

# The Changing Climate of New Power Generation

## Current Issues in Obtaining Air Quality Offsets in Southern California – Or, How SCAQMD's Priority Reserve System was Scuttled

Wärtsilä Flexible Power Symposium  
February 20, 2009

Arthur O'Donnell  
Executive Director  
Center for Resource Solutions  
415-561-2101  
[arthur@resource-solutions.org](mailto:arthur@resource-solutions.org)

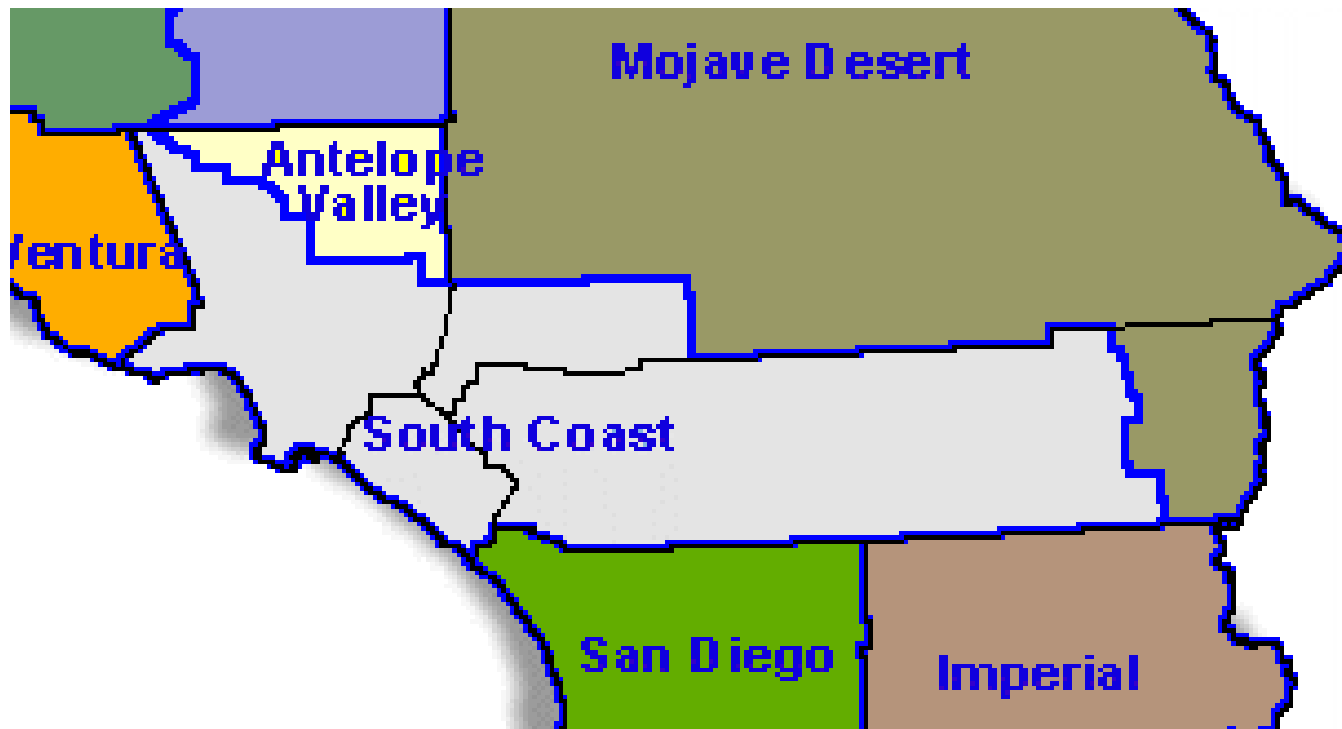
# South Coast Air Quality Management District

Air pollution control agency for all of

- Orange County,
- Urban portions of Los Angeles Co.,
- Riverside, Co.,
- San Bernardino Co.

