

Permitting and Offset Requirements in SCAQMD

CEC / ARB Workshop:
Emission Offset Challenges for Fossil
Power Plants in Southern California

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South Coast Air Quality Management District (SCAQMD)



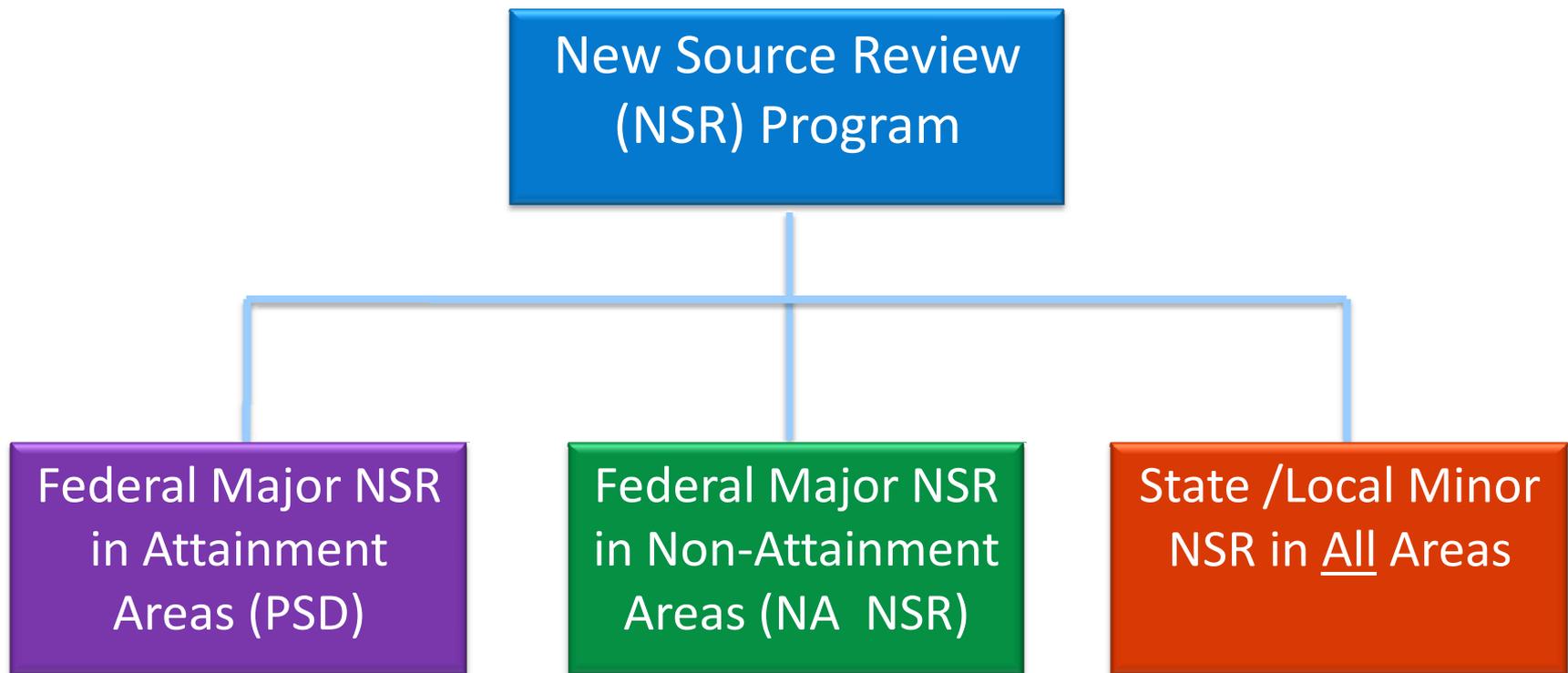
- Local Air Pollution Control District in Southern California (All of Orange & Non-Desert Portions of LA, Riverside & San Bernardino Counties)
- Population of over 17 million (about half of State's population)

- Covers 10,743 sq. miles
- Worst air quality in the nation (Ozone & PM 2.5)
- Receives and Process about 10,000 permits annually
- Regulates over 28,000 stationary sources

