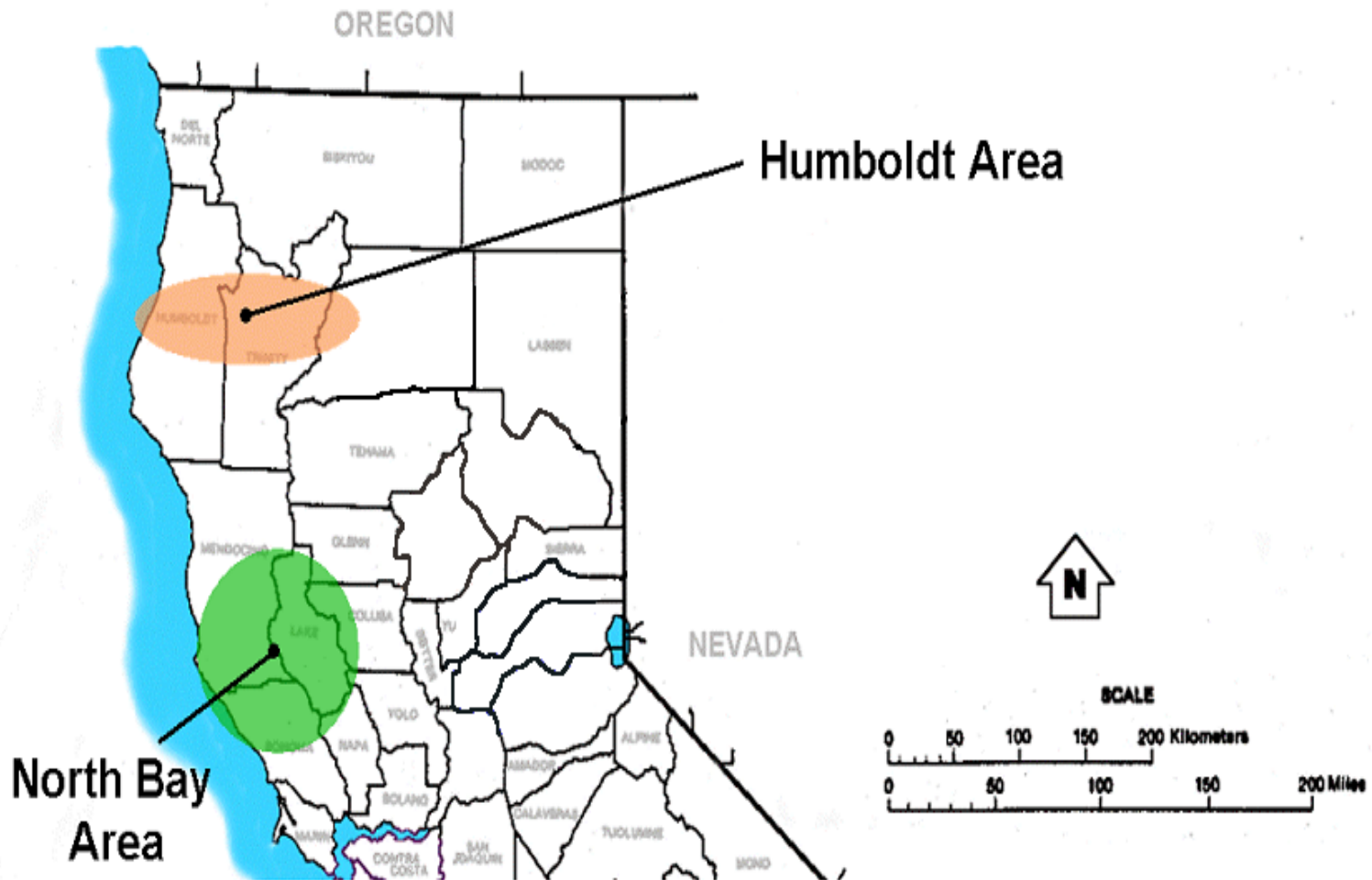
Senior Advisor, Regional Transmission North

