



Peak Oil News

A Compilation of New Developments, Analysis, and Web Postings

[Tom Whipple](#), Editor

Friday, November 28, 2008

Current Developments

[1. OIL FALLS BELOW \\$54 IN ASIA AHEAD OF OPEC MEETING](#)

Alex Kennedy
Associated Press Writer
November 28, 2008

SINGAPORE – Oil prices fell below \$54 a barrel Friday in Asia as a gloomy outlook for global crude demand overshadowed hopes OPEC will announce a production cut this weekend. Light, sweet crude for January delivery was down 95 cents to \$53.45 a barrel in electronic trading on the New York Mercantile Exchange by late afternoon in Singapore. Trading was closed Thursday in the U.S. for the Thanksgiving holiday. Oil prices have fluctuated between \$50 and \$55 this week, pausing after fall of over 60 percent since reaching a record \$147.27 in mid-July. Grim economic data this week pointing to a severe recession in the U.S. in the fourth quarter and signs of growth slowing around the world have kept prices from rebounding further.

[2. OIL FALLS BEFORE OPEC DISCUSSES OUTPUT CUT TO STEM PRICE SLUMP](#)

By Alexander Kwiatkowski and Christian Schmollinger

Nov. 28 (Bloomberg) -- Crude oil fell on speculation OPEC won't be able to halt the slide in prices as the global recession cuts fuel demand. The Organization of Petroleum Exporting Countries may consider a reduction at its meeting this weekend in Cairo to stabilize the market, Shokri Ghanem, the chairman of Libya's National Oil Corp., said yesterday. Prices have slumped 63 percent from a record \$147.27 a barrel on July 11 as demand falls around the world. Economic reports this week showed a deepening recession in the U.S., the world's largest oil user. "OPEC is aware that the market is not so concerned about the production side as it is about demand," said Eugen Weinberg, a Commerzbank AG analyst in Frankfurt. "There is lots and lots of pressure on the market and that is weighing on the price."

[3. OPEC CHIEF SAYS OIL MARKET 'OVERSUPPLIED'](#)

Middle East Online
Cairo, 28 November 2008

Oil prices fall as market waits to see whether OPEC producers cartel would decide to cut output. OPEC Secretary General Abdalla Salem El-Badri said on Friday that the oil market was "over-supplied," on the eve of a key meeting that could see the cartel cut output. "The market is over-supplied," El-Badri said ahead of the OPEC meeting in Cairo opening on Saturday. Oil prices fell on Friday as the market waited to see whether the OPEC producers cartel would decide at a weekend meeting in Cairo to slash its crude output. Light sweet crude for delivery in January was down 1.39 dollars to 53.05 dollars a barrel on the New York Mercantile Exchange (NYMEX). On London's InterContinental Exchange (ICE), Brent North Sea crude for January dropped 71 cents to 52.42 dollars in morning trade. OPEC has watched oil prices collapse since striking record highs above 147 dollars in July, sparking serious concern among its members about plunging revenues.

4. OPEC'S SPY NETWORK

By Carola Hoyos in Cairo and Javier Blas in London
Financial Times
November 27 2008 21:41

When the OPEC oil cartel meets in Cairo tomorrow, some of its most powerful members will argue that the key action the group must take is to keep strictly to the 1.5m barrel a day cuts that it has already announced. Verifying whether Opec's countries do just that is far from simple. Knowing how much each country produces is mired in politically motivated dishonesty, secrecy and, in many cases, incompetence. The most reliable data, used even by Opec countries themselves, come not from the cartel member's energy ministries, but from so-called secondary sources – a network of spies watching, binoculars in hand, the movement of tankers in and out of the world's biggest export terminals. Conrad Geber, head of Petro-Logistics, one of the tanker-trackers, says gathering the information is a painstaking exercise. "We cannot cross the Saudi desert on a camel to measure the output at the oil wells," he jokes, "but we can measure supply by the number of tankers leaving the ports because we know their destination and what is inside the tanker."