SCAQMD's Permitting Process

- Prior to construction or installation of equipment which releases or controls air emissions, the owner/ operator is required to obtain a written Permit to Construct from SCAQMD
- One of the cornerstones of permitting is New Source Review (NSR), intended to assure that:
 - Air quality is not significantly degraded in areas which are currently in attainment; and
 - Air Quality does not worsen, and, together with all other programs, NSR offsets represents reasonable further progress towards attainment

Overall Structure of the NSR Program



Federal Major NSR/Attainment Areas

If an area is in attainment, prevent significant deterioration (PSD) and keep clean air clean (maintain attainment)

- Federal PSD Regulations (40 CFR 52.21) apply to New Major Sources and Major Modifications at Existing Major Sources of Attainment Pollutants
- PSD Permitting is done by: States/Locals through a SIP-Approved or Delegated Program, or EPA for all other States/Local and Tribal Lands

PSD Permitting Status in California

- Six districts have delegated PSD program:
 - South Coast, Bay Area, Kern, San Diego, Santa Barbara and Shasta
- Five districts have SIP-approved PSD Programs:
 - Monterey, Sacramento, Mendocino, N. Coast and Northern Sonoma
- EPA currently issues PSD permits for the other 24 California districts
- **Greenhouse Gas (GHG) Tailoring Rule will potentially change PSD permitting status in California**

Federal Major NSR/Nonattainment (NA) Areas

If an area is Nonattainment, assure the air quality does not worsen, and, together with all other programs, NSR offsets represent reasonable further progress towards attainment

- Federal NA-NSR Regulations (Appendix S of 40 CFR Part 51 & 40 CFR Part 51.165) applies to new Major Sources and Major Modifications at existing Major Sources of nonattainment pollutants or their precursors.
- NA-NSR Permitting is done by:
 - State/Locals for all major & major modification sources through SIP-approved NSR Rules, or
 - EPA for Tribal Lands through Appendix S

Minor NSR Program

- Applies to:
 - New Minor Source (< Major Source Threshold)
 - Modifications at Minor Sources
 - Minor Modifications at Major Sources
- Applies in both attainment and nonattainment areas
- Can be used to create “synthetic minor” sources (could be used to avoid major source NSR and Title V permitting requirements)
- EPA Minor NSR Rules for Tribal Lands (proposed 8/21/06)

Main NSR Permitting Requirements

Federal Clean Air Act PSD	<ul style="list-style-type: none"> • Best Available Control Technology (BACT) • Analysis of impacts on Air Quality, Soil, Vegetation, Visibility, Class I Areas and Endangered Species
Federal Clean Air Act NA-NSR	<ul style="list-style-type: none"> • Lowest Achievable Emission Rates (LAER) • Air Quality Impact Analysis • Emission Offsets (ERCs or SCAQMD's Internal Offsets)
California State Clean Air Act NA-NSR	<ul style="list-style-type: none"> • BACT • No Net Increase / Emission Offsets (ERCs or SCAQMD's Internal Offsets)
SCAQMD's NSR	<ul style="list-style-type: none"> • BACT/ LAER • Air Quality Impact Analysis (Modeling) • Emission Offsets (NA-NSR only, ERCs or SCAQMD's Internal Offsets)

When are Emission Offsets Required?

- Emission Offsets are required for permitting of:
 - New Facilities & Relocations
 - Existing Facility Modifications/Expansions by:
 - Installation of New Equipment
 - Replacement of Existing Equipment
 - Modification and/or modernization of existing equipment
- However, under SCAQMD's NSR Rules certain sources are exempt from providing their own offsets, but SCAQMD still provides the required offsets to comply with Federal & State laws.

