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October 14, 2010

James D. Boyd, Presiding Member
Anthony Eggert, Associate Member
Carlsbad Siting Committee
California Energy Commission

**Subject: Carlsbad AFC (Docket No. 07-AFC-6): (1) Recent Ninth Circuit Case Regarding Liquefied Natural Gas Use in California; (2) U.S. Environmental Protection Agency Determination Regarding Applicability of Prevention of Significant Deterioration Permit.**

Briefing for the Carlsbad AFC concluded as of October 11, 2010. Staff wishes to call to the Committee's attention a very recent U.S. Ninth Circuit Court of Appeals case that is relevant to one of the issues in the Carlsbad proceeding. The case is so recent that Staff has only just discovered it, and could not include it in its brief.

An issue raised by Intervenor Center for Biological Diversity (CBD) is whether, in its FSA, Staff should have considered the allegedly higher greenhouse gas (GHG) contribution from liquefied natural gas (LNG) that could be imported through Mexico to California and burned in California power plants, and analyzed and quantified such increased impacts. Staff contended that such a consideration is not necessary because (1) natural gas supplies and the natural gas market have changed dramatically in the past three years, making the use of LNG imports much less likely than previously forecast, and making it *highly speculative* that LNG will be burned in Carlsbad, and (2) even if one assumes that LNG is burned in the proposed Carlsbad power plant in significant quantities, a more efficient power plant would be even more valuable in reducing GHG emissions, because it would reduce the consumption of that higher carbon fuel source.[1]

The speculative nature of LNG imports and usage in California has been addressed in a very recent decision from the Ninth Circuit Court of Appeals: *South Coast Air Quality Management District v. FERC* (Sept. 9, 2010) ___ F.3d ___No 08-72265 (2010 WL 3504649). In that case, the air district challenged the sufficiency of an environmental impact statement prepared by the Federal Energy Regulatory Commission. The court held that the environmental document was sufficient, one of the reasons being "the substantial uncertainty regarding the eventual burning of North Baja gas [LNG]." (Westlaw Star Page 13.) The court discussed this uncertainty in the following paragraph:

[1] This assumes, as CBD does, that imported LNG has significantly higher GHG emissions. Staff is agnostic on this assumption, and Applicant's witness testified at hearing that LNG imports do not have significantly higher GHG emissions.

> The CPUC's observations have proven to be prophetic. Because of the recent discovery of huge natural gas reserves in the United States, which are already being tapped, today "[i]mport terminals for [liquefied natural gas] sit virtually empty, and the prospects that the U.S. will become even more dependent on foreign imports are receding." Amy Myers Jaffe, *Shale Oil Gas Will Rock the World,* Wall St. J., May 10, 2010. This is echoed in the circumstances depicted one year earlier. *See,* Ben Casselman, *U.S. Fields Go From Bust To Boom,* Wall St. J., April 30, 2009 at A1 ("Liquefied natural gas imports plunged [in 2008], leaving import terminals nearly idle.") (Westlaw Star Page 8, fn. omitted.)

In summing up its decision, the Court concluded that "there remains substantial uncertainty about the eventual burning of North Baja gas [LNG]." (Westlaw Star Page 13.) Staff brings this new decision to the attention of the Committee and the parties because it so directly bears on the very issue raised by CBD, and Staff's response that LNG use is unquantifiable, speculative, and beside the point.

The uncertainty surrounding future LNG imports is further addressed in Staff's Opening Brief. Although Staff believes that the record on this issue is more than sufficient, it is also docketing an Associated Press article regarding the recently discovered abundance in U. S. natural gas supplies and the remarkable effect this has had on the U.S. gas market. That article ("Natural Gas Elbows its Way to Center Stage," Associated Press, published in the *Sacramento Bee* on October 14, 2010) is attached and will be docketed today.

As a secondary matter, the U.S. Environmental Protection Agency (EPA) has recently determined that the Carlsbad Energy Center Project does not require a federal Prevention of Significant Deterioration permit (PSD); the EPA letter will be docketed later today. While this determination regarding a separate federal permit is, strictly speaking, of limited relevance to the issues before this agency, Staff alerts the Committee of this determination because the possible requirement of a PSD permit has been raised by some parties (incorrectly) as a pertinent consideration for the Energy Commission's state license.

