



California ISO  
Shaping a Renewed Future

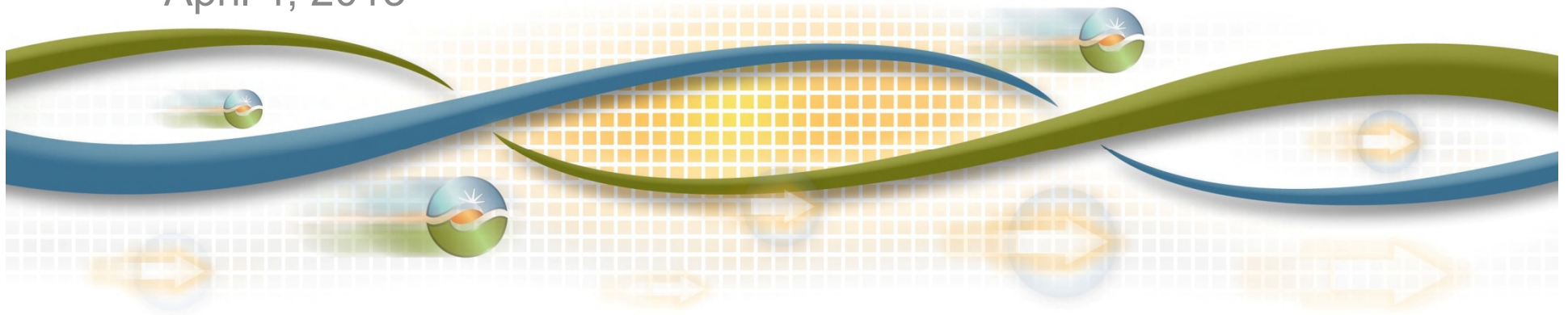
# 2014 and 2018 Final LCR Study Results – Humboldt