Stakeholder Call

April 13, 2017



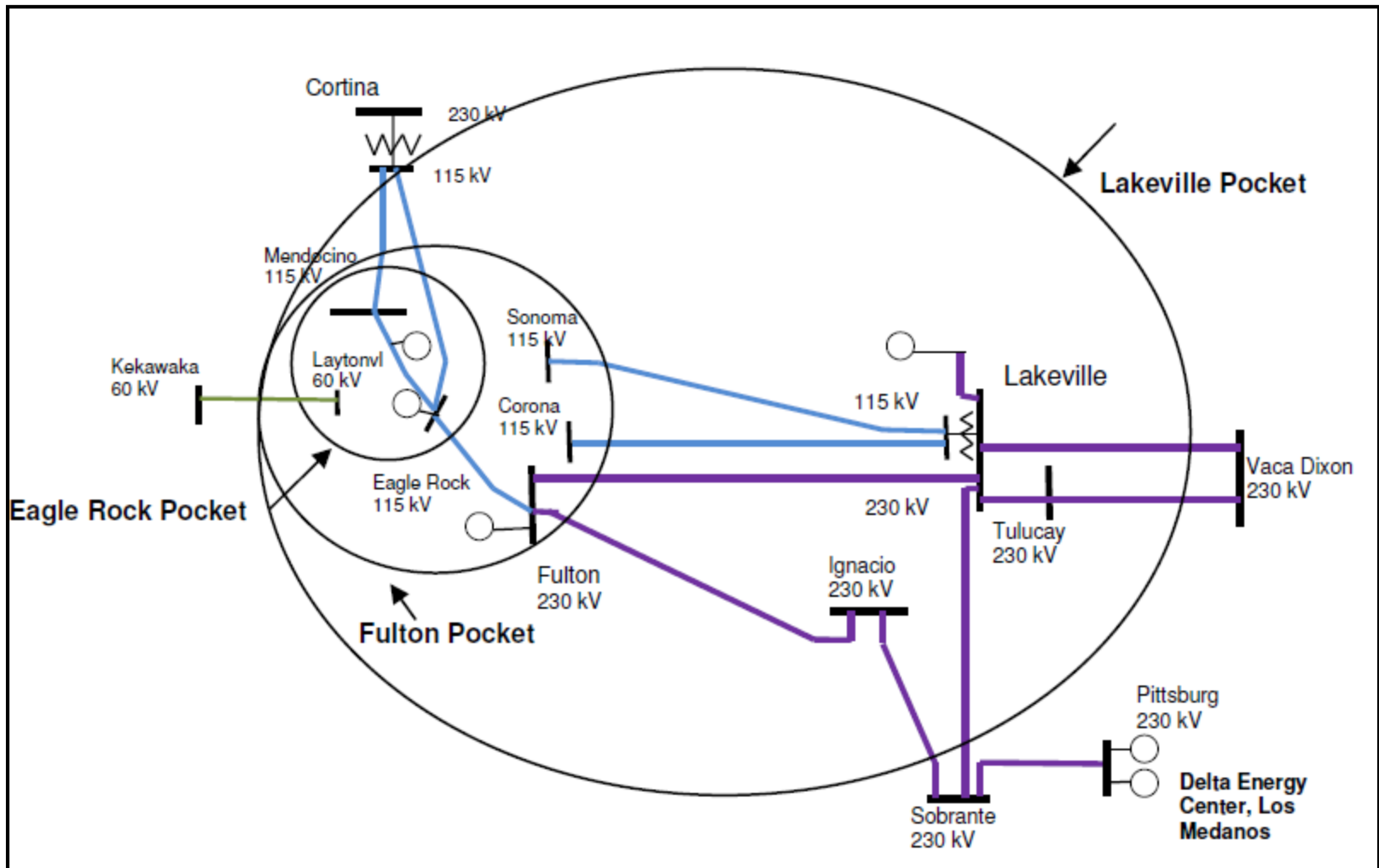
Humboldt and North Coast/North Bay Areas