5. GLOBAL ENERGY INVESTMENT HIT BY FINANCIAL CRISIS

Thu Nov 27, 2008 3:09pm EST

Nov 27 (Reuters) - The growing financial crisis and plunging energy prices have forced companies to scale back spending and delay projects, with expensive ventures in the Canadian oil sands hardest hit. Below is a list of energy projects that have been delayed or scaled back in recent months, as well as other related news. Nov 27 - Royal Dutch Shell (RDSa.L: Quote, Profile, Research, Stock Buzz) announces a second project delay in its Canadian oil sands holdings. The company said it has withdrawn a request for regulatory approval for its 100,000 bpd Carmon Creek thermal oil sands projects as it tweaks its design to lower costs. Nov 24 - Russian oil company LUKOIL (LKOH.MM: Quote, Profile, Research, Stock Buzz) may delay investment at its Bulgarian refinery, but the plant will keep its crude processing targets for this year and next. Nov 18 - British energy group BP Plc (BP.L: Quote, Profile, Research, Stock Buzz) said it will close its Australian solar-cell factory by end-March 2009 to focus on bigger, lower-cost operations offshore. The factory is the BP's smallest solar plant.

6. CHINA, INDIA CUT WEST AFRICAN CRUDE IMPORTS AS DEMAND DECLINES

By Nesa Subrahmaniyan and Alexander Kwiatkowski

Nov. 28 (Bloomberg) -- Asian refiners cut West African crude oil imports for loading in December by as much as 27 percent after buyers led by China Petroleum & Chemical Corp. lowered purchases because of falling demand for fuels. China's imports will drop to between 420,000 barrels and 460,000 barrels a day from November's 570,000 barrels a day, according to five traders surveyed by Bloomberg. Indian Oil Corp. and refiners in the nation will cut purchases by 21 percent to about 280,000 barrels a day in December from November. Asian oil-processing plants are reducing output as product prices have fallen faster than crude oil, lowering the profit to make gasoline and other fuels, after a global economic slowdown reduced consumption. China Petroleum, Asia's biggest refiner, cut crude oil processing by 10 percent this month from July's record, company officials said last week. "Interest for West African grades were lower for December cargoes because of refinery run cuts and weak demand," said Vienna-based consultant JBC Energy GmbH.

7. IRAQ CENTRAL GOV'T, KURDISTAN AGREE OIL EXPORTS

By Mohammed Abbas
Thu Nov 27, 2008 2:40pm EST

BAGHDAD, Nov 27 (Reuters) - Iraq's oil ministry and the country's largely autonomous northern Kurdish region have agreed to export oil from Kurdistan to Turkey, an Oil Ministry spokesman said on Thursday. The initial agreement represents a breakthrough in a dispute between the two Iraqi authorities. Disagreement between the Baghdad central government and the Kurdistan Regional Government has held up development of oilfields for export. "There has been an initial agreement to export Iraqi oil from

the Tawke oil field," Iraqi Oil Ministry spokesman Asim Jihad said. Exports of 100,000 barrels per day are expected to begin from the Tawke oil field, where Norwegian oil firm DNO (DNO.OL: Quote, Profile, Research, Stock Buzz) has a concession, at the beginning of next year, KRG Natural Resources Minister Ashti Hawrami said. Tawke is expected to be connected to Iraq's main northern export pipeline, which reaches the Turkish port of Ceyhan, by the end of this year. A second Kurdistan oil field, Taq Taq, is due to be linked to the pipeline three to four months later, Harami said.

8. KURDS SAY TO PRODUCE 250,000 BARRELS A DAY IN 2009

By Fatima Kamal
Azzaman
28 November 2008

Iraqi Kurds say volume of oil produced from their semi-independent region will hit 250,000 barrels a day by the end of 2009. Most of the crude will come from three main oilfields the Kurds have developed via deals with foreign firms in the past few years. The fields are situated in the Iraqi Kurdish Province of Dahouk and are not far from the Turkish borders. The twin Iraqi pipeline carrying crude to terminals in Turkey passes through the province and the Kurds say they have obtained the green light from the central government to export their crude to international markets via the pipeline. According to Ashti Horami, Minister of Natural Resources in the Kurdish regional government, the Kurds have a production target of up to 1 million barrels a day in the future.

9. THE OCTOPUS

What does a company making \$250 billion a year do for an encore?

