

Air Credits in the South Coast Basin

California Energy Commission

DOCKETED

14-IEP-1E

TN 73667

AUG 18 2014

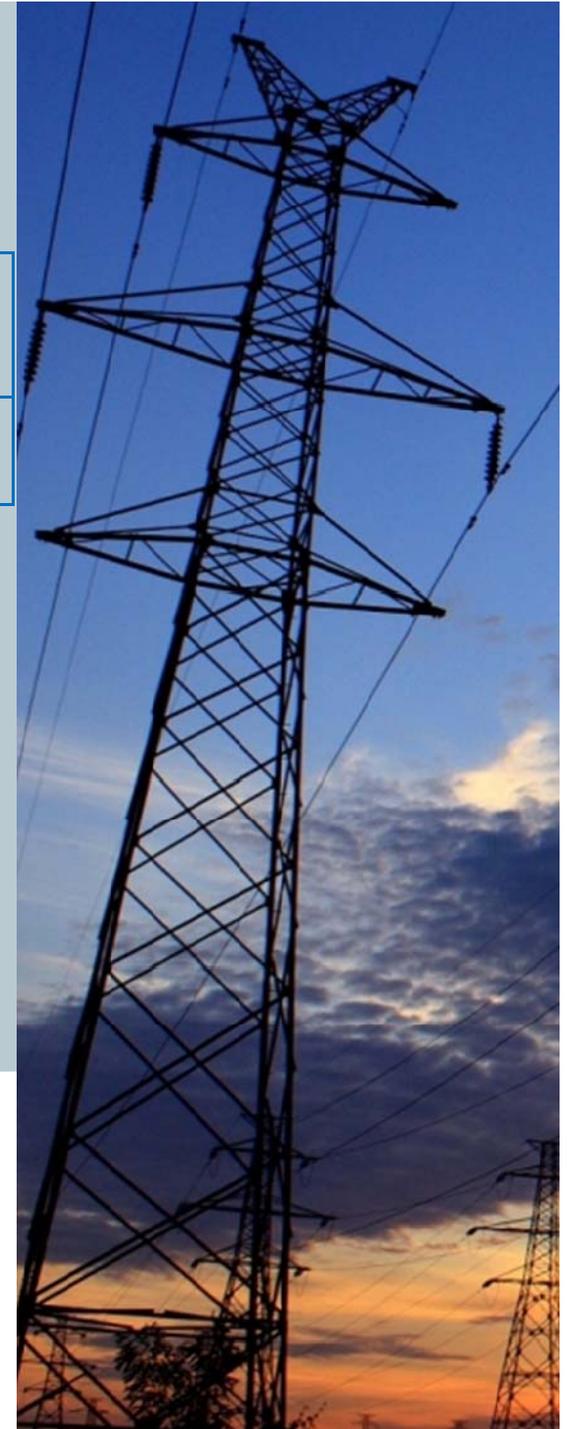
Southern California Reliability
California Energy Commission
IEPR Lead Commissioner Workshop

University of California, Los Angeles

August 20, 2014



Mohsen Nazemi P.E.
Deputy Executive Officer
South Coast Air Quality Management District



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
Preferred Resources Minimum Requirement	150 MW	400 MW	550 MW
Energy Storage Minimum Requirement	50 MW	--	50 MW
Gas-fired Generation Minimum Requirement	1000 MW	--	1000 MW
Optional Additional From Preferred Resources/Energy Storage Only	Up to 400MW		Up to 400 MW
Additional from any Resource	200 MW	100 to 300 MW	300 to 500 MW
Total Procurement Authorization	1400 to 1800 MW	500 to 700 MW	1900 to 2500 MW
Maximum Gas Fired Generation	1200 MW	300 MW	1500 MW

* 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
Total Repower Pending under CAISO Authority				4,025 MW

* 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
Total Repower Pending for LADWP				1,411 MW