North Coast/North Bay Load and Resources (MW)

		2018	2022
Load	=	1407	1371
AAEE	=	-27	-50
Behind the meter DG	=	-79	-103
Transmission Losses	=	32	31
Total Load	=	1333	1249
Market Generation	=	751	751
Wind Generation	=	0	0
Muni Generation	=	113	113
QF Generation	=	5	5
Total Qualifying Capacity	=	869	869

North Coast and North Bay



Eagle Rock Sub-Area

Eagle Rock Sub-area – Single Contingency

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

2018 LCR need: 191 MW

2022 LCR need: 215 MW

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

Eagle Rock Sub-area – Double Contingency

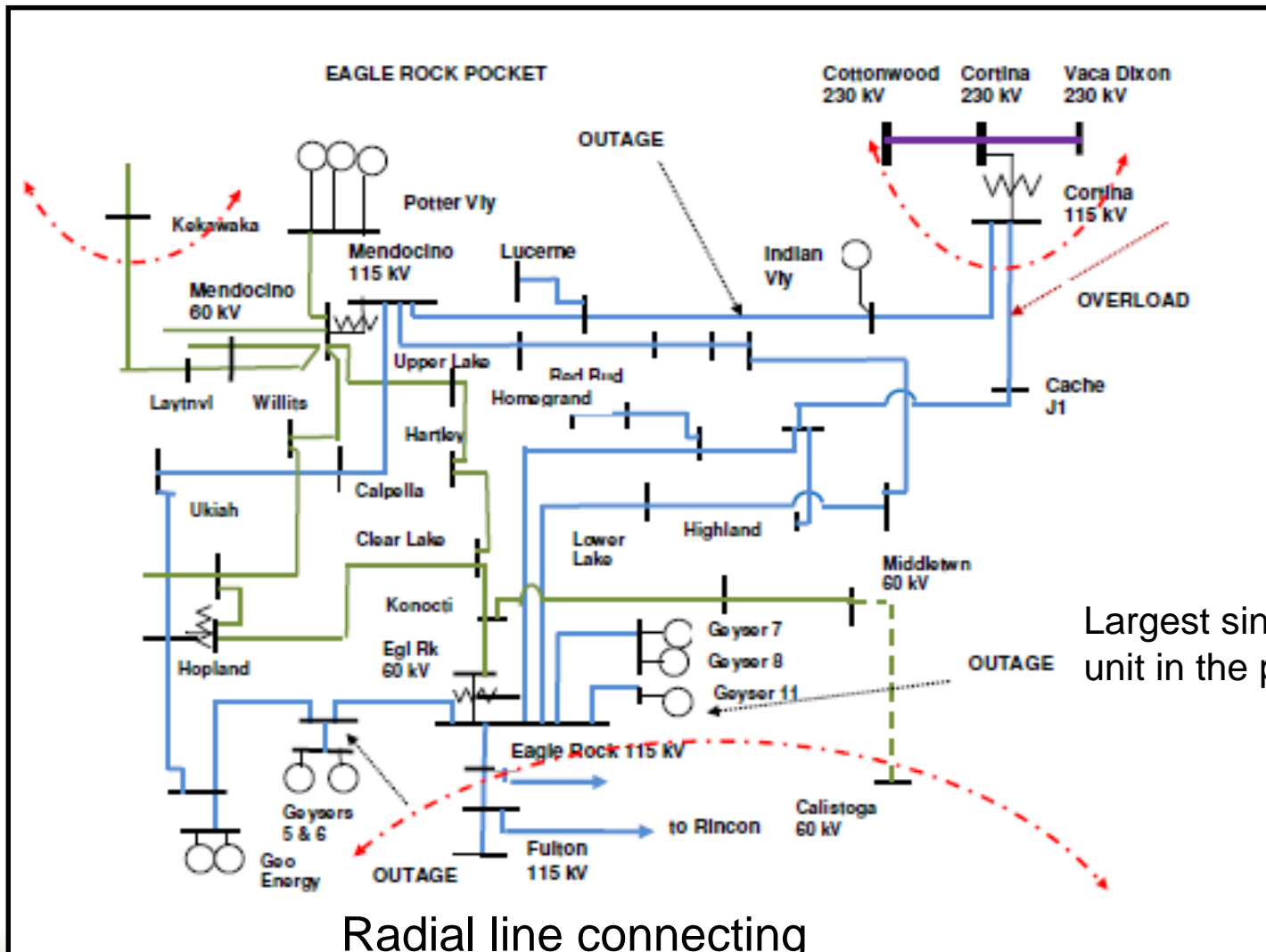
Contingency: Cortina-Mendocino and Geysers #3-Geysers #5 115 kV lines

