



California ISO  
Shaping a Renewed Future

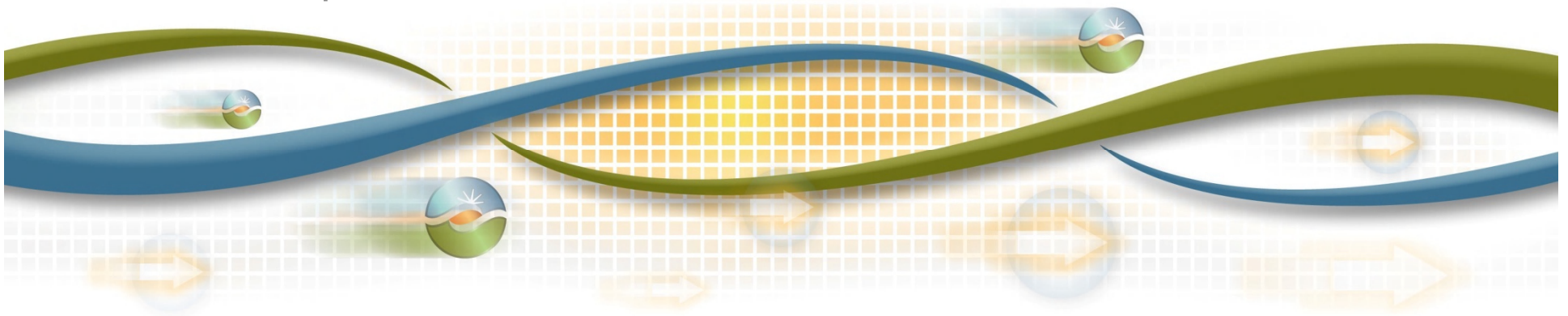
# 2013 Final LCR Study Results Big Creek/Ventura and LA Basin