Sincerely,

/s/ Richard Ratliff
RICHARD C. RATLIFF
Staff Counsel IV

Attachment

cc: Paul Kramer, Hearing Officer
Carlsbad POS list

abcNEWS

# Natural Gas Elbows Its Way to Center Stage

How cheap, abundant natural gas is pushing every other power source to the sidelines

**By JONATHAN FAHEY**

***The Associated Press***

By unlocking decades' worth of natural-gas deposits deep underground across the United States, drillers have ensured that natural gas will be cheap and plentiful for the foreseeable future. It's a reversal from a few years ago that is transforming the energy industry.

The sudden abundance of natural gas has been a boon to homeowners who use it for heat, local economies in gas-rich regions, manufacturers that use it to power factories and companies that rely on it as a raw material for plastic, carpet and other everyday products. But it has upended the ambitious growth plans of companies that produce power from wind, nuclear energy and coal. Those plans were based on the assumption that supplies of natural gas would be tight, and prices high.

Billions of dollars' worth of plans to build wind farms and nuclear reactors have been delayed or scuttled, including Constellation Energy's Calvert Cliffs nuclear project in Maryland. The company signaled this week it was in peril because of higher-than-expected financing costs.

And coal power, already struggling under tighter environmental regulations, is now under even more pressure. Natural gas emits fewer dangerous chemicals and about half as much carbon dioxide as coal.

The new natural gas discoveries,

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mostly beneath states in the East, South and Midwest, have kept prices remarkably low, even as demand has begun to come back since the end of the recession.

"We once thought we could face gas shortages and (electricity) brownouts. Now we are facing an enormous oversupply of natural gas," said Fadel Gheit, senior oil a nd gas analyst at Oppenheimer and Co. "We have not scratched the surface of potential of gas in the U. S. and across the world."

The U.S. uses natural gas to produce 21 percent of its electricity. Coal is the dominant fuel, accounting for 48 percent of the electricity mix. By 2015 natural gas is predicted to reach 25 percent while coal is expected to fall to 44 percent.

In the middle of the last decade, natural gas looked to be in short supply. Production in the U.S. was slowing, imports from Canada were rising and plans for importing liquefied natural gas from the Middle East and elsewhere were drawn up.

Natural gas, which had traded at about $2 per 1,000 cubic feet in t he 1990s, hit nearly $15 in 2005. It is now about $3.50, driven lower by reduced industrial power demand and rising production by drillers who are learning to make a profit from shale gas at ever lower prices.

Starting in about 2006, after decades of work, natural gas drillers like Devon Energy, EOG Resources and XTO Energy, now owned by ExxonMobil, perfected methods first tried in 1981 that now allow them to cheaply drill down and then horizontally into gas trapped in formations of shale never before thought accessible.

To release the trapped gas, drillers inject a slurry of water, sand and hazardous chemicals deep into the ground to break up rock and create small escape channels, a process known as hydraulic fracturing, or "fracking."

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There is a fear that fluids or wastewater from fracking could contaminate drinking water supplies. Congress has asked the Environmental Protection Agency to study the issue.

But in just a few years, a number of shale gas fields around the country are suddenly producing gas, including the Barnett field in Texas, the Fayetteville field in Arkansas, the Haynesville field in Louisiana and the massive Marcellus field that stretches from Western New York through Pennsylvania, Eastern Ohio and West Virginia.

While these developments are almost certain to boost U.S. gas production for years to come, they will have little effect on imports of foreign oil, at least in the short term. There are proposals to use more natural gas as a transportation fuel, but it is now used mainly to generate electricity, heat homes, and as an industrial feedstock.

A recent study by the Massachusetts Institute of Technology on the future of natural gas found that 80 years' worth of global natural gas consumption could be developed profitably with a gas price of $4 or below.

Plans for nuclear plants and wind farms were made under the assumption that gas prices would average $7 to $9. At that level, electricity prices would be high enough to make wind and nuclear power look affordable. Now many of these projects suddenly look too expensive.

