

# Air Credits in the South Coast Basin

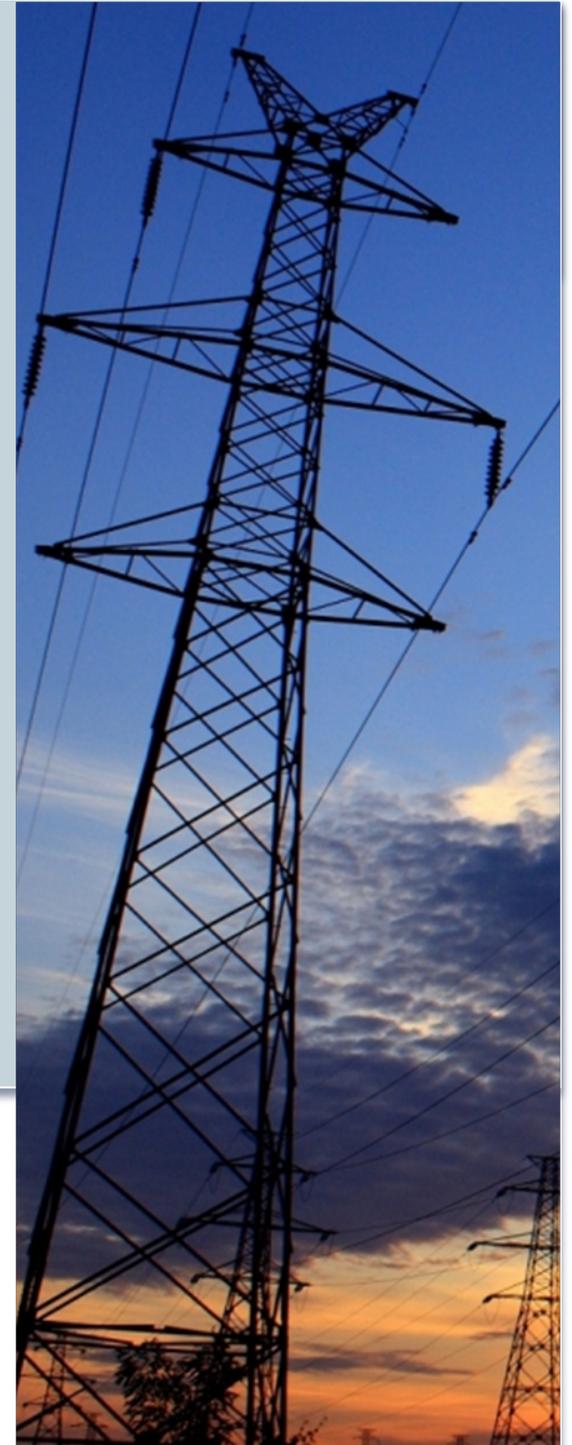
**Southern California Reliability  
California Energy Commission  
IEPR Lead Commissioner Workshop**

**University of California, Los Angeles**

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# CPUC Procurement Authorization and Requirements for SCE\*



Resource Type	Track 1 LCR Resources (D. 13-02-015)	Additional Track 4 (D.14-03-004)	Total Authorization
<b>Preferred Resources Minimum Requirement</b>	150 MW	400 MW	550 MW
<b>Energy Storage Minimum Requirement</b>	50 MW	--	50 MW
<b>Gas-fired Generation Minimum Requirement</b>	1000 MW	--	1000 MW
<b>Optional Additional From Preferred Resources/Energy Storage Only</b>	Up to 400MW		Up to 400 MW
<b>Additional from any Resource</b>	200 MW	100 to 300 MW	300 to 500 MW
<b>Total Procurement Authorization</b>	<b>1400 to 1800 MW</b>	<b>500 to 700 MW</b>	<b>1900 to 2500 MW</b>
<b>Maximum Gas Fired Generation</b>	<b>1200 MW</b>	<b>300 MW</b>	<b>1500 MW</b>

\* Source: CPUC Decision Authorizing Long Term Procurement to Replace Permanent Shutdown of San Onofre Nuclear Station – March 14, 2014

# Once Through Cooling Units Status in South Coast AQMD



Facility	Equipment	MW Rating	Repower SCAQMD Permit Status	State Water OTC Removal Date
AES Alamitos	Boilers 1 thru 6	1950	Appl. Pending	Dec 31 2020
AES Redondo Beach*	Boilers 5 thru 8	1310	Appl. Pending	Dec 31 2020
AES Huntington Beach	Boilers 1 & 2	430	Appl. Pending	Dec 31 2020
	Boilers 3 & 4	450	Retired -MW to Walnut Creek	Dec 31 2020
NRG El Segundo	Boilers 1 thru 3	685	Repower Complete	Dec 31 2015
	Boiler 4	335	Appl. Pending	Dec 31 2015
<b>Total Repower Pending under CAISO Authority</b>				<b>4,025 MW</b>

