



California ISO
Your Link to Power

2011 Draft LCR Study Results Humboldt and North Coast/ North Bay

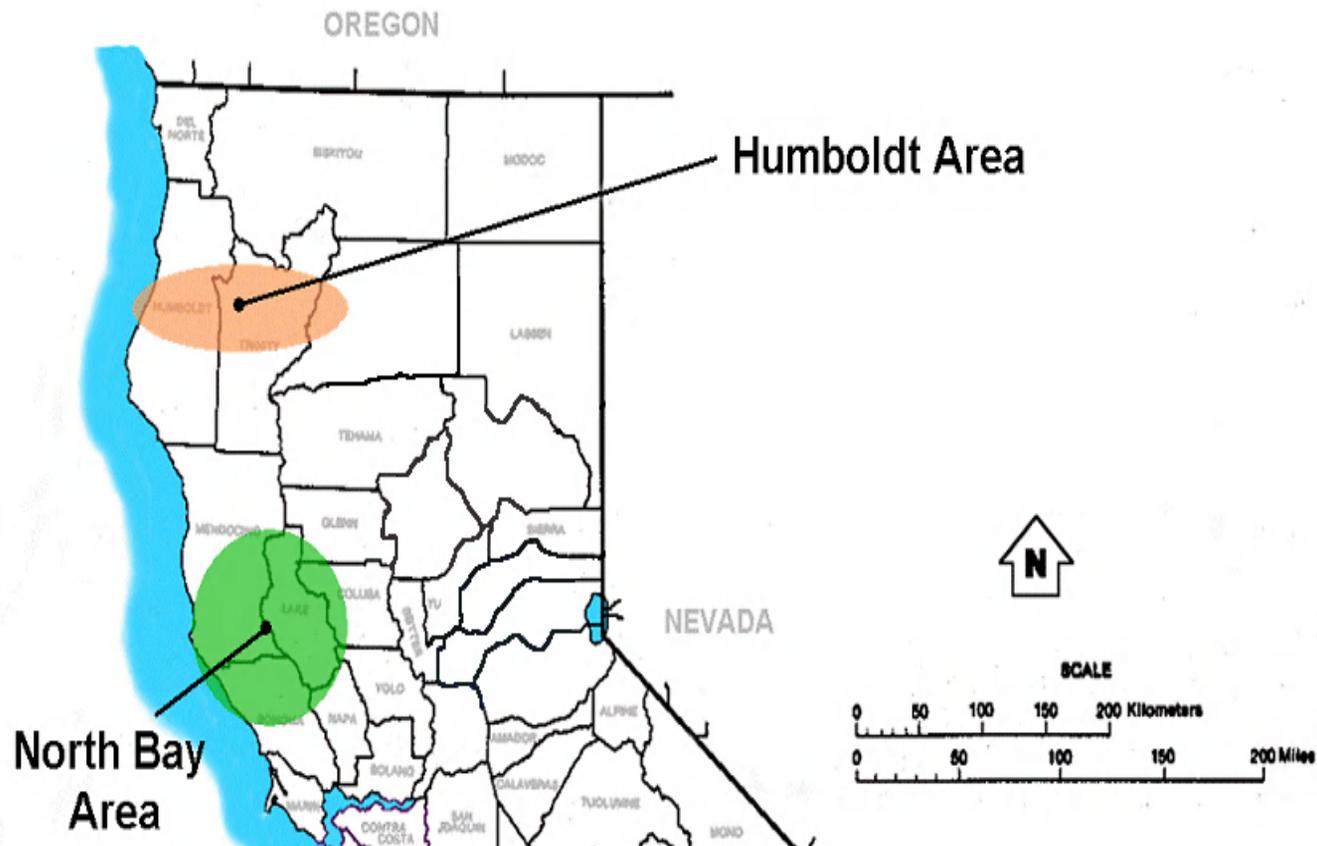
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Stakeholder Meeting