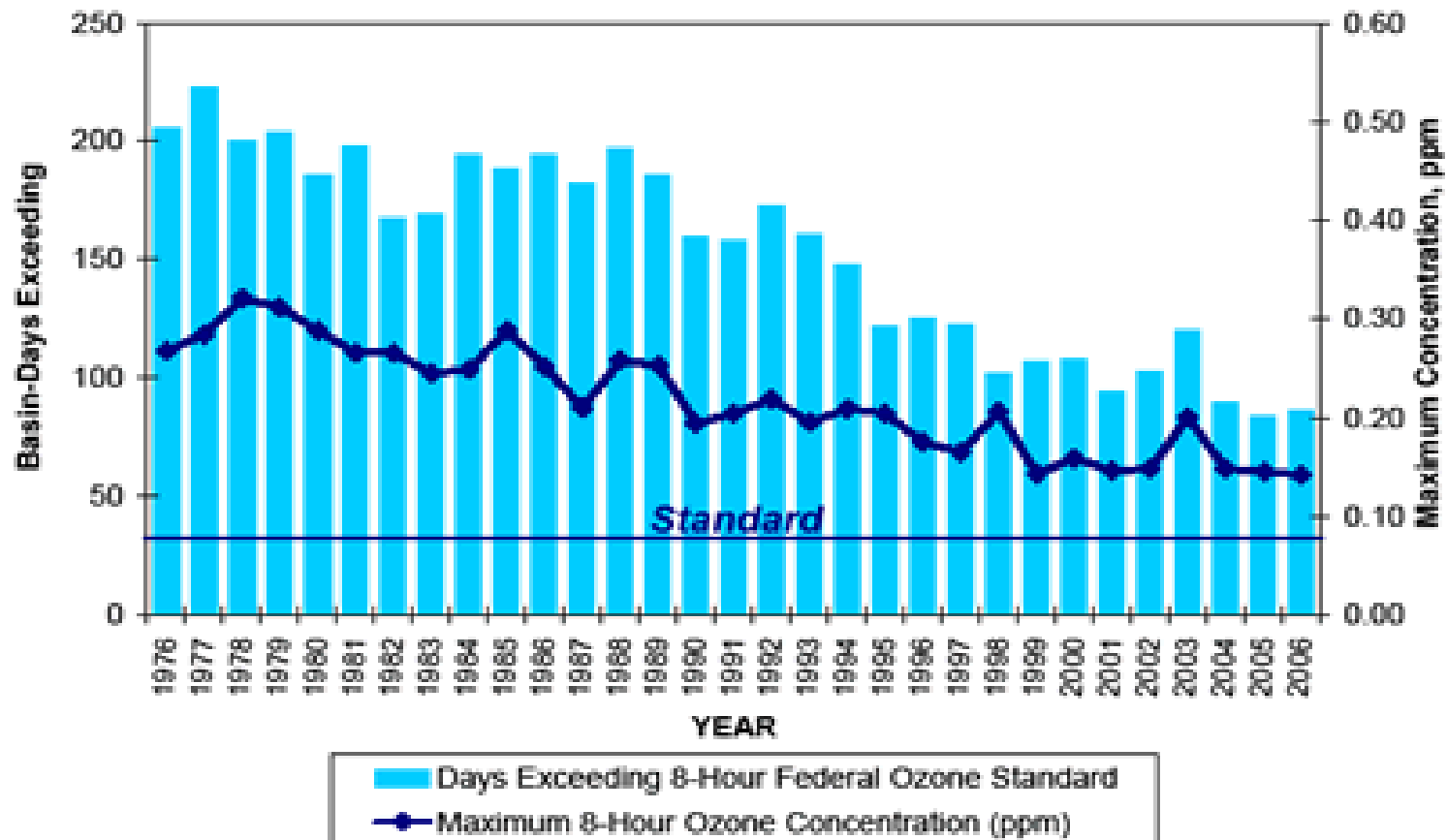
Covers 10,743 square miles and home to over 16 million people - about half the population of the whole state of California. The second most populated urban area in the United States and one of the smoggiest.

# South Coast Air Quality Management District



# South Coast Air Quality Management District

## South Coast Air Basin Smog Trend



# South Coast Air

photo source LA Times



# Priority Reserve System

**Rule 1315, amended as Rule 1309.1** Adopted during California energy crisis 2001 to ensure that new projects and construction for essential services and innovative priorities could access sufficient offset credits for:

- Reactive organic gases (ROG) 500 lbs/day
- Nitrogen oxides (NOx) 250 lbs/day
- Sulfur dioxide (SOx) 60 lbs/day
- **Particulate matter (PM10) 125 lbs/day**
- (note: AQMD executive may transfer up to 1,500 lbs/day if needed, but must be decided in public meeting)
- Carbon monoxide (CO) 250 lbs/day

