

# Saudi Oil May Have Peaked



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**A**s oil stubbornly refuses to fall below \$45 a barrel, a major market mover has cast a worrying future prediction. Energy investment banker Matthew Simmons, of Simmons & Co International, has been outspoken in his warnings about peak oil before. His new statement is his strongest yet, "we may have already passed peak oil."

The subject of peak oil, the point at which the world's finite supply of oil begins to decline, is a hot topic in the industry, *aljazeera.net* reported.

Arguments are commonplace over whether it will happen at all, when it will happen or whether it has already happened. Simmons, a Republican adviser to the Bush-Cheney energy plan, believes it "is the world's number one problem, far more serious than global warming."

## Saudi Oil Peaking?

Speaking exclusively to *Aljazeera*, Simmons came out with a statement that, if proven true over time, could herald by far the biggest energy crisis mankind has known.

"If Saudi Arabia had damaged their fields, accidentally or not, by overproducing them, then we may have already passed peak oil. Iran has certainly peaked, there is no way on Earth that can ever get back to their production of six million barrels per day (mbpd)."

"The technical term for damaging an oilfield by overproduction is rate sensitivity. In other words, if the oil is pulled out of the ground too fast, it damages the fragile geological structure of the field. This can make as much as 80% of the oil within the field unextractable. Of course, at the moment, virtually every producer is at full tilt. The most important among them is Saudi Arabia; their Gharwar field is the world's biggest."

One of the first hints that Simmons got over possible Saudi Arabian overproduction was from researching an obscure US Senate committee meeting in 1974.

## Field Damage

"A whistleblower in Saudi Aramco, Saudi Arabia's oil company, was first reported in The Washington Post. He had claimed that Aramco had been overproducing the giant Gharwar field and that if they did not slow down, they would damage the reservoirs."

"The committee, which swore witnesses in under oath, produced over 1400 pages of documentation on the subject, it included some specialist advice which advised cutting Saudi production to 4mbpd to maintain production levels."

Currently, at near maximum production, Saudi Arabia is producing about 9mbpd, though recently they claimed they could potentially produce 12mbpd or even as much as 20mbpd. A claim Simmons called "pie in the sky".

"The faster you pull a reservoir, the faster you pull out all of the easy-to-produce oil," explains Simmons. "What happens is that you lose massive amounts of what the oil industry calls oil-left-behind still inside the field. These issues, as you can see, have been known about for years."

## Overproduction

"If you look at what Iran is doing, they are actually going to inject natural gas to the tune of 2bcb (billion cubic feet) through a 72in pipe into their Aghajari oilfield. It is a \$2bn project. This is in order just to boost production from 200,000bpd to 300,000bpd. In the 1970s Aghajari was producing 1mbpd. It has been overproduced."

Simmons also says the same thing happened with the oil company El Paso last year.

"At the same time as the Shell write-off, El Paso realized they had been producing their fields too hard. As a result they had to write off 41% of their reserves." In 2004 Shell first announced it had lost about 20% of its oil reserves.

Another clue came as Simmons discovered a ferocious debate that had been going on inside Saudi Aramco about overproduction.

"The company claimed in the early 1970s that it would be able to produce 20 to 25 mbpd, then by 1978 it was 12mbpd. Now it looks like 9.8mbpd is the maximum," he says.

# Experts Look at Major Energy Challenges

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need natural gas. You need to see hybrid, electric and diesel vehicles in the short and medium term. You need to see hydrogen and fuel cell cars in the long term. You need nuclear power. We are not going to be able to do away with it and still get down to those levels. Because we are still going to be burning coal in 2035, we are going to have to deal with the carbon emissions and so you are going to need carbon capture and geological sequestration."

## Fuel cell vehicle

Even though the United States is not part of the Kyoto agreement to reduce global warming, Ms. Claussen noted 141 other nations are. She also notes that more than 20 states have already adopted their own climate change policies with programs to encourage use of alternative fuels. She says development of a federal policy to reduce greenhouse gas emissions is only a matter of time and that energy companies should be part of that future.

# India Gas Imports Could Double

**L**iquefied natural gas producers including Royal Dutch/Shell Group and Exxon Mobil Corp. may double sales to India by 2007 as economic growth boosts demand for the fuel in Asia's third-biggest energy market.