2018 LCR need: 209 MW

2022 LCR need: 233 MW

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 – Single Contingency

No requirement

Fulton Sub-area – Double Contingency

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

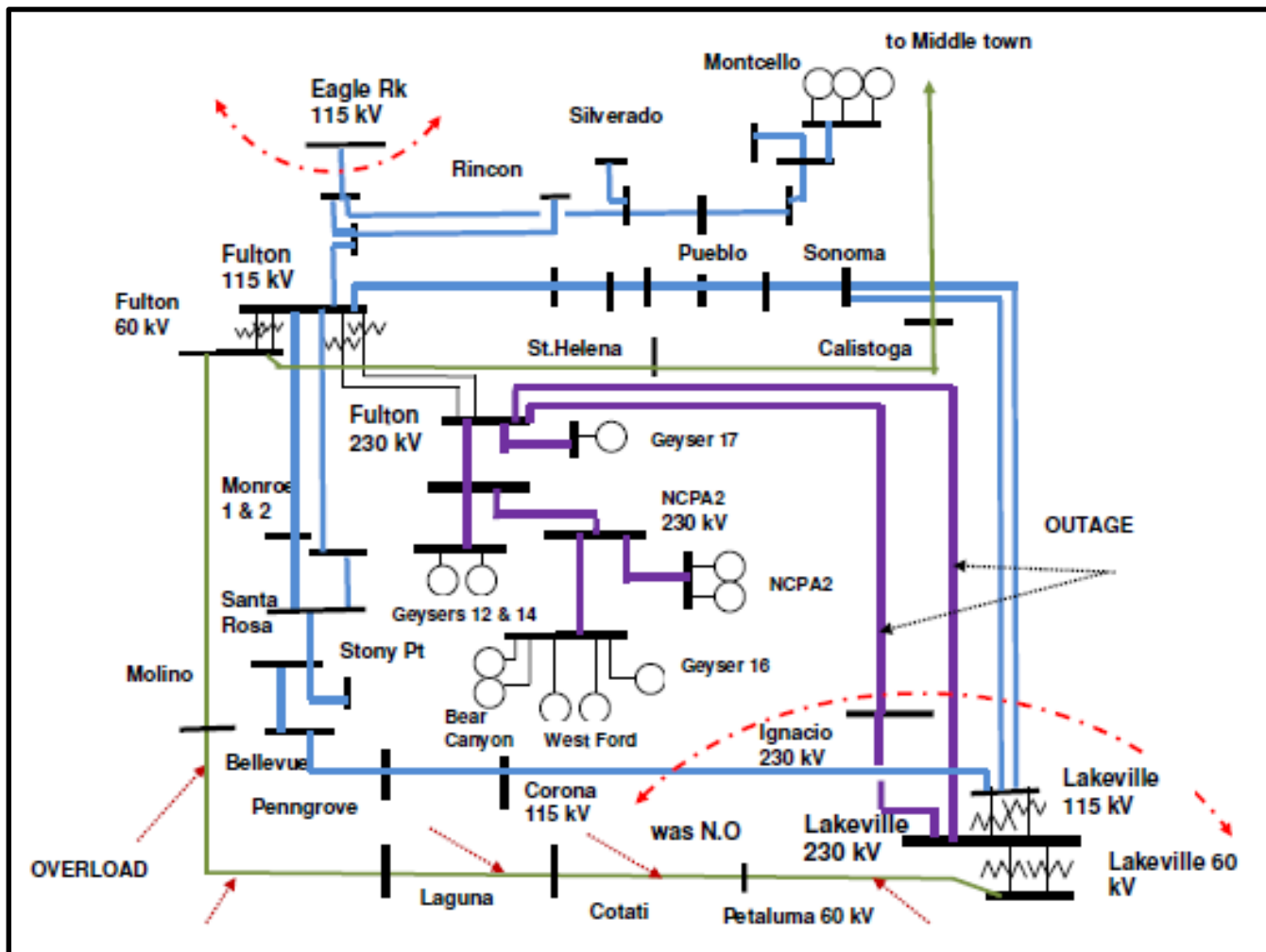
Limiting component: Thermal overload on Lakeville# 2 60 kV line (Lakeville-Petaluma-Cotati 60 kV), which was previously normally opened at Cotati Substation