March 10, 2010

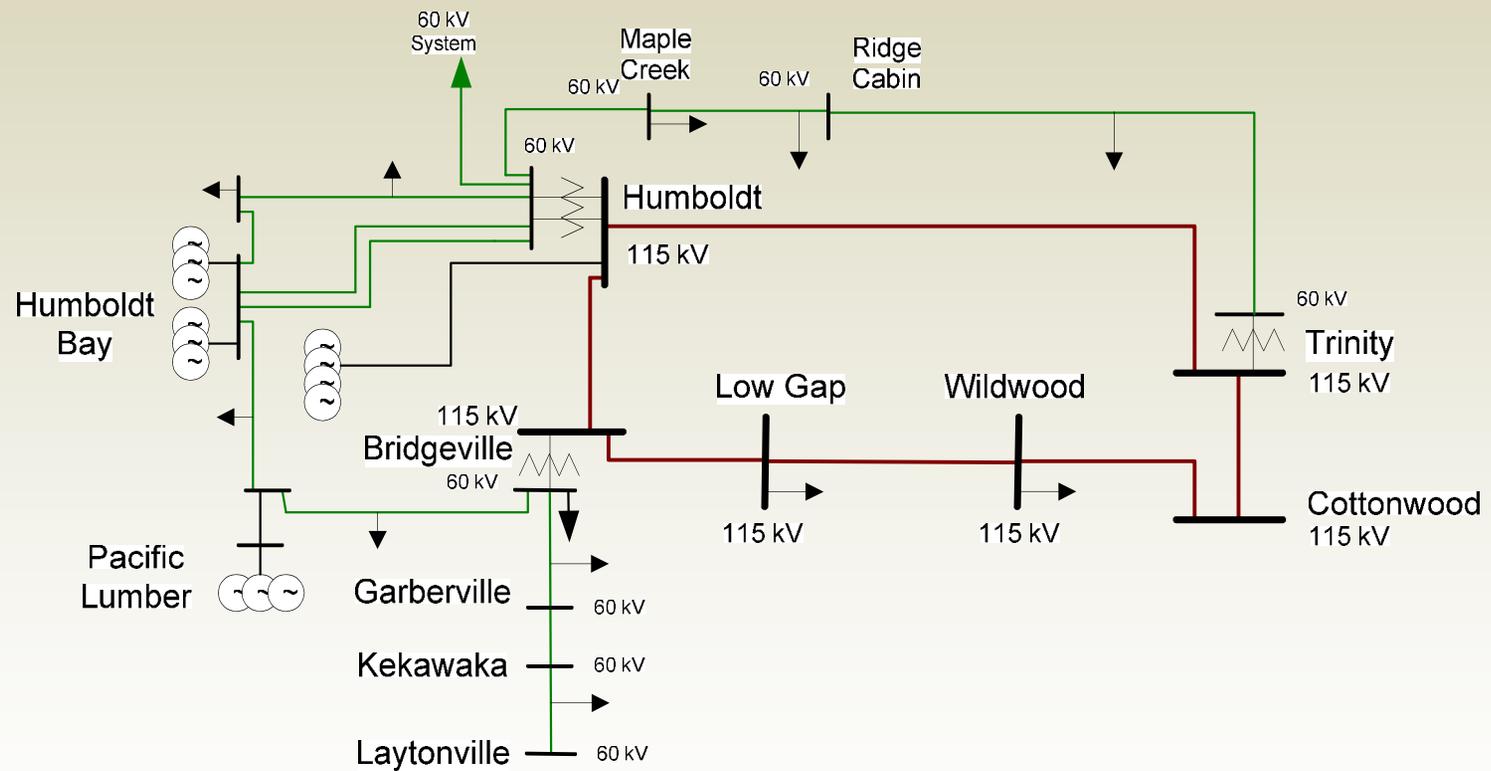
Humboldt and North Coast/North Bay Areas



Humboldt Load and Resources (MW)

		2011
Load	=	197
Transmission Losses	=	9
Total Load	=	206
Market Generation	=	166
Muni Generation	=	0
QF/Self-Gen Generation	=	56
Total Qualifying Capacity	=	222