Christopher Helman
Forbes
11.24.08

The nerve center of Saudi Aramco is tucked in a windowless, high-security room in the center of its massive headquarters compound in Dhahran. To get there you pass through three checkpoints manned by armed guards, as well as a handful of X-ray machines and electronic turnstiles. Called the Operations Coordination Center, it features a curved wall 12 feet high and 240 feet long covered with a digital screen of 200 million pixels. Maps and schematics depict the real-time volumes of crude oil and natural gas wending their way from Aramco's 102 fields through 48 gas-oil separators and 11,000 miles of pipelines into 7 refineries and chemical plants, 19 tank farms and 3 terminals feeding a dozen waiting supertankers.

10. THIEVES FORCE NIGERIA LNG TO DECLARE FORCE MAJEURE

By Nick Tattersall
Thu Nov 27, 2008 12:26pm EST

LAGOS, Nov 27 (Reuters) - Thieves tapping into energy pipelines in southern Nigeria have forced Nigeria LNG Limited, supplier of 10 percent of the world's liquefied natural gas, to warn it may not be able to meet all of its export obligations. NLNG said on Thursday it had warned buyers of possible disruption after Royal Dutch Shell (RDSa.L: Quote, Profile, Research, Stock Buzz) was forced to shut down its Soku gas plant, which contributes 40 percent of NLNG's feed stock, to repair pipeline damage caused by thieves. Shell declared force majeure on its gas supplies to the NLNG plant in Rivers state in the Niger Delta earlier on Thursday following a sharp rise in illegal connections on pipelines to Soku in recent months. "The level of theft from this pipeline has meant we had to remove more than 50 illegal valves in August and September alone," Mutiu Sunmonu, managing director of Shell's SPDC subsidiary in Nigeria, said in a statement. "Over the last few weeks the situation has deteriorated rapidly and resulted in a situation where safety concerns dictated we had to shut in. We also approached a stage where we have questions regarding the integrity of the pipeline which we will check," Sunmonu said.

11. POWER WOES TO WORSEN

This Day (Lagos)
28 November 2008

Nigeria's power generation problems may worsen following the shutting down of a major gas facility belonging to Anglo Dutch giant, Shell Petroleum Development Company (SPDC), at Soku, the country's oil and gas nerve center. Power generation has already dropped by over 800 megawatts owing to inadequate gas supply to Egbin and Sapele Power Stations. Also, Nigeria's gas export and domestic supply yesterday suffered major setbacks as Nigeria Liquefied Natural Gas Ltd (NLNG), supplier of around 10 per cent of the world's LNG, declared force majeure on gas delivery to its customers. This action came after Shell shut down its Soku Gas Plant to repair pipelines damaged by vandals and also declared force majeure on gas supply to NLNG. Shell's Soku Gas Plant supplies 40 per cent of NLNG's gas requirements. The declaration of force majeure enables companies to miss contractual obligations to their customers without incurring any legal liabilities due to circumstances beyond their control.

12. VENEZUELA, CHEVRON VENTURE OPERATING BELOW CAPACITY SINCE OCT.

By Steven Bodzin

Nov. 27 (Bloomberg) -- Petroleos de Venezuela SA and Chevron Corp.'s heavy-oil producing joint venture has been operating below capacity since an October power outage, an executive for Venezuela's state-owned energy company said. The Petropiar venture's upgrader, a specialized plant that converts tar-like heavy oil into a lighter grade for export, lost a sulfur unit in the blackout, cutting output to 135,000 barrels a day, said Petroleos de Venezuela Vice President Eulogio Del Pino. The project is designed to handle 180,000 barrels of crude. Venezuela's power grid, strained by years of consumption that has outpaced capacity, has failed three times this year, causing nationwide blackouts. All four of Venezuela's upgraders broke down because of the blackout, including a two-week stoppage at Petrozuata, the only one without a private-sector partner, Del Pino said. A smaller outage on Oct. 13 closed the Puerto La Cruz refinery.