2018 LCR need: 430 MW

2022 LCR need: 411 MW

If the Lakeville # 2 60 kV line is open, then the limiting element is Santa Rosa-Corona 115 kV line, and there is no additional LCR need compared with the Eagle Rock sub-area

Fulton Sub-area



Lakeville Sub-area

Lakeville Sub-area (NCNB Overall) – Category B

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

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

Ames/Pittsburg Sub-area – Category C

Contingency: DCTL Newark-Ravenswood & Tesla-Ravenswood 230 kV

Limiting component: Thermal overload on the Newark-Ames #2 115 kV line

2018 LCR need:

NCNB: 634 MW

Ames: 596 MW

Pittsburg: 1182 MW

Lakeville Sub-area

NCNB Sub-area – Category B

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

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

Ames/Pittsburg Sub-area – Category C

Contingency: DCTL Newark-Ravenswood & Tesla-Ravenswood 230 kV

Limiting component: Thermal overload on the Newark-Ames #2 115 kV line

2022 LCR need – Vaca Dixon-Lakeville 230 kV lines not reconducted:

NCNB: 628 MW

Ames: 596 MW

Pittsburg: 1162 MW

Lakeville Sub-area

NCNB Sub-area – Category C

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

Limiting component: Thermal overload on the Moraga-Sobrante 115 kV line

Ames/Pittsburg Sub-area – Category C

Contingency: DCTL Newark-Ravenswood & Tesla-Ravenswood 230 kV

Limiting component: Thermal overload on the Newark-Ames #2 115 kV line

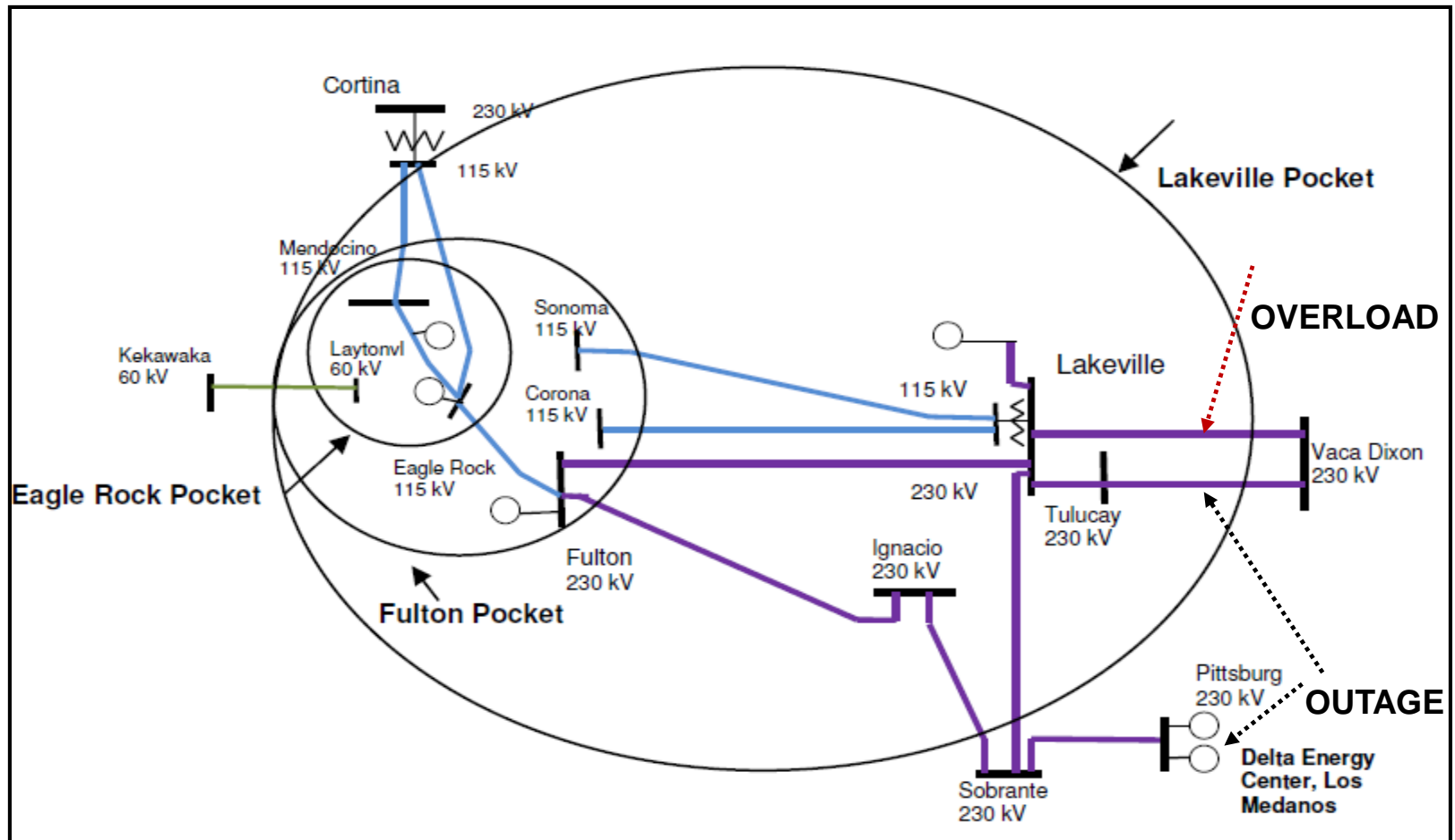
2022 LCR need – Vaca Dixon-Lakeville 230 kV lines reconductored:

NCNB: 440 MW

Ames: 596 MW

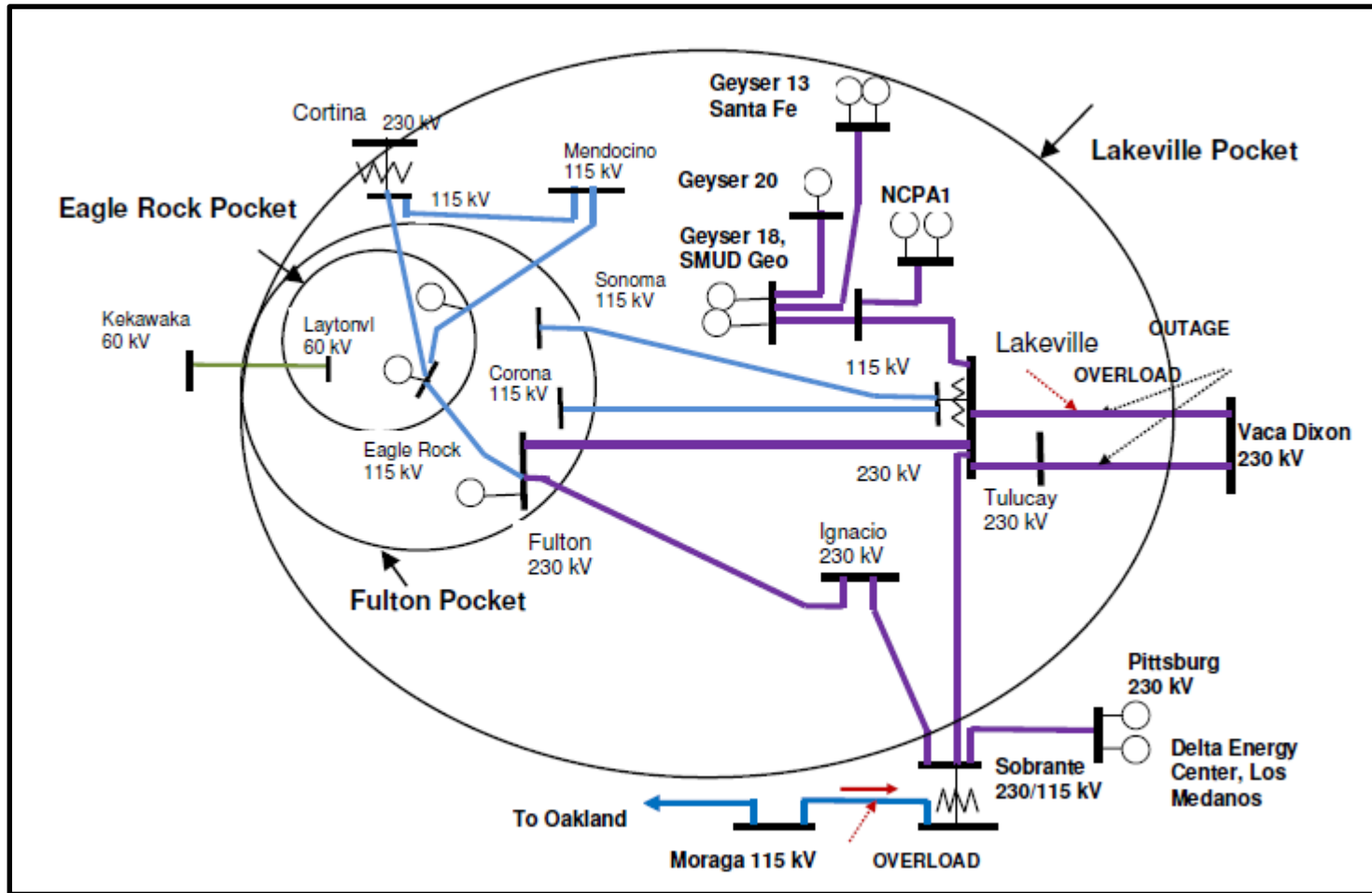
Pittsburg: 1232 MW

Lakeville sub-area one line and generator



LCR need depends on the generation in the Pittsburg/Ames sub-areas.

Lakeville Sub-area double line outage



LCR need depends on the generation in the Pittsburg/Ames sub-areas.

Changes

Since last year:

- 1) 2018 load forecast has increased by 22 MW vs. 2017
- 2) LCR need has decreased in 2018 vs. 2017 by 87 MW mainly due to load decrease in the Bay Area.
- 3) 2022 load forecast has decreased by 69 MW vs. 2021
- 4) LCR need has decreased in 2022 vs. 2021 by 40 MW mostly due to load decrease.

Since last stakeholder meeting:

- 1) Updated NQC.

Your comments and questions are welcomed

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