\* Ballot Initiative for March 2015 to abandon power generation and convert the site to mixed use

# Once Through Cooling Units Status in South Coast AQMD (cont'd.)



Facility	Equipment	MW Rating	Repower SCAQMD Permit Status	State Water OTC Removal Date
LADWP Harbor	Turbines 1 & 2 combined	182	No Appl. Filed (Appl. Expected 2026)	Dec 31 2029
LADWP Haynes	Boilers 1 & 2,	460	No Appl. Filed (Appl. Expected by 2023)	Dec 31 2029
	Turbines 9 & 10 combined	590	No Appl. Filed (Appl. Expected by 2029)	Dec 31 2029
	Boilers 5 & 6	573	Repower Complete	Dec 31 2013
LADWP Scattergood	Boilers 1 & 3	639	Repower Permits Issued	Dec 31 2024
	Boiler 2	179	No Appl. Filed (Appl. Expected by 2020)	Dec 31 2024
<b>Total Repower Pending for LADWP</b>				<b>1,411 MW</b>

# SCAQMD's Major Source Thresholds & Offset Requirements



Pollutant	Offset Requirement	Major Source PTE Threshold (tons/yr)	SCAQMD Offset PTE Threshold (tons/yr)
<b>VOC</b>	ERCs*/ Offsets Required	10	4
<b>NOx</b>	RTCs**/ Offsets Required	10	4
<b>SOx</b>	ERCs/ Offsets Required	100	4
<b>CO*</b>	Attainment, No Offsets Required	50	29
<b>PM10</b>	ERCs/ Offsets Required	70	4
<b>PM2.5</b>	ERCs/ Offsets Required	100	100

\*Emission Reduction Credits

\*\*Reclaim Trading Credits

# Rule 1304.1 - Electrical Generating Facility Fee For Use Of Offset Exemption



- **Rule 1304(a)(2) exempts electric utility boiler replacements from offsets, however SCAQMD still has to provide offsets from SCAQMD's Internal Bank**
- Rule 1304.1 adopted on September 6, 2013 to require fees for use of this exemption & SCAQMD offsets
- Governing Board directed staff to work with stakeholders to develop guidelines for use of funds
  - “. . .priority will be placed on the use of the funds to improve air quality consistent with the AQMP in the impacted, surrounding communities”