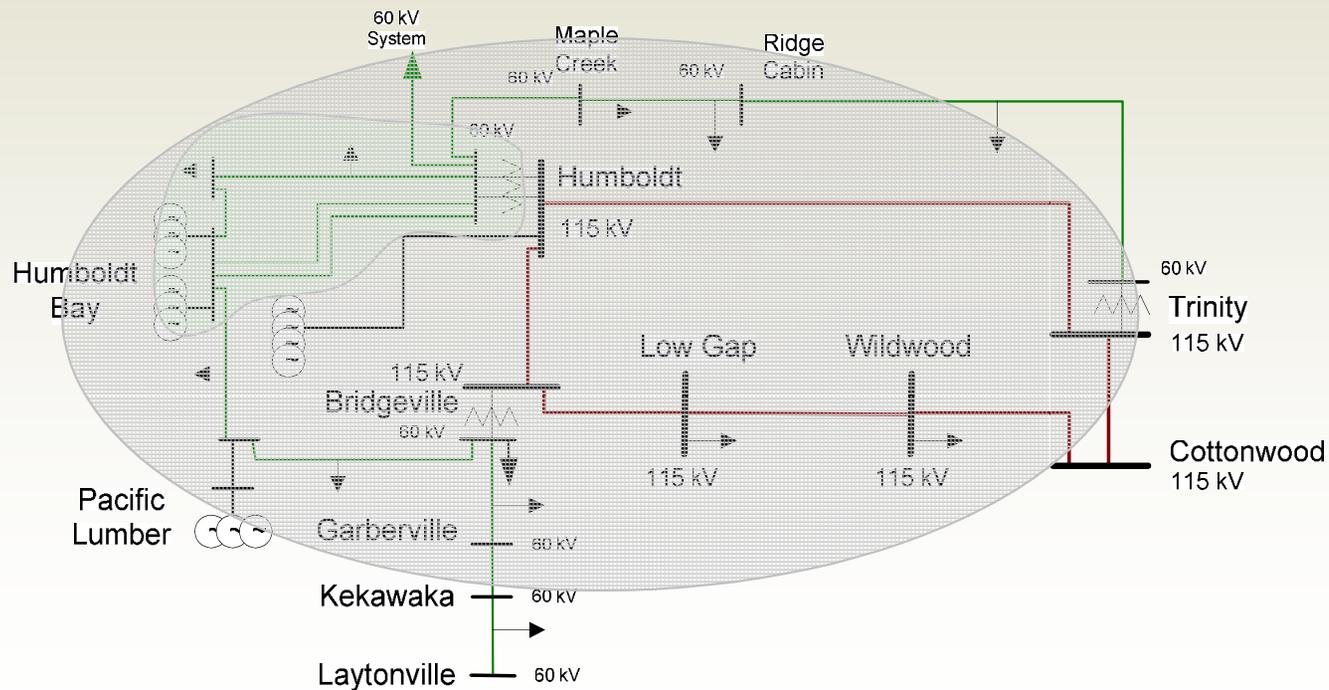
Critical Contingencies Humboldt Area



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: The outages of one Humboldt 115/60 kV Transformer and one unit of the New Humboldt Bay (on 60 kV side)

LCR need: 163 MW (including 56 MW of QF/Self generation and 7 MW of deficiency)

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

Humboldt 60 kV Sub-area – Category C

Contingency: The outages of one Humboldt 115/60 kV Transformer and one of the tie-line connecting the New Humboldt Bay units (on 60 kV side)

LCR need: 174 MW (including 56 MW of QF/Self generation and 18 MW of deficiency)

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

Critical Contingencies Humboldt Area

Humboldt Overall – Category B

Nothing extra to the single contingency for the 60 kV pocket.

Humboldt Overall – Category C

Contingency: The outages of Cottonwood – Bridgeville 155 kV line overlapping with an outage of one of the tie-line connecting the New Humboldt Bay Units

LCR need: 188 MW (including 56 MW of QF/Self generation)

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

Changes

Since last year:

- 1) The new Humboldt Bay Repowering Project (HBPP) is modeled
- 2) Two new transmission projects are modeled
 - Maple Creek Reactive Support
 - Garberville

While load is lower but total LCR need has increased since system conditions have changed and different limitation is identified

- Reactive power is no longer the most critical contingency
- The HBPP project changes the amount of generation on 115 and 60 kV sides