Yi Zhang

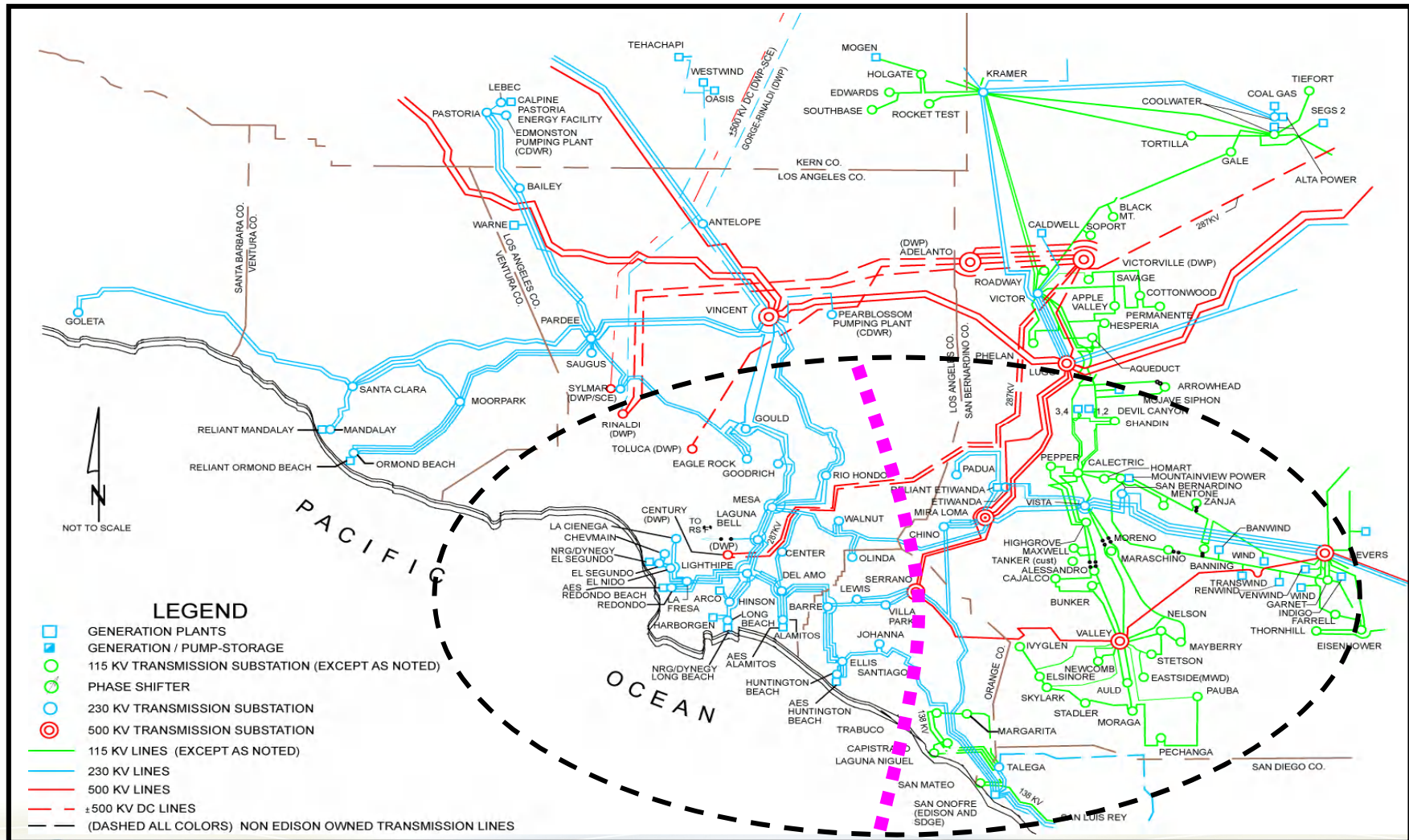
Senior Regional Transmission Engineer

Stakeholder Meeting

April 12, 2012



# LA Basin Area



# LA Basin Area 2013 Loads & Resources

## *Load*

Load (MW)	Pump Load (MW)	Transmission Losses (MW)	Total (MW)
19300	27	133	19460

## *Available Generation*

	QF/Wind (MW)	Muni (MW)	Nuclear (MW)	Market (MW)	Max. Qualifying Capacity (MW)
Available Gen	1040	1166	2246	8675	13127

## El Nido Sub-area

### **Category C LCR:**

#### Contingency:

The loss of the La Fresa – Hinson 230 kV line (N-1) followed by the loss of the La Fresa – Redondo #1 and #2 230 kV lines (N-2)

Limiting components: Voltage collapse

LCR Need: 362 MW (includes 47 MW of QF and 4 MW of MUNI)

## Western LA Basin Sub-area

### **Category C LCR:**

Contingency: The loss of the Serrano – Villa Park #1 or #2 and Serrano – Lewis 230 kV lines

Limiting components: Thermal overload of the remaining Serrano – Villa Park #1 or #2 230 kV line

LCR Need: 5540 MW (includes 6239 MW of QF, 6 MW of Wind, 582 MW of Muni and 2246 MW of nuclear generation)

# Valley Sub-area

## **Category C LCR:**

### Contingency:

1. The loss of the Palo Verde – Devers 500 kV #1 and Valley – Serrano 500 kV #1 lines

Limiting components: Voltage collapse

LCR Need: 670 MW

## LA Basin Overall

### **Category B LCR:**

Contingency: Palo Verde-Devers 500 kV line with SONGS #3 unit out of service

Limiting Component: South of Lugo operating rating (6400 MW)

LCR Need: 10295 MW (includes 810 MW of QF, 230 MW of Wind, 1166 MW of Muni and 2246 MW of nuclear generation)

# Changes

## Since last year:

- 1) Load forecast is down by 470 MW
- 2) Total overall LCR decreased by 570 MW
- 3) Segments of TRTP project