# Rule 1304.1

## Overview

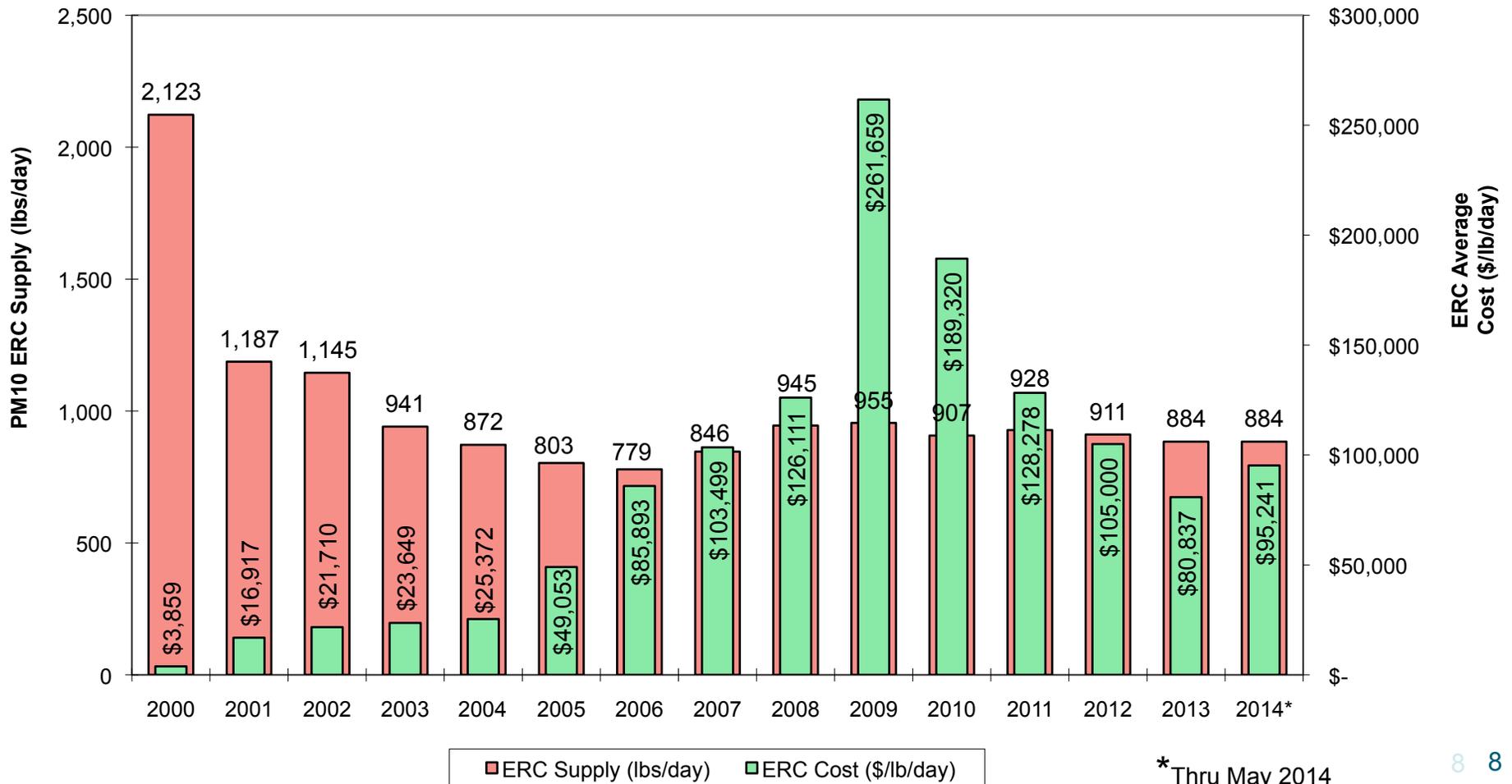


- Rule 1304.1 applicable to Repowering of electric utility boiler units at Existing power plants
- Provides PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>x</sub> and VOC Offsets to repowering projects for a fee
- Current lack of PM<sub>10</sub>, SO<sub>x</sub> and NO<sub>x</sub> ERCs in the open market

# PM10 ERC Supply & Cost 2000 – 2014\*



**Supply dropped by 58% since 2000**  
**Cost increased by 2,368% since 2000**  
**Highest price of PM10 ERC (sold in 2009) is \$350,000 per lb/day**



# Use of Rule 1304.1 Mitigation Fees



- Impacted Surrounding Communities consistent with AQMP with Emphasis on:
  - Preferred Resources
    - Energy Efficiency
    - Demand Response
    - Energy Storage
    - Renewables
  - Meeting AQMP Reduction Needs
  - Near Zero- or Zero-Emission Vehicles & Charging Infrastructure

# Proposed Rule 1304.2

## Overview



- Require a Fee for SO<sub>x</sub>/PM<sub>10</sub> Offsets obtained from SCAQMD offset accounts for New Greenfield Electrical Generating Facility (GEGF) in SCAB
- Not mandatory to obtain offsets from SCAQMD accounts
- Fee proceeds to be invested in air pollution improvement strategies consistent with the Air Quality Management Plan and/or local impacts

# Proposed Rule 1304.2

## Background (cont'd.)



- Promote preferred resources
  - CPUC Loading Order
  - CARB AB32 Scoping Plan
  - SCAQMD Energy Policy
- Facilitate grid reliability
- Assist in implementation of attainment strategy

# Use of Proposed Rule 1304.2 Fees

- Impacted Surrounding Communities, consistent with AQMP with Emphasis on:
  - Preferred Resources
    - Energy Efficiency
    - Demand Response
    - Energy Storage
    - Renewables
  - Low- or Zero-Emission Vehicles & Charging Infrastructure
- Consistent with R1304.1 Once Approved

# Offsets from SCAQMD Internal Bank



Total Repower Pending under CAISO	4,025 MW
Total Repower Pending for LADWP	1,411 MW
<u>CPUC Procurement Authorization for SCE</u>	<u>1,500 MW*</u>

**Total Maximum Potential**

**6,936 MW**

\* Includes either Repower or New Generation

# Offset Requirements/ Availability\*



	<b>VOCs</b>	<b>NOx</b>	<b>SOx</b>	<b>CO</b>	<b>PM10</b>
Max. Offsets Required for 6,936 MW	1.53	7.62	0.44	0	4.97
SCAQMD Internal Offsets Bank Balance**	89	26	3	19	13

\* In Tons/Day

\*\*SCAQMD's Final NSR Determination of Equivalency Report for CY2012