"We have orders for the entire 5 million tons of production and there's appetite to absorb five times more," Petronet's Managing Director Suresh Mathur said in an interview on Feb. 9.

"LNG will have a dominant share of India's gas supplies," Petronet began selling the fuel in April. Qatar's RasGas Co., partly owned by Exxon Mobil, plans to increase annual sales to Petronet LNG to 7.5 million tons a year, Mathur said. Shell plans to start importing 5

million tons a year through its terminal by April, it said last month. India wants natural gas to account for a fifth of its energy usage by 2025, from 9 percent now, to reduce pollution, Bloomberg.com reported. India's gas production of 74 million cubic meters a day—equal to about 32 million tons of LNG a year—lags potential demand of 120 million cubic meters a year, the government has said. Consumption may rise if more factories switch to gas because of near-record oil and coal prices, analysts said.

government anticipates," R.K. Pachauri, director at New Delhi-based Tata Energy Research Institute, said. "Gas will be the fuel of the decade for the country."

Steel Authority of India Ltd., the nation's biggest steel producer, last week said it will use 3.56 million cubic meters a day of gas—equal to about 940,000 tons of LNG a year—starting next year as part of a plan to lower coal purchases by one million tons a year. National Thermal Power Corp., which generates a fifth of India's electricity, will use 3 million tons of natural gas to fire 2,600 megawatts of new capacity it plans to add by 2007.

## Price

"India's gas demand is far higher than what the

"We have to start preparing," she added. "Companies have to start thinking about how to do this. They have to start figuring out how to engage in this debate so that we end up with the smartest policies, chosen early, with the least impacts later. We may never have any scenario going out to 2035 like the ones we have here, but I think these things are pretty clear. We are going to end up in some kind of situation where there will be a mandatory climate policy. It is in your interest and in everybody's interest to start working on it now."

Andrew Slaughter, an economist with the Shell Oil Company, says Shell has already begun working on renewable energy research with an eye toward its own potential stake in what could become a lucrative market.

"Our own business, our own company has been around for 100 years and we want to be around for another 100 years or more, so we want to be a part of whatever energy mix or energy markets exist at that time. So we have an interest in terms of our own sustainability," he said.

One of the cleanest and most efficient sources of energy is also one of the most controversial, nuclear power.

Helen Howes, Vice President for Environment, Health and Safety at Exelon, a US electrical power company, says new technology could allow the design of nuclear plants that have safety and security as top priorities. But, she says, it may take some time before these plants are a reality.

## Market Entry

Competition from Iran and local gas producers that pipe the fuel to users without the cost of liquefying it may persuade suppliers to keep prices low to gain entry to the market.

Reliance Industries Ltd., which made the world's biggest gas discovery of 2002, has agreed to sell 3 million tons of the fuel to National Thermal at \$2.97 per million British thermal units starting in 2007.

Indian Oil Corp. and GAIL (India) Ltd., two of the nation's biggest state-owned energy companies, plan to import 7.5 million tons of LNG from Iran for 25 years starting 2009.

# Trash-Fueled Power Plant Planned

**T**he county waste authority is partnering with PPL to build a \$5 million mini power plant in Manor Township, tapping methane gas bubbling up from decomposing buried waste to generate electricity.

The "green power" project may also pipe heated water from the power generation process to the adjacent Turkey Hill Dairy farm as heat.

PPL and Turkey Hill officials are working out details on such a venture.

The Lancaster Solid Waste Management Authority board this morning authorized the partnership, which would safely capture methane gas and other pollutants escaping from the old Creswell Landfill and the current Frey Farm Landfill, the authority says. PPL and waste authority officials say the environmental benefits of the project are considerable, *lancasteronline.com* reported.

Methane gas, a major "greenhouse" gas that is currently within allowable limits at the site, no longer will be vented into the atmosphere, they say. Greenhouse gas contributes to global warming.

In addition, the amount of carbon dioxide captured in the methane will be the equivalent of removing the emissions from 45,000 cars a year, according to PPL.

And the power produced annually by the natural gas will be equal to 800 railroad cars of coal or 400,000 barrels of oil.

The authority currently doesn't have to capture methane gas at its two landfills but anticipates it will have to at Frey Farm in the future, under federal anti-pollution laws.

The authority anticipates making about \$50,000-\$75,000 a year from the sale of the gas.

PPL Energy Services would benefit from a new federal tax credit on generation of renewable energies, worth about \$1.2 million over five years.