SCAQMD's Major Source Thresholds & Offset Requirements



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

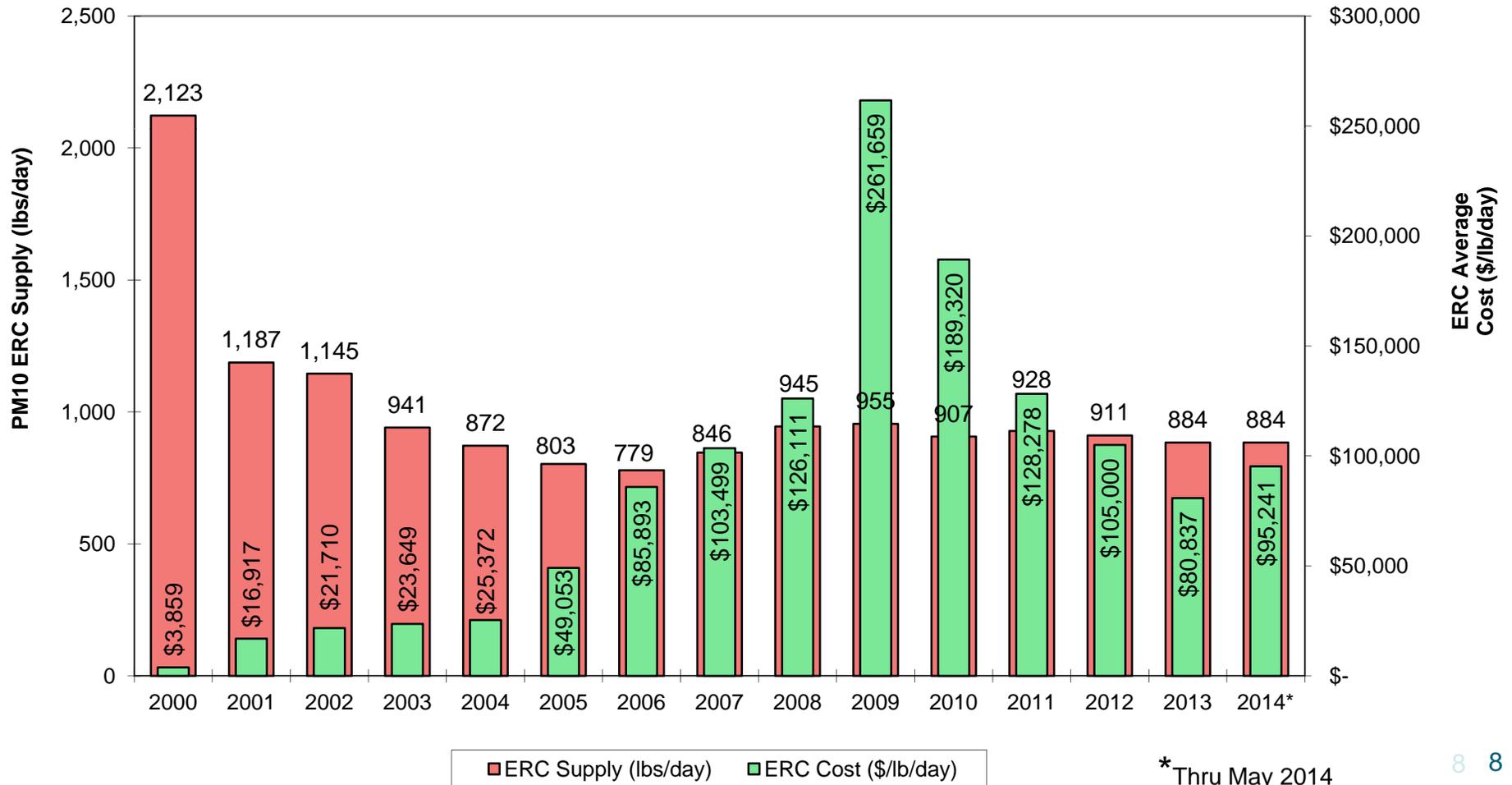


- Rule 1304.1 applicable to Repowering of electric utility boiler units at Existing power plants
- Provides PM₁₀, NO_x, SO_x and VOC Offsets to repowering projects for a fee
- Current lack of PM₁₀, SO_x and NO_x ERCs in the open market

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_x/PM₁₀ 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*



	VOCs	NOx	SOx	CO	PM10
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