13. PETROBRAS TOOK LOAN DUE TO 'TEMPORARY' PROBLEMS - MINISTER

Thu Nov 27, 2008 3:46pm EST

BRASILIA/RIO DE JANEIRO Nov 27 (Reuters) - Brazil's state-run oil giant Petrobras took a loan from a state-owned bank due to "temporary" financial problems, the country's energy minister said on Thursday. Petrobras (PETR4.SA: Quote, Profile, Research, Stock Buzz) (PBR.N: Quote, Profile, Research, Stock Buzz) borrowed 2 billion reais (\$877.6 million) from Caixa Economica Federal in October, raising questions about the company's financial health. This month Petrobras posted a record third-quarter net profit. Congress ordered the chief executives of Petrobras and Caixa, respectively, to explain the loan at a public hearing. Opposition legislators wanted to know why Petrobras needed a loan and why it used a state bank instead of a private bank. Energy Minister Edison Lobao said unexpected one-time costs had forced Petrobras to seek the loan. "It had temporary difficulties due to unforeseen taxes," Lobao told reporters in Brasilia.

14. IDEMITSU TO CUT CRUDE REFINING FURTHER IN OCT-DEC

Thu Nov 27, 2008 9:49pm EST

TOKYO, Nov 28 (Reuters) - Idemitsu Kosan Co (5019.T: Quote, Profile, Research, Stock Buzz), Japan's third-biggest oil refiner, said on Friday it would cut its October-December crude oil refining volume further amid slowing oil demand. The company now plans to refine 7.4 million kilolitres of crude oil during the quarter, down 15 percent or 1.3 million kl from the same period a year earlier, it said in a statement. It cited slower-than-expected sales of kerosene and other oil products. The company in September had initially expected to refine 7.5 million kl of crude during October-December, down 14 percent or 1.2 million kl from a year ago. [ID:nT135565] Idemitsu said it has not yet decided refining volumes for January-March since it is difficult to predict sales in the current volatile market. It said it would provide an outlook after the situation becomes clearer in December.

15. BRUCE POWER COMPLETES SASKATCHEWAN NUCLEAR STUDY

Thu Nov 27, 2008 4:34pm EST

CALGARY, Alberta, Nov 27 (Reuters) - Bruce Power LP said on Thursday the western Canadian province of Saskatchewan could support a nuclear plant producing up to 1,000 megawatts of electricity, as it completed a feasibility study for a facility and narrowed down potential sites for a reactor. The company, which operates the 4,700-megawatt Bruce nuclear complex in Ontario, said it's looking to site Saskatchewan's first commercial reactor somewhere within a broad swath in the west central region of the province. "We think it is feasible for Saskatchewan to host a reactor," said Steve Cannon, a spokesman for Bruce Power. "Something up to 1,000 megawatts of nuclear generation probably would fit nicely, but this is just a start." The area the company is mulling runs from Lloydminster on the Alberta border to the Prince Albert in the heart of the prairie province. Bruce Power has yet to finalize a site, or pick a reactor design, Cannon said. It plans to pick a site and then begin looking for environmental approvals, a process that could take up to three years.

16. SHELL MOVES TO SLOW CANADIAN OIL SANDS PROJECT

Thu Nov 27, 2008 12:36pm EST

CALGARY, Alberta, Nov 27 (Reuters) - Royal Dutch Shell Plc (RDSa.L: Quote, Profile, Research, Stock Buzz) is delaying another Canadian oil sands project, saying on Thursday it has withdrawn a regulatory application for its 100,000 barrel per day Carmon Creek thermal project as it looks to shave costs by revamping the project. The delay is the latest blow to what had been an ambitious schedule of projects for Canada's oil sands. The oil sands region of northern Alberta contains the largest oil reserves outside the Middle East, but they are technically challenging and expensive to extract. Shell, one of the biggest players in the oil sands, last month delayed an expansion of its oil sands mining operation when costs rose and oil prices fell. Adrienne Lamb, a spokeswoman for the company, said Shell is reviewing and redesigning the Carmon Creek project and plans to submit a new application to regulators. The company hasn't yet decided when that will take place.