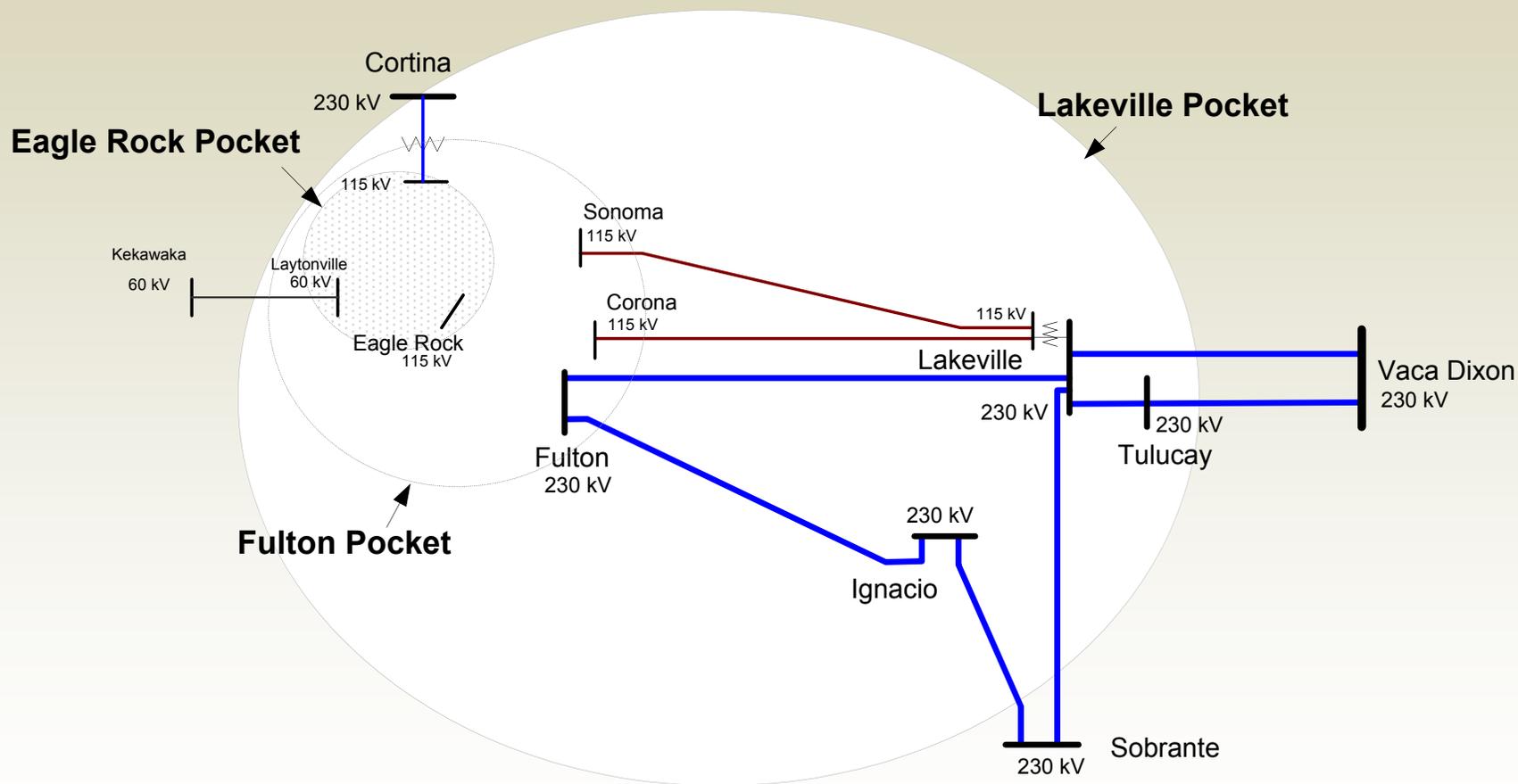
Your comments and questions are welcome.

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

North Coast/Bay Load and Resources (MW)

		2011
Load	=	1511
Transmission Losses	=	63
Total Load	=	1574
Market Generation	=	736
Muni Generation	=	131
QF Generation	=	18
Total Qualifying Capacity	=	885

North Coast and North Bay



Eagle Rock Sub-Area

Eagle Rock Sub-area – Category C

Contingency: Eagle Rock-Silverado- Fulton 115 kV line and Cortina #4 230/115 kV bank.

LCR need: 217 MW (includes 3 MW of QF/Muni generation)

Limiting component: Thermal overload on Fulton-Hopland 60 kV line

Eagle Rock Sub-area – Category B

Contingency: Cortina #4 230/115 kV bank.

LCR need: 93 MW (includes 3 MW of QF/Muni generation)

Limiting component: Thermal overload on Fulton-Hopland 60 kV line

Fulton and Lakeville Sub-areas

Fulton Sub-area – Category C

Contingency: Lakeville-Ignacio #1 230 kV line and Crocket-Sobrante #1 230 kV line.

LCR need: 546 MW (includes 17 of QF and 64 MW of Muni generation)

Limiting component: Thermal overload on Fulton-Lakeville #1 230 kV line

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

Contingency: Vaca Dixon-Lakeville 230 kV line and DEC power plant out of service

LCR need: 821 MW (includes 149 MW of QF/Muni generation)

If DC run-back scheme is used, only 734 MW is required

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

Changes

Since last year:

- 1) Load forecast is down by 40 MW
- 2) Total LCR need has increased by 38 MW

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