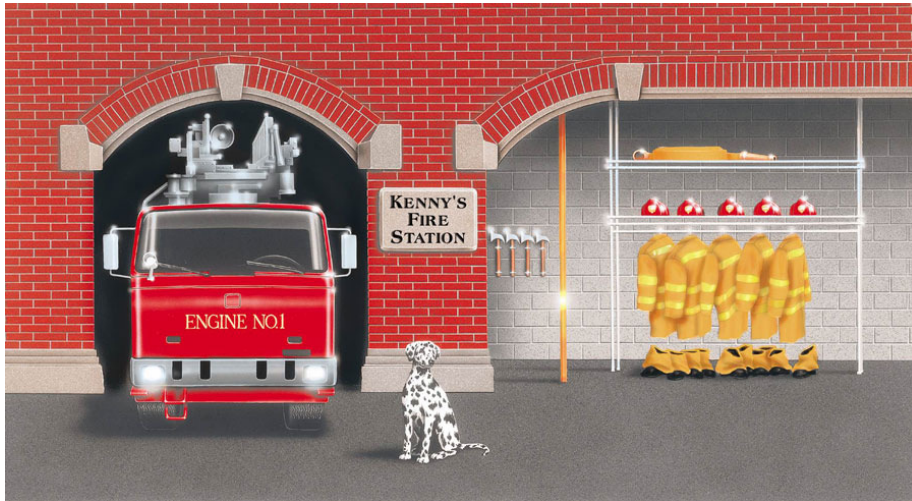
*Source of credits was from small business/industrial closures in 1990s...turned into near-permanent future stream of credits.*

# Priority Reserve System

## **Categories of approved ‘priority’ projects:**

- **Innovative technology – Better than BACT**
- **Research operations**
- **Essential Public Services**
- **Electrical Generating Facilities (EFG)**

# Priority Reserve System



# Electrical Generating Facilities

**In-district or Downwind Air Basin location**

**>50 MW for grid delivery in-district**

**Must have siting certification with California Energy Commission**

**Long-term sales contract with SoCal Edison or SDG&E, with CDWR for delivery into Southern California**

**Muni-owned – may not sell into state, unless ordered by CAISO**

**<50 MW for water pumping (30% of output) or peaker plant**

**<10 MW for on-site use.**

Priority reserve allocations expected to cover 2,700 MW of new generation 2005-08; above that may be approved by AQMD Governing Board.

# Disposition of Fees

**In 2007 Amendments, AQMD directed to staff:**

- Fees from sale of Priority Reserve credits would be applied to PM10, SO and CO emission reduction programs, as close as possible to source of new emissions.**
- One-third of proceeds devoted to promote renewable energy, including solar photovoltaics, in communities where new generation would be located.**
- Monitor costs of reductions achieved, and review at least annually, the adequacy of fee structure.**

# Projects Counting on Priority Reserve Offsets

**05-AFC-2 Walnut Creek Energy- LA County  
500 MW**

**(CEC final decision issued 2/08; project on hold)**

**05-AFC-3 Sun Valley Energy - Riverside  
500 MW**

**(CEC decision est. 04/09)**

**06-AFC-2 Highgrove Peaker - San Bernardino  
300 MW**

**(Expansion of existing, CEC approval set for 04/09)**

**06-AFC-4 South East Regional Power – Vernon/LA  
943 MW**

**(Staff questions as to qualify for priority reserve, it is 200 MW larger than limit and had no power sale agreement as per requirements; CEC decision pending 04/09)**

# Projects Counting on Priority Reserve Offsets

**07-AFC-01 Victorville 2 gas/solar hybrid  
563 MW**

**(Approved in July 08; construction to begin 04/09, but was planning on using PR VOCs to mitigate VOCs and NOx)**

**07-AFC-2 San Gabriel expansion – San Bernardino  
656 MW**

**07-AFC-3 CPV Sentinel Peaker – Riverside  
850 MW**

**(Est. CEC decision 02/09)**

**08-AFC-9 Palmdale solar/gas hybrid plant – LA Co.  
617 MW**

**(Est decision date 10/09)**

**08-SPPE-1 Riverside Energy – expansion – Riverside  
96 MW**

**(Est decision 02/09)**

# Other SoCal Projects Delayed or Affected

**00-AFC-14C El Segundo Redevelopment  
630 MW**

**(note: issue is more dry cooling, not priority reserve)**

**01-AFC-17C Inland Energy  
800 MW**

**(Unit 2 completion delayed possible 07/09)**

**In May 2005, CEC allowed 92 lbs/day SOx and 503  
lbs/day PM10**

**\*07-AFC-9 Canyon Power Peaker – Anaheim  
200 MW**

**(Reduced hours from 4000 to 200/year waiver; est.  
decision 04/09)**

**Total capacity at risk: 6,655 MW**

## The Legal Issues

NRDC, et al., v. SCAQMD (Inland Energy, Mojave Desert AQMD, Antelope Valley AQMD, real parties in interest) No. BS 110792 7/29/08

Los Angeles Co. Superior Court - Hon. Ann Jones  
Ruling on AQMD's Motion for Summary Adjudication

Be careful what you wish for.