## Since last stakeholder meeting:

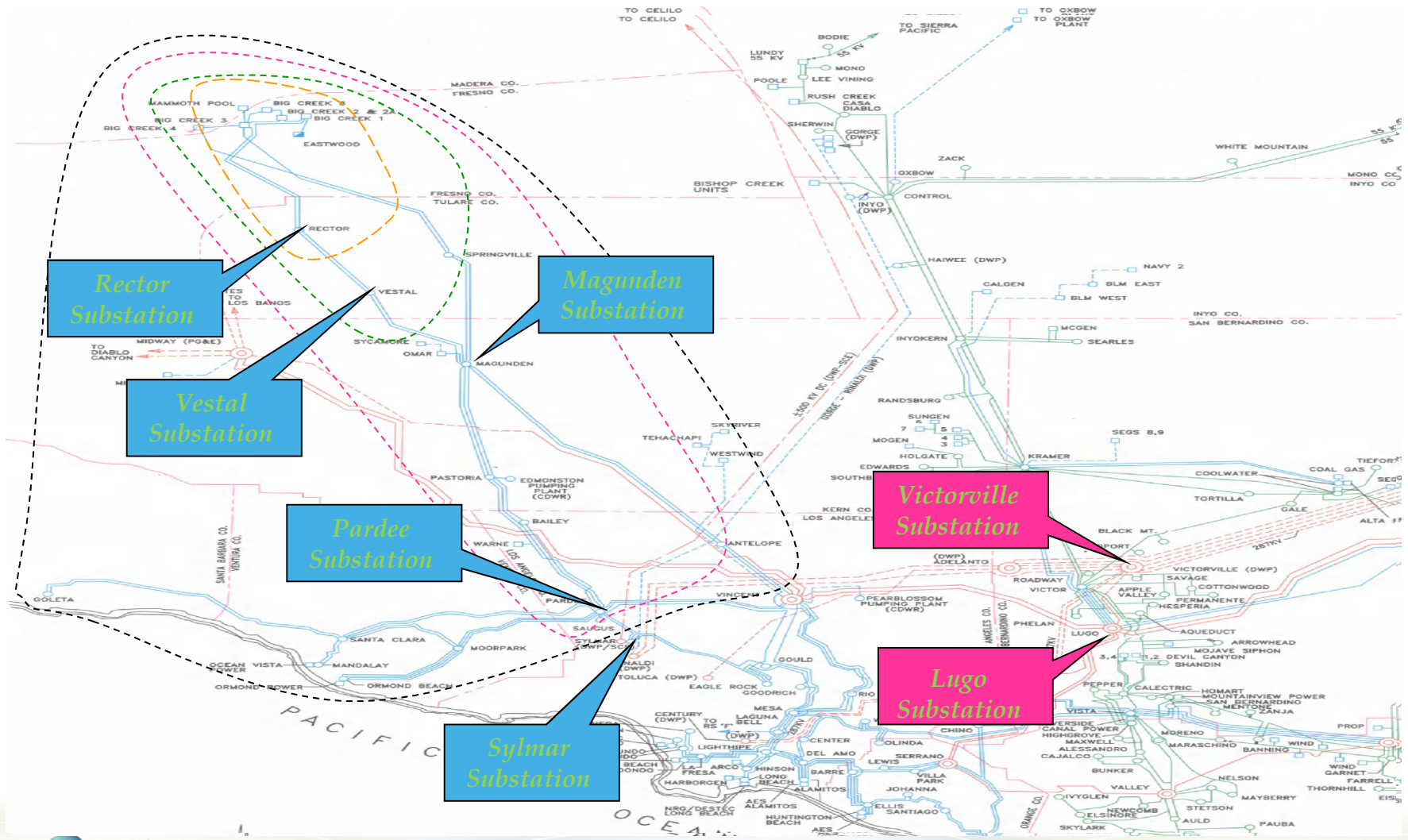
- 1) The project of Del Amo – Ellis 230 kV line loop into Barre 230 kV substation
- 2) Updated NQC

**Your comments and questions are welcome.**

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



# Big Creek/Ventura Area



# Big Creek/Ventura Area 2013 Loads & Resources

## *Load*

Load (MW)	Pump Load (MW)	Transmission Losses (MW)	Total (MW)
4164	355	77	4596

## *Available Generation*

	QF (MW)	Muni (MW)	Wind (MW)	Market (MW)	Max. Qualifying Capacity (MW)
Available Gen	752	381	46	4097	5276

## Rector and Vestal Sub-areas

### **Rector:**

Contingency: Vestal-Rector #1 or #2 230 kV line with Eastwood unit out of service

Limiting component: thermal overload the remaining Vestal-Rector #1 or #2 230 kV line

LCR Need: 601 MW (includes 7 MW of QF generation)

### **Vestal:**

Contingency: Magunden-Vestal #1 or #2 230 kV line with Eastwood unit out of service

Limiting components: thermal overload the remaining Magunden-Vestal #1 or #2 230 kV line

LCR Need: 801 MW (includes 104 MW of QF generation)

All resources in Rector apply towards the LCR need in Vestal sub-area.

## Santa Clara and Moorpark Sub-areas

### **Santa Clara:**

Contingency: Pardee – S.Clara 230 kV N-1 followed by Moorpark – S.Clara #1 and #2 230 kV lines N-2

Limiting component: Voltage collapse

LCR Need: 264 MW (includes 65 MW of QF generation)

### **Moorpark:**

Contingency: Pardee – Moorpark 230 kV (N-1 followed by N-2)

Limiting components: Voltage collapse

LCR Need: 422 MW (includes 93 MW of QF generation)

All resources in Santa Clara apply towards the LCR need in Moorpark sub-area.

# Big Creek/Ventura Overall

## Category B LCR:

Contingency: Sylmar-Pardee #1 or #2 230 kV line with Ormond Beach #2 unit out of service

Limiting component: thermal overload the remaining Sylmar-Pardee #1 or #2 230 kV line

LCR Need: 2161 MW (includes 752 MW of QF, 381 MW of Muni and 46 MW of wind generation)

## Category C LCR:

Contingency: Lugo-Victorville 500 kV followed by the loss of Sylmar-Pardee #1 or #2 230 kV line or vice versa

Limiting components: thermal overload the remaining Sylmar-Pardee #1 or #2 230 kV line

LCR Need: 2241 MW (includes 752 MW of QF, 381 MW of Muni and 46 MW of wind generation)



# Changes

## Since last year:

- 1) Load forecast is down by 97 MW
- 2) Load reallocation between substations in the area
- 3) Segments of TRTP project
- 4) Overall LCR has decreased by 852 MW

## Since last stakeholder meeting:

- 1) Updated NQC

**Your comments and questions are welcome.**

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