



## Rising Air Credit Prices Point to Statewide Shortage

With the state's population projected to climb to more than 44 million by 2020, California energy companies appear to be facing an increasingly tight statewide market for air pollution offset credits. The market constraint is blocking some efforts by power plant developers to build facilities to quench growing public thirst for electricity and transportation fuel.

A shortage of credits needed to build new, or expand existing, facilities in polluted areas has so far only stymied plans to build power plants in the sprawling and smoggy Los Angeles area. Southern California air regulators were expected to try to ease the credit shortage in a meeting held at press time July 13 (*Circuit*, May 25, 2007)

Outside of the South Coast Air Basin to date, air district officials maintain that offset requirements have not disrupted plans to build any energy facilities. While project developers are paying more for credits, they still can arrange to obtain credits, though in the absence of a liquid market it takes time, according to Matt Dessert, Imperial County Air Pollution Control District analyst.

Jan Smutny-Jones, Independent Energy Producers Association executive director, said he does not know of any power plant projects outside the Los Angeles area that have been held up by a lack of air credits. He would not be surprised if the market is tightening for credits in other areas of the state, he said.

Growth in the number of energy facilities and an apparent slowdown in development of cleanup technologies is driving California toward a shortage of air credits. San Joaquin Valley, for instance, is searching for technological advances to clean up its air, as is the Los Angeles area, observed said Samantha Unger, Evolution Markets director of California emissions markets.

Other areas in the state have seen a rapid run-up in air credit prices over the past year that may signal a dramatic squeeze on the statewide supply of emission rights.

"In most of the California air districts there's a limit on supply," Constraints are being reached in the fast-growing San Joaquin Valley, San Diego, and Imperial Valley as the energy industry seeks to expand, according to Unger

The increasingly tight supply—coupled with business expansion—has sent the price of credits soaring, threatening the financial

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planning assumptions behind power plant projects, Unger said. Credit prices are increasing much faster than it takes to plan and permit new power plants. The process can take well over a year.

For instance, in the past year, the San Joaquin Valley price of credits for fine particulate matter increased from a range of \$15,000/ton/year to near \$80,000/ton/year, according to data from Evolution Markets. The firm tracks credit prices.

Prices in the Imperial Valley for particulate emissions increased from less than \$10,000/ton/year to \$45,000/ton/year, according to Dessert. The price of nitrogen oxide credits there went from \$10,000/ton/year to as high as \$70,000/ton/year, he added.

"It's just really caught on fire in the last year," said Dessert.

The credits are required for new or expanding plants in polluted areas under the federal Clean Air Act's New Source Review provisions. Those provisions require power plant and other major industrial facility builders to offset their new pollution with emissions reduction credits. Industries either can purchase the credits on the open market from others who have reduced pollution or earn their own by cutting emissions more than required at an existing plant.

The air credit crunch comes as the California Energy Commission this week forecast that demand for electricity statewide is projected to grow from 288,370 GWh next year to 317,477 GWh by 2016. That is an average increase of 1.2 percent a year and a total increase of

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fire."**

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10.1 percent. Peak demand is projected to increase from 62,327 MW to 68,804 MW, an increase of 10.4 percent.

Demand for transportation fuel could grow too. The commission forecast that gasoline use will increase unless fuel prices are high or greenhouse gas reduction standards are enforced. Under a business as usual base-case scenario, the CEC forecasts that gasoline demand will increase from 15.9 billion gallons a year in 2005 to 17.9 billion gallons a year in 2015, a 12 percent increase.

Even prices for volatile organic compound credits—traditionally comparatively plentiful in supply—are heading up in the San Joaquin Valley, according to Evolution Markets, reaching the \$20,000/ton/year range lately, almost double the price this time last year.

The local market for volatile organic compound credits is beginning to tighten as the area sees an up tick in ethanol facilities, acknowledged Errol Villegas, San Joaquin Valley Air Pollution Control District. Ethanol production facilities typically require offsets for volatile organic compound emissions, he explained. However, they generally do not emit enough to need offsets for other pollutants, such as nitrogen oxides or particulate, he added.

For instance, volatile organic compound emissions from a Pacific Ethanol plant opened outside Fresno last year total 16 tons a year. Regulators required offsets for the

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emissions. Another ethanol producer, Cilion, is expected to need to offset an estimated 44,897 pounds a year of volatile organic compound emissions from its proposed ethanol plant in Stanislaus County.

In Imperial Valley, another area with a tight offset market, developers are eyeing nine new ethanol plants, according to Tim Kelley, Imperial Valley Economic Development Corporation president. Pacific Ethanol broke ground on one facility in the valley that will make 50 million gallons of the alternative fuel from grain. California Ethanol and Power has obtained financing for another plant that will make 50 million gallons a year of ethanol from sugar cane and also generate 30 MW of power. San Diego-based U.S. Farms is pursuing a plant, as well, after receiving a favorable feasibility study by an outside consultant on its project

earlier this year.

Air credits have not yet stymied the ethanol industry in the low desert area, according to Kelley. But, it could prove "a challenge" as the local industry reaches toward its total production potential of more than 750 million gallons a year. Ethanol made in the valley could readily be used in gasoline sold throughout Southern California and Arizona, he said.

The Energy Commission forecasts that if the state aggressively pursues low-carbon fuels and greenhouse gas reductions demand for ethanol could grow from 951 million gallons a year in 2005 to 1.8 billion gallons a year in 2015. Almost all the ethanol California motorists burn today is imported from out of state, particularly from the Midwest.

—William J. Kelly