*Separately filed suit under Sec. 304 of the Clean Air Act is pending.*

# The Big Legal Issues

## Are the rules subject to CA Environmental Quality Act (CEQA)?

- “There is no question that the adoption of Rule 1315 and the amendment of 1309.1, taken together or separately, are projects subject to CEQA.”
- “Rule 1315 has expanded exponentially the universe of pollution credits available. . . in an already polluted Basin.”
- The program “has obvious and measurable consequences in a world in which those credits will be accessed and used by credit-hungry polluters.”

# The Big Legal Issues

## Did AQMD comply with CEQA?

- “Failed to provide an accurate and detailed description of the proposed-rulemaking objectives, as well as its characteristics.”
- “It cannot be seriously doubted that the capture and redeployment of credits . . . will have the foreseeable and inevitable consequences of significantly increasing air pollution in SCAQMD.”
- “What is wholly speculative, however, is District’s claimed health benefits from avoiding ‘rolling blackouts’ in the event that these 11 new facilities will not get built. This list of random, improbable events does not constitute evidence substantial enough to support the District’s conclusion of no significant health impacts.”

# The Big Legal Issues

## Did Environmental Assessment Examine

### Global Warming Impacts?

- PEA limited discussion to CO2. “Petitioners noted that 19.6 percent of GHG emissions in California stem from electric power facilities. When the new rules allow additional facilities to be built, it is inevitable that these emissions will increase. Yet, not a single word of the PEA is addressed to GHG other than carbon dioxide.”
- Overall: “(A)nalysis of health impacts, aesthetic impacts and global warming/GHG are fundamentally flawed...inadequate under CEQA.”

## The Outcome

- “Writ of mandate vacating the District’s approval of the rules and enjoining the District from undertaking any action to further implement these rules pending CEQA compliance.” 7/29/08

# Impacts

## Memo from SCAQMD Executive Officer, Jan. 9, 2009

- “AQMD cannot at this time issue permits for construction that rely on credits from Rule 1309.1 Priority Reserve or that rely on Rule 1304 offset exemption.”
- “AQMD plans to readopt the invalidated rule, or other appropriate program, as soon as possible. We expect that to take at least 9 to 12 months.”
- “In the meantime, permits to construct can only be issued to applicants providing offsets in the form of ERC certificates that are owned by the applicants or that are purchase in the open market.”

# Options for Power Plants

ERCs are “scarce and in some cases very expensive,” especially PM 10. Some cost estimates:

Power plant	= \$100 - \$200 million
Landfill gas project with five turbines	= \$140 million
Sewage treatment plant expansion	= \$3 million
Police station backup generator	= \$110,000

Example: 850 MW generator might spend \$114 million to \$225 million for market emission credits, according to SCAQMD figures.

## Can anything be permitted?

*“The application is for air-pollution control equipment and no emission increases of any kind will occur.”*

# Options for Power Plants

## Example, case of Palmdale Hybrid Plant:

- Limited options for PM10, estimated that entire market availability would cover only one power plant.
- Depend on AQMD to readopt its rules or transfer from San Joaquin Basin, subject to trading ratios.
- Interpollutant trading possible for NOx/hydrocarbons.
- But mobile-to-stationary offsetting used for RECLAIM unavailable under New Source Review.

# Impacts

*Not the least of problems:*

*Once-Thru-Cooling ban* resource impacts to Southern California

- About 7,416 MW of resources in ISO Southern grid area needed to replace OTC generation;
- If existing OTC power plants are retired or shut down, then about \$4 billion to \$5 billion (2008 dollars) of identified conceptual transmission upgrades, if determined to be feasible, are needed;
- Additional transmission costs would be incurred to mitigate potential out-of-state transmission impacts due to increased imports into ISO Control Grid.

*My best source:*

*“I don’t think it’s going to be resolved any time soon.”*

# CONTACT

Arthur O'Donnell  
Executive Director  
Center for Resource Solutions  
415-561-2101  
[arthur@resource-solutions.org](mailto:arthur@resource-solutions.org)