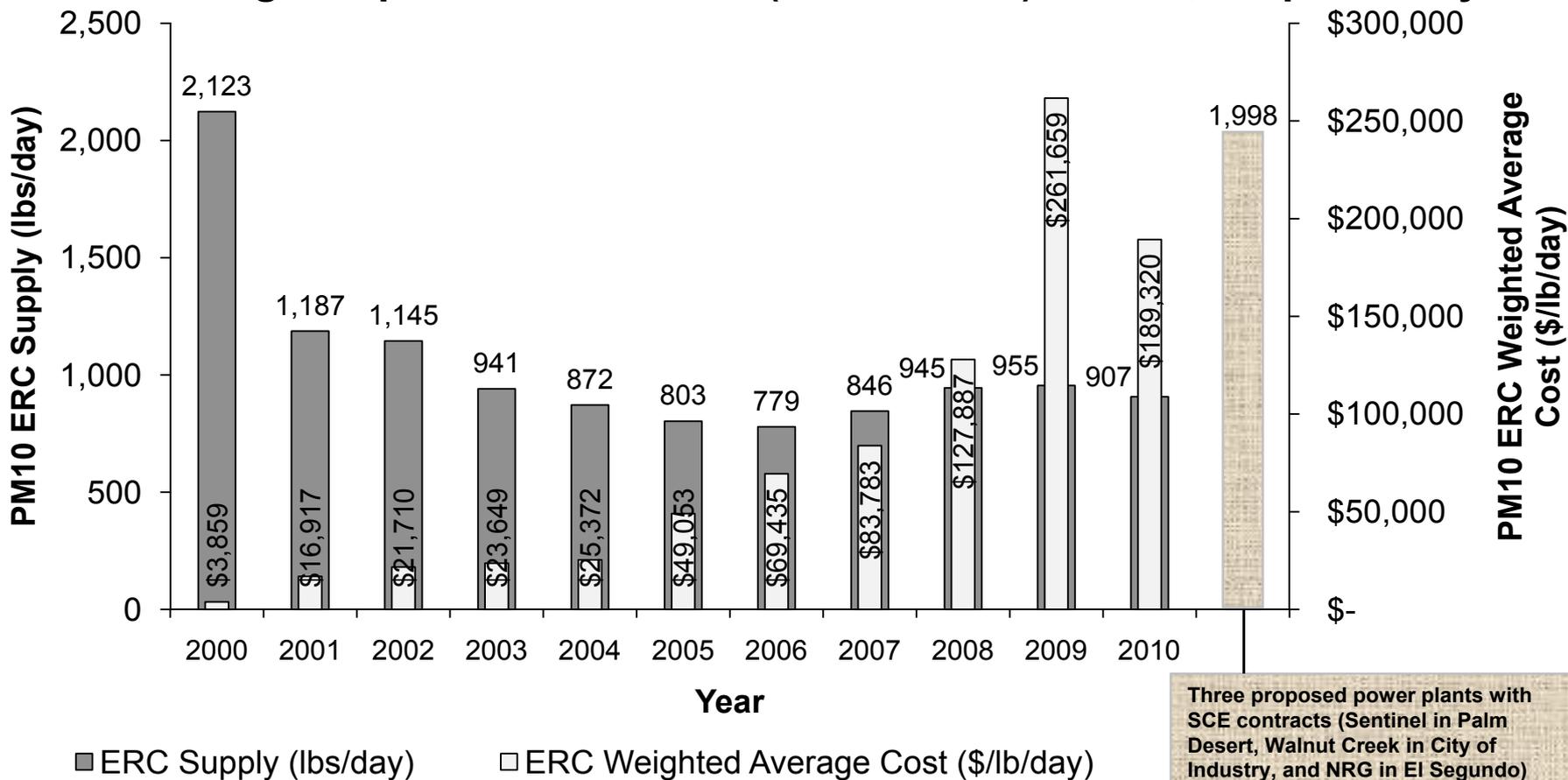
Sources Exempt from Offsets under SCAQMD's NSR Rules

- **Rule 1309.1 - Priority Reserve**
 - Essential Public Service
 - Sewage Treatment and Landfill facilities; Prison & Police facilities; Fire Fighting facilities; Schools; Hospitals.
 - Innovative Technology/ Research Operations
 - Limited Power Plants (CY2000-03 with Mitigation Fees)
- **Rule 1304 - Exemptions**
 - Facility Modernization (Replacement/ Modification/ Relocations/ **Repowering for utility boilers**)
 - Air Pollution Control Strategy/ Regulatory Compliance
 - Emergency Equipment/ Small Sources
 - State Programs (Portable Equipment/ Resource Recovery & Energy Conservation)