Plus, the utility hopes to sell about a million dollars worth of power each year from the facility.

The plant has to be in operation by the end of the year to qualify for the tax credit.

"We definitely look at this as an environ-

mental enhancement, both short term and long term," says James Warner, authority executive director. "And we think everyone else will see it that way, too."

The portable, low-lying plant would be built by PPL on a two-acre site near the two landfills that will be leased from the authority.

The location is part of the heavily wooded 21-acre Deann Herr property that the authority purchased last year at the request of Herr.

The plant would be screened from River Road. The tallest structure would be a 20- to 25-foot flare stack where methane would be burned if the power plant is not in operation. Methane is a flammable gas.

Most of the power plant equipment would be in sound enclosures and would emit "very low" noise, according to Steven Gabrielle, PPL Energy Services business development manager, who gave a presentation on the project to the authority board today.

"If you heard anything, it would be a very low hum," he says. "You can talk right next to these enclosures."

The plant would have one full-time PPL employee during daytime hours. The cost to run the plant was estimated by PPL at \$400,000-\$500,000 a year.

Here's how the power plant would work. Methane gas would be sucked into a network of pipes under the two landfills and flow into a compressor.

The compressor removes water and prepares the methane for burning in two Caterpillar combustion engines that produce the energy.

An electrical switchgear station bumps the electricity to a higher voltage, then the power is plugged into utility lines already on the property.

The power is used in the Pennsylvania-New Jersey-Maryland utility grid.

The 60-acre Creswell Landfill, built on an old farm, operated from 1968 through 1989 and has waste buried up to 100 feet deep.

The 96-acre Frey Farm Landfill has been in operation since the Creswell Landfill was closed.

# W. Africa Awaiting Accelerated Exploration

**H**yperdynamics has initiated in-depth planning with a goal to accelerate exploration activity in its concession offshore West Africa.

Hyperdynamics invests in companies with substantial potential for growth, and develops and provides state-of-the-art seismic data management services. Its international active oil and gas subsidiary, SCS, owns rights to explore and exploit acreage offshore West Africa.

SCS has recently undertaken new technical developments, and the company believes it is now more equipped and confident in its ability to implement simultaneous tracks and put strategies in play to both develop higher-risk, deeper targets, as well as shallower, lower-risk drilling prospects.

It is of the opinion that lower-cost, lower-risk prospects may be ready to drill much faster than the larger, more complex targets. It is also considering that valuable geological knowledge could also be learned from such multi-track strategy, increasing the real potential for a commercial discovery of oil and/or natural gas sooner.

Under consideration for inclusion in the 2005 work program, is the start of a long-term seismic coverage program to acquire additional 2D and 3D seismic necessary to

pinpoint drilling locations for targets already generally located throughout the concession and locate new drilling prospects as well. *eyeforenergy.com* reported.

With the possibility for expanded data acquisition, the company expects to enhance its marketing strategy to find working interest or drilling partners. While it has been speaking with potential drilling partners on an increasing basis and levels of interest have been growing, consideration is apparently being given to significantly define a proactive program to solicit partners for the larger, higher-risk, higher-return prospective areas.

SCS's Chief Executive Officer, Kent Watts, who is responsible for initiating and facilitating these developments, comments: "I have had many questions over the last few months regarding how we are proceeding with our exploration operations offshore West Africa. Although we have not been actively pursuing oil company partners, we have indeed been speak-

ing to potential partners as they have been coming to us. We will continue to do so. Over the last two years it has been made clear to us that each viable oil company we speak with has its own propensity for risk. When we find the right partner with the appropriate capabilities that is willing to stand at least side by side with the risk-reward, we will not waste time striking a deal. In the meantime, our planning is being formulated to significantly move our exploration forward, irrespective of when we sign on a partner."

He continues that without doubt SCS is involved in a risk venture that has the potential for enormous returns, but at the same time the company is doing everything it can to reasonably mitigate risk.

"This risk-mitigating strategy is evidenced first by our move last year to initiate HYD Resources to obtain our own domestic proven reserves and production-based revenues. Now we are initiating plans to accelerate our exploration offshore West Africa."

"I believe the downward trend in our stock price of recent weeks is not reflective of our company's performance and potential. As always, I would ask our shareholders to please keep abreast of our filings and news as we update and solidify our plans and work programs going forward," Watts concludes.