Rajeev Annaluru

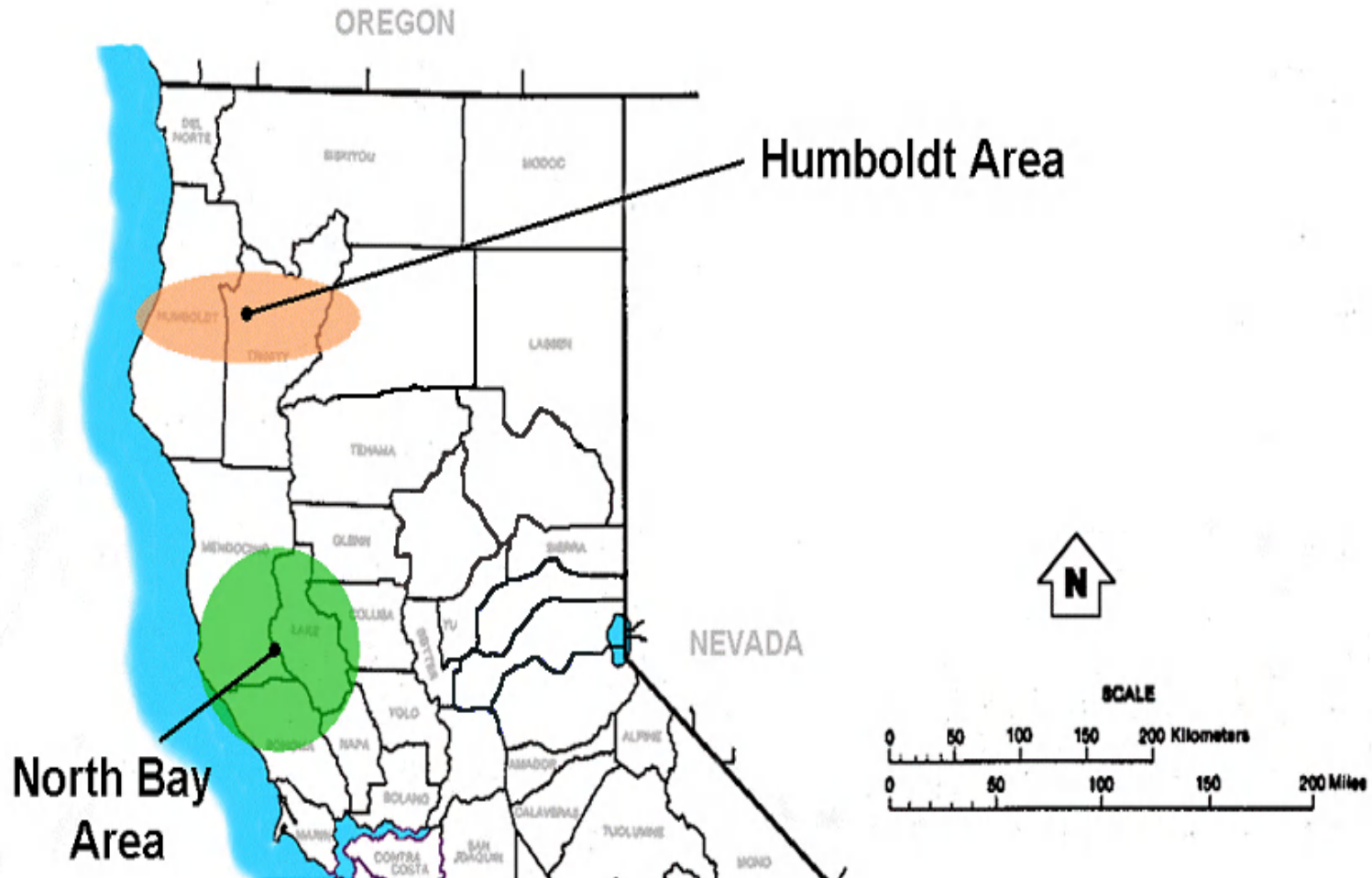
Senior Regional Transmission Engineer

Stakeholder Conference Call

April 4, 2013



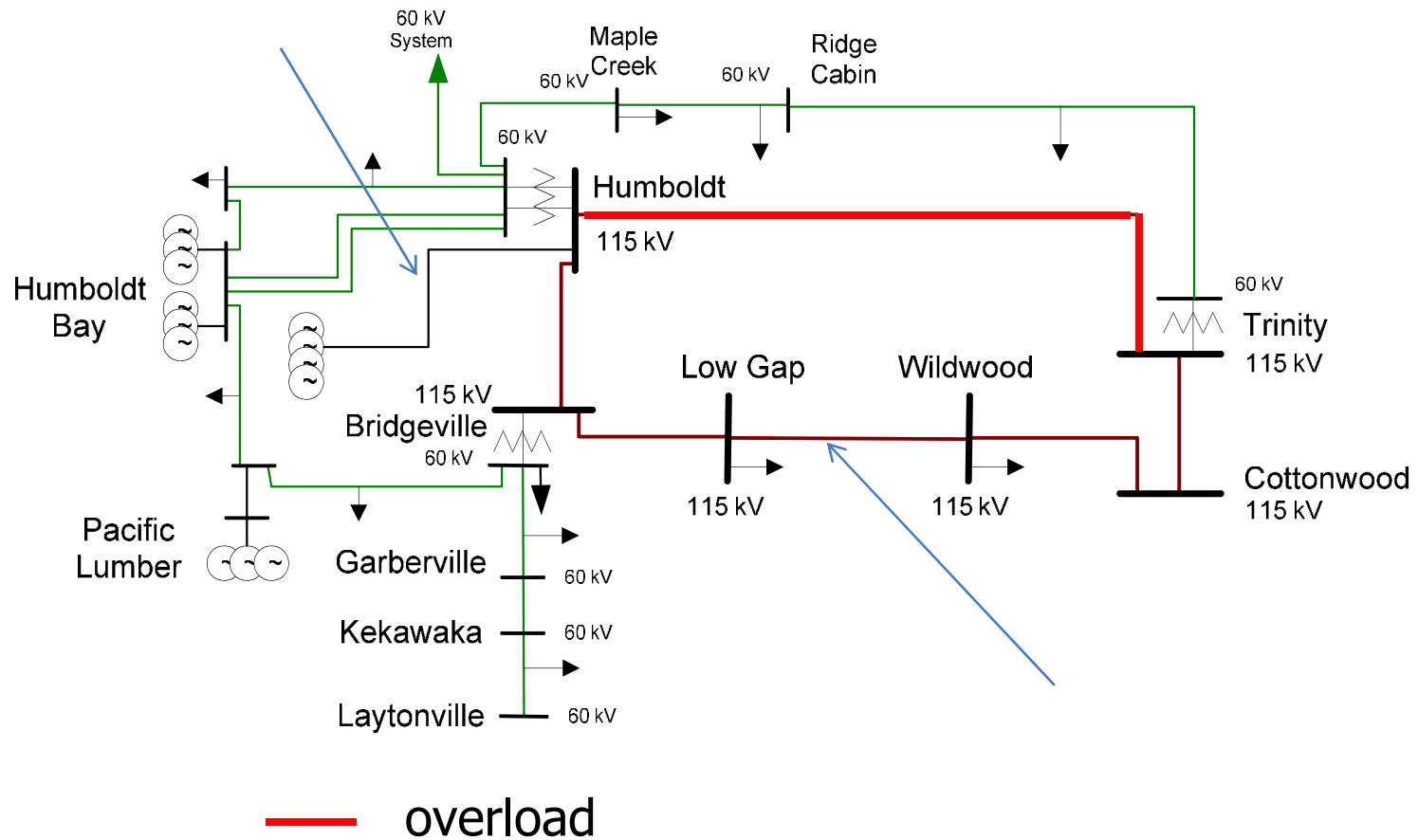
# Humboldt Area



# Humboldt Load and Resources (MW)

|                           |   | <b>2014</b> | <b>2018</b> |
|---------------------------|---|-------------|-------------|
| Load                      | = | 187         | 198         |
| Transmission Losses       | = | 8           | 10          |
| Total Load                | = | 195         | 208         |
| Market Generation         | = | 173         | 173         |
| Wind Generation           | = | 15          | 15          |
| QF/Self-Gen Generation    | = | 55          | 55          |
| Total Qualifying Capacity | = | <b>243</b>  | <b>243</b>  |

# Critical Contingencies Humboldt Area



# Critical Contingencies Humboldt Area

## Humboldt Overall – Category B

- Contingency: Cottonwood-Bridgeville 115 kV line + one Humboldt PP units out of service
- Limiting component: Thermal overload on Humboldt -Trinity 115 kV line
- 2014 LCR need: 145 MW (including 55 MW of QF/Self generation and 15 MW of Wind)
- 2018 LCR need: 149 MW (including 55 MW of QF/Self generation and 15 MW of Wind)

## Humboldt Overall – Category C

- Contingency: Cottonwood – Bridgeville 115 kV line + 115 kV Gen tie to the Humboldt Bay Units
- Limiting component: Thermal overload on the Humboldt - Trinity 115kV Line
- 2014 LCR need: 195 MW (including 55 MW of QF/Self generation and 15 MW of Wind)
- 2018 LCR need: 197 MW (including 55 MW of QF/Self generation and 15 MW of Wind)

# Changes

## Since last year:

- 1) Load + Losses for Humboldt came down by 15 MW
- 2) Garberville reactive support project
- 3) Humboldt 115 kV transformer replacements
- 4) LCR increased by 5 MW
- 5) Long-Term LCR increase by 2 MW over 2014

## Since last stakeholder meeting:

- 1) Updated NQC

**Your comments and questions are welcomed**

**Please send written comments to:**  
**[RegionalTransmission@caiso.com](mailto:RegionalTransmission@caiso.com)**