PM10 ERC Supply & Cost 2000 – 2010

Supply Dropped by 57% since 2000
Cost increased by 4,806% since 2000

Highest price of PM10 ERC (sold in 2009) is \$350,000 per lb/day



SCAQMD Actions Taken in 2006/2007

- **Electricity Supply (Rule 1309.1)**
 - State agencies projected that there will be another electricity shortfall in Southern California in the near future
 - State requirements for replacement of OTC (1/3 of Gen. Cap) and reduce GHG from aged power plants (1/2 of Gen. Cap > 40 years old)
 - SCAQMD amended its NSR Rules to allow new cleaner and more efficient power plants limited access to use SCAQMD's internal offsets.
 - Power Plants were required to pay a mitigation fee to be used for emission reduction projects in the surrounding areas.
- **NSR Offset Tracking (Rule 1315)**
 - Since 1990, SCAQMD used a tracking system to show emission increases from exempt sources are offset by SCAQMD's internal offsets.
 - As per EPA's request, SCAQMD adopted a rule to memorialize the tracking system.

Environmental Organizations' Legal Actions

State Court

- NRDC v. SCAQMD filed after Rule 1315 adoption & Rule 1309.1 amendment, arguing CEQA analysis inadequate. Writ issued 11/2008 enjoining implementation of Rule 1315 & Rule 1309.1 Amendments.
- CA Communities Against Toxics v. SCAQMD filed 12/2009, arguing SB827 & AB1318 violate separation of powers and that SCAQMD use of minor source offsets before conducting CEQA violates both statutes. Dismissed 6/2010; on appeal—no hearing date set.

Federal Court

- NRDC v. SCAQMD filed 8/2008, arguing offsets in SCAQMD's internal accounts not valid under Clean Air Act. Dismissed 1/2010; on appeal to Ninth Circuit Court of Appeals—no hearing date set.

Result of State Court Decision

- **Permit Moratorium**

- A Permit Moratorium was imposed preventing Rule 1309.1 and 1304 sources from using SCAQMD's internal offsets
- State legislation SB 827 (Wright) was passed to lift the Permit Moratorium

- **Rulemaking**

- SCAQMD will not amend Rule 1309.1 for power plants
- SCAQMD adopted Rule 1315 – Federal NSR Tracking on February 4, 2011

New Legislation

SB 827 – Senator Wright

- Passed both Assembly & Senate (9/11/09) & was signed by the Governor (10/11/09)
- Lifts the Permit Moratorium by allowing SCAQMD to issue permits to projects subject to Rule 1309.1 (Essential Public Services) and Rule 1304
- Went into effect Jan. 1, 2010 and is effective until May 1, 2012
- NRDC, etc. filed a petition with EPA in December 2009 asking EPA to order AQMD not to issue any permits under SB 827
- On Sept. 23, 2010 EPA issued a response denying NRDC's request