Plans for three dozen new nuclear plants were drawn up in the middle of the last decade, and the nuclear industry hailed what it called a renaissance. Lawmakers, aiming to help stave off high electricity prices, authorized an $18.5 billion loan guarantee program to help the nuclear industry begin building new plants after two decades of inactivity.

Now almost all of those plans have been delayed or shelved. Even companies that are finalists for

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federal loan guarantees, NRG Energy and Constellation Energy, announced recently that they have nearly stopped spending on their projects.

Constellation announced last week that it was giving up on its loan guarantee application because the federal government's terms were too restrictive. Analysts say low natural gas prices are making the project uneconomic. NRG chief executive David Crane said he will not pursue the company's two-reactor project in South Texas if gas prices stay low, even if his project is offered a loan guarantee.

"Clearly $4 gas challenges the economics of just about every other form of electricity generation," says Richard Myers, vice president for policy development at the Nuclear Energy Institute, an industry group. "If you take a snapshot, today, it looks bleak."

The wind industry is also suffering. Antonio Mexia, chief executive of the Portuguese utility EDP, which is the third-largest wind power producer in the world and owner of Houston-based Horizon wind, said in a recent interview that the company plans to reduce wind investments by 75 percent in the U. S. between this year and next.

Nationwide, the wind industry installed enough wind turbines to supply electricity to 2.6 million homes in 2009, a record. This year wind turbine construction will likely fall 40 percent, and next year Mexia predicts that it could fall again, by as much as half. Federal subsidies for renewable energy projects reduce costs by some 30 percent, but that is not enough to help the wind-power industry compete with natural gas these days, he says.

In much of the country it is still cheaper to produce power by burning coal than natural gas, but coal, too, is being threatened. Coal power is becoming more expensive because environmental regulations are forcing utilities to install new emission control equipment.

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With natural gas so cheap, in many cases it will be less expensive to switch to gas than it will to install new emission equipment and continue to burn coal. Dan Eggers, an analyst at Credit Suisse, wrote in a recent report that 60 gigawatts of coal-fired plants □ enough to power 35 million homes □ will likely be shut down between 2013 and 2017.

Meanwhile, natural gas drillers are spending money and adding jobs. A recent report by Pennsylvania State University, commissioned by a natural gas industry group, predicts that in 2010 drilling in Pennsylvania's shale formations will add 89,000 jobs and inject $8 billion in spending into the state.

And consumers of natural gas are welcoming low prices. Analysts predict heating bills this winter could be as low or lower than last year and sharply lower than in recent years. Through the first six months of 2010, average residential gas prices were 9 percent lower than for the same period in 2009 and 18 percent lower than in 2008, according to the Energy Information Administration.

While most signs now point to low and stable natural gas prices for years to come, it is not a sure thing.

If regulations tighten or drilling methods are forced to change over environmental concerns, prices could rise.

Also, when the economy recovers to pre-recession strength, gas demand may rise enough to send prices higher, some analysts say.

"We have plenty of gas," says George Shiau, a partner and energy expert at the hedge fund Copia Capital. "We've yet to test what happens when demand spikes."

And though burning natural gas for power is far cleaner than burning coal, burning it still produces carbon dioxide. Alternatively, wind and nuclear power generation are carbon-free.

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"We don't want natural gas to become our next big climate problem," said Ashok Gupta, Senior Energy Economist at the Natural Resources Defense Council.

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**APPLICATION FOR CERTIFICATION FOR THE *CARLSBAD ENERGY CENTER PROJECT***

**Docket No. 07-AFC-6**
***PROOF OF SERVICE***
**(Revised 7/14/2010)**

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## DECLARATION OF SERVICE

I, Janet Preis, declare that on October 14, 2010, I served and filed copies of the attached **October 14, 2010 letter (with attachment) to Carlsbad Siting Committee**. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [http://www.energy.ca.gov/sitingcases/carlsbad/index.html]. The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

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I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

___/s/ Janet Preis_____
*Janet Preis*

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