17. NK-BP COULD FREEZE NEW PROJECTS IN 2009

The Moscow Times
28 November 2008

TNK-BP may have to freeze new refining and marketing projects next year as Russia faces its biggest financial crisis in a decade. "Next year won't be easy, just as for any other company," Alexander Kaplan, an interim vice president for refining and marketing, said Thursday. The board will decide on the 2009 business plan on Dec. 11, he said. Russian oil companies are already struggling with falling output at mature fields, a drop in crude prices and rising costs for starting projects in harder-to-reach regions. TNK-BP, the country's third-largest oil producer, survived a shareholder dispute earlier this year that threatened to cut spending plans. The company may have to trim 15 percent of managers in its refining and marketing division because of the economic slowdown, Kaplan said. TNK-BP will spend \$500 million on refining and marketing this year, he said, with \$160 million dedicated to maintenance and the rest to new projects.

18. GERMANY CUTS CARBON-DIOXIDE EMISSIONS TO BELOW KYOTO TARGET

By Jeremy van Loon

Nov. 28 (Bloomberg) -- Germany reduced carbon-dioxide emissions to below levels required under the Kyoto Protocol, an international agreement aimed at stemming climate change. The nation's factories, power plants and other emitters released a combined 957 million tons of CO2 last year, a decline of 2.3 percent from the previous year, the environment ministry reported today in an e-mailed statement. Germany, home to Europe's largest economy, encouraged homeowners and businesses to cut air pollution by using electricity generated by wind turbines, solar panels and by burning plant material. A law requires producers of renewable energy to be paid a supplement over the standard price. Under Kyoto,

which limits greenhouse gas emissions for wealthy countries, Germany pledged to curb output to an average of 974 million tons a year during the 2008-2012 measurement period, a 21 percent reduction from 1990 levels.

Discussion and Analysis

19. THE ENERGY OPTIMIST'S LEXICON

Kurt Cobb
Scitizen
25 Nov, 2008 05:52 pm

The world's energy optimists often employ a particular lexicon to make their case for abundance far into the future. Whether the lexicon is used cynically or out of ignorance, the result is the same: false impressions. It is understandable that when people want to argue their case effectively, they use the terms most favorable to their argument. We should expect that in any spirited debate. But when it comes to the debate over the world's energy future, those arguing for continued abundance are sometimes ignorant of the full implications of the terms they use and sometimes just intellectually dishonest. To help readers sort through the thicket of loaded terms often used by the energy optimists, I've constructed a short list of the most pernicious words and phrases that are often used to fool audiences rather than inform them.

20. THE FALL OF TRIUMPHALISM

By Michael T. Klare
This article appeared in the December 15, 2008 edition of The Nation.

In a remarkable evocation of the strategic environment of 2025, the National Intelligence Council (NIC), a government intelligence service, portrays a world in which the United States wields considerably less power than it does today but faces far greater challenges. The assessment, contained in *Global Trends 2025: A Transformed World* (dni.gov/nic/NIC_home.html), was released November 20 and is intended to be read by President-elect Obama's transition team as well as the general public. "Although the United States is likely to remain the single most powerful actor," the council notes, "the United States' relative strength--even in the military realm--will decline and US leverage will become more constrained."

21. GULF'S WOES BODE ILL FOR THE OIL AND GAS WE NEED

Carl Mortished: World briefing
From The Times
November 26, 2008

Alistair Darling's Pre-Budget Report on Monday contained at least one item that raised not a flicker of attention at Westminster but which will have been keenly noticed far away in the Gulf: he has decided that Islamic bonds will not form part of the Government's borrowing programme in the near future. The scrapping of Britain's first sukuk (a loan instrument that complies with Islamic strictures on the immorality of interest) will be seen as a slap in the face, a cold shoulder at a time when Islamic financial institutions are being buffeted by a catastrophe of real estate, the seeds of which were planted in America and Europe.

Alternatives

22. PLANS FOR THE WORLD'S BIGGEST WIND FARM

By Erica Gies
Herald Tribune
Wednesday, November 26, 2008

It is not the usual green suspect. But it hopes to build a 5-gigawatt, deep-water wind farm - the largest in the world, equal to the output from five nuclear plants. "It" is the Ocean Energy Institute, a tiny research organization founded by Matthew Simmons. An energy investment banker who specializes in oil and gas,

Simmons was an energy adviser to President George W. Bush. His main partner, George Hart, is a physicist who consults for the Pentagon on the Strategic Defense Initiative, where he uses supercomputers for the mathematical modeling of complex systems. He also co-invented a laser used for eye surgery and semiconductor manufacturing. Simmons does not believe in climate change, but he believes in peak oil. His book, "Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy," presciently published in 2005, argued that the world was at or near peak oil production, which would limit supply and drive prices skyward.