New Legislation

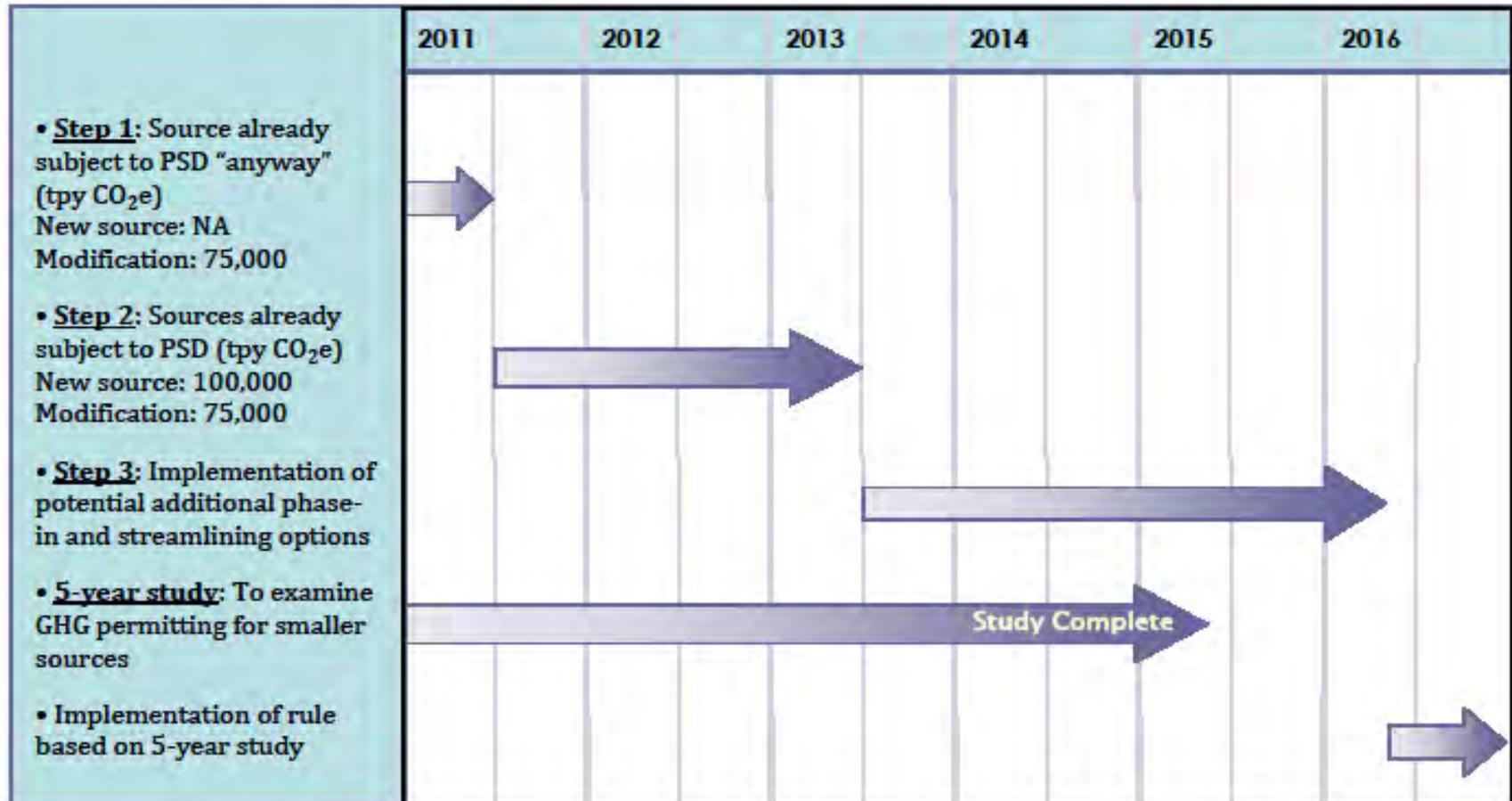
AB 1318 – Assembly Member Perez

- Passed both Assembly & Senate (9/11/09) & was signed by the Governor (10/11/09)
- Requires SCAQMD to provide offsets for power plants within SCAQMD jurisdiction, but outside SCAB, which have a power purchase agreement prior to 2008
- Power Plant must pay mitigation fee to be used for emission reductions (30% near the Power Plant and 30% in EJ areas)
- **Requires CARB (in consultation with CEC, ISO and SWRCB) to conduct an evaluation of electrical system reliability needs for SCAB and recommend most effective and efficient means to meet the needs and report to the Governor and Legislature by July 1, 2010**
- Went into effect Jan. 1, 2010 and is effective until Jan. 1, 2012