1. OIL FALLS BELOW \$54 IN ASIA AHEAD OF OPEC MEETING

Alex Kennedy
Associated Press Writer
November 28, 2008

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Oil prices have fluctuated between \$50 and \$55 this week, pausing after fall of over 60 percent since reaching a record \$147.27 in mid-July.

Grim economic data this week pointing to a severe recession in the U.S. in the fourth quarter and signs of growth slowing around the world have kept prices from rebounding further.

"The drop-off in demand is going to continue," said Jonathan Kornafel, Asia director at market maker Hudson Capital Energy in Singapore. "There's no reason for the market to rally."

Oil will likely trade below \$50 a barrel and could test the \$40 level by the end of the year, Kornafel said.

Investors will be watching whether the Organization of Petroleum Exporting Countries reduces output quotas at an informal meeting Saturday in Cairo. Venezuelan Oil Minister Rafael Ramirez on Wednesday called on OPEC to cut production by 1 million barrels a day.

OPEC Secretary-General Abdullah al-Badri on Thursday said the group should not panic in the face of falling oil prices. Russia also indicated this week it may join OPEC in lowering output.

"I don't expect a cut out of the Cairo meeting, but I do expect a 1.5 million barrel cut at their December meeting," Kornafel said. "I wouldn't be surprised to see Russia get in with OPEC either."

In other Nymex trading, gasoline futures was steady at \$1.18 a gallon. Heating oil dropped 2.76 cents to \$1.71 a gallon while natural gas for January delivery slid 16.9 cents to \$6.71 per 1,000 cubic feet.

2. OIL FALLS BEFORE OPEC DISCUSSES OUTPUT CUT TO STEM PRICE SLUMP

By Alexander Kwiatkowski and Christian Schmollinger

Nov. 28 (Bloomberg) -- Crude oil fell on speculation OPEC won't be able to halt the slide in prices as the global recession cuts fuel demand.

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around the world. Economic reports this week showed a deepening recession in the U.S., the world's largest oil user.

"OPEC is aware that the market is not so concerned about the production side as it is about demand," said Eugen Weinberg, a Commerzbank AG analyst in Frankfurt. "There is lots and lots of pressure on the market and that is weighing on the price."

Crude oil for January delivery dropped \$1.24, or 2.3 percent, to \$53.20 a barrel at 10:18 a.m. London time in electronic trading on the New York Mercantile Exchange. Nymex was open only for electronic trading yesterday because of the U.S. Thanksgiving holiday. Futures closed at \$54.44 on Nov. 26 after rising 7.2 percent.

Concerns about oil consumption have increased after reports showed the U.S. economy slowed and consumer spending fell. Gasoline demand dropped 1.3 percent from last week, the Energy Department said in its weekly report on Nov. 26.

Consumer Slump

Consumer spending slumped the most in seven years and orders for durable goods including refrigerators and washing machines declined twice as much as forecast, the Commerce Department said Nov. 26.

Brent crude oil for January settlement fell as much as 98 cents, or 1.8 percent, to \$52.15 a barrel on London's ICE Futures Europe exchange. It was at \$52.40 a barrel at 9:54 a.m. London time. Prices declined 1.5 percent yesterday.

Ministers from OPEC, which supplies 40 percent of the world's oil, are meeting tomorrow for the third time in as many months to discuss a further cut in production.

OPEC decided last month to reduce supply quotas by 1.5 million barrels a day. The Cairo meeting, originally intended just for ministers from Arab nations, was expanded into a full OPEC meeting to include Venezuela, Iran and Angola.

The crude oil market is over-supplied, OPEC Secretary-General Abdalla el-Badri said yesterday in an interview in Cairo. He declined to recommend a course of action, saying any decision concerning production quotas was up to ministers.

'Exorcise Surplus'

"They might say that they will cut 1 million barrels but in reality the market knows maybe they'll cut 500,000 to 600,000 barrels," Stephen Schork, president of Schork Group Inc. in Villanova, Pennsylvania, said in a Bloomberg Television interview. "And that's simply not enough to exorcise the surplus out of the market."

Daily shipments of oil from OPEC will fall 1.6 percent in the four weeks to Dec. 13, said industry consultant Oil Movements. The group will load 24 million barrels a day in the period, down from 24.38 million barrels a day.

Fourteen of 38 analysts surveyed by Bloomberg News, or 36 percent, said oil prices will decline through Dec. 5. Twelve respondents, or 32 percent, said oil will rise and 12 forecast oil will be little changed.

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Middle East Online
Cairo, 28 November 2008

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"The market is over-supplied," El-Badri said ahead of the OPEC meeting in Cairo opening on Saturday.

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OPEC has watched oil prices collapse since striking record highs above 147 dollars in July, sparking serious concern among its members about plunging revenues.

OPEC ministers agreed in Vienna last month to reduce production by 1.5 million barrels a day from November 1 as they sought to defend tumbling prices.

But the market has since crumbled further, approaching the lowest levels for nearly four years on growing concern that a painful global recession could savage demand for energy, traders said.

The OPEC cartel, which pumps 40 percent of the world's oil, called the extraordinary meeting in Cairo two weeks ago as prices descended towards 50 dollars.

However, ahead of the meeting, OPEC President Chakib Khelil has downplayed the idea of an output cut being announced in the Egyptian capital.

The cartel may wait until a scheduled policy meeting due in Algeria on December 17 before announcing any change to output, according to traders.

Last week, Brent North Sea oil plunged to 47.40 dollars and New York crude touched 48.35 dollars, marking the lowest points for nearly four years.

That compared with their respective record high points of 147.50 and 147.27 dollars on July 11.

4. OPEC'S SPY NETWORK

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Verifying whether Opec's countries do just that is far from simple. Knowing how much each country produces is mired in politically motivated dishonesty, secrecy and, in many cases, incompetence.

The most reliable data, used even by Opec countries themselves, come not from the cartel member's energy ministries, but from so-called secondary sources – a network of spies watching, binoculars in hand, the movement of tankers in and out of the world's biggest export terminals.

Conrad Geber, head of Petro-Logistics, one of the tanker-trackers, says gathering the information is a painstaking exercise.

“We cannot cross the Saudi desert on a camel to measure the output at the oil wells,” he jokes, “but we can measure supply by the number of tankers leaving the ports because we know their destination and what is inside the tanker.”

Mr Geber relies on multiple sources – from “spies” at oil ports to “friendly” officials at oil companies leaking data. But even so, he concedes the information is never 100 per cent accurate.

“There are black holes such as Nigeria and Venezuela where all you can come by is a reasonable estimate,” he says.

Venezuela is so unsure about how much it pumps that from time to time the central bank calls the oil ministry to correct the numbers because there are too few dollars in the vaults to support their inflated oil-production claims, industry insiders say.

With the cartel’s compliance critical, the market is hunting for Opec’s real-time production data. Traders mostly rely on figures from three leading tanker-tracking companies: Petro-Logistics, Oil Movements and Lloyd’s Intelligence Marine Unit.

The confusion and distrust about production is so deep that Opec members regularly request data about fellow members’ production from the International Energy Agency. This is ironic because the IEA, created after the 1970s oil shocks as the western countries’ oil watchdog, is basically to Opec what Nato was to the Warsaw Pact.

Despite uncertainty about production levels, Abdalla El-Badri, Opec’s secretary-general, says the cartel must deliver what it promised: “We already cut 1.5m b/d and would like to see what happens to that amount.”

With compliance levels still unclear, better data will emerge by mid-December, analysts say. Opec is likely to take Mr El-Badri’s advice and adopt a wait-and-see approach. Nevertheless, Iran and Venezuela are already calling for a new round of reductions of 1-1.5m b/d and there is an outside chance that Opec could make that cut in Cairo.

The cartel is not the only one seeking a