EPA's PSD & Title V GHG Tailoring Rule

- Purpose:
 - To integrate Greenhouse Gases into PSD and Title V Programs in an Administratively Feasible Manner
 - Tailors the requirements to focus PSD and title V permit requirements on the largest emitting facilities
- GHGs Became “Subject to Regulation” on January 2, 2011, Due to Motor Vehicle Rule
- EPA Proposed the Tailoring Rule on October 27, 2009 and received over 400,000 comment letters
- EPA Issued the Final Tailoring Rule on May 13, 2010
- EPA Issued Permitting Guidance and BACT Guidelines for PSD and Title V GHG Sources on November 10, 2010

Permitting Steps under the Tailoring Rule



SCAQMD's Rule Amendments to Implement GHG Tailoring Rule

- On November 5, 2010 SCAQMD
 - **Amended Title V Rules**
 - “Rule 3001 – Applicability” to change the definition of major source to incorporate GHGs.
 - “Rule 3008 – Potential to Emit Limitation” to exempt synthetic minor sources from Title V.
 - **Adopted PSD Rule (Rule 1714) for GHG and submitted into the SIP**
- SCAQMD maintained its Partial PSD Delegation for other criteria pollutants

Once-Through-Cooling Generating Units in SCAQMD (Total 7,615 MWs)

Operator	Facility	Units	Total MW	OTC Replacement date	Status
AES	Alamitos	Boilers 1-6	1950	2020	
AES	Huntington Beach	Boilers 1-4	880	2020	
AES	Redondo Beach	Boilers 5-8	1310	2020	
NRG	El Segundo	Boilers 3-4 (Boilers 1-2 already shutdown)	670	2015	Repower permit issued to replace Boilers 1, 2, & 3 with CCGT - dry cooling by 2013
LADWP	Haynes	Boilers 1,2,5,6 Turbines 9,10	1623	2019	Repower permit issued to replace Boilers 5 & 6 with SCGT - dry cooling by 2013
LADWP	Harbor	Turbines 1,2	364	2015	
LADWP	Scattergood	Boilers 1-3	818	2020	LADWP will repower Boilers 1 & 2 by 2013

Status of Proposed Fossil Power Plants in SCAQMD

Project	Size (MW)	Location	SCAQMD Permit	CEC License	Offsets
Existing Repower OTCs					
NRG El Segundo (PPA)	573	El Segundo	Issued	Issued	SB 827 (R-1304)
LADWP Haynes (Municipality)	616	Long Beach	Issued	N/A	SB 827 (R-1304)
Existing Expansions					
City of Riverside (Municipality)	99	Riverside	Issued	SPPE	ERCs
Watson Cogen (BP Refinery)	85	Carson	Pending	Pending	SB 827 (R-1304)
New					
CPV Sentinel (PPA)	850	Desert Hot Springs	Pending	Issued	AB1318
City of Anaheim (Municipality)	200	Anaheim	Issued	Issued	ERCs

Status of Proposed Fossil Power Plants in SCAQMD (cont'd)

Project	Size (MW)	Location	SCAQMD Permit	CEC License	Offsets
City of Vernon (Municipality)	943	Vernon	Denied	Withdrawn	N/A
AES Highgrove	300	Grand Terrace	Denied	Terminated	N/A
Walnut Creek/ Edison Mission Energy (PPA)	500	City of Industry	Pending	Issued	Pending
Valle Del Sol/ Edison Mission Energy	500	Romoland	Pending	Suspended	Pending
San Gabriel Power Generation/GenOn Energy	656	Rancho Cucamonga	Pending	Suspended	Pending

Status of Proposed Renewable Power Plants in SCAQMD

Project	Size (MW)	Location	SCAQMD Permit	CEC License	Offsets
Bowerman Power Landfill Gas to Energy	23	Irvine	Issued	N/A	SB 827 (R-1309.1)
Ridgewood Power Landfill Gas to Energy	29	Brea	Issued	N/A	SB 827 (R-1309.1)
Sunshine Gas Producers	23	Sylmar	Pending	N/A	SB 827 (R-1309.1)
LA County Sanitation District	3	Palos Verdes	Issued	N/A	SB 827 (R-1309.1)
Palen Solar Millennium Solar Power	500	Desert Center	Issued	Issued	SB 827 (R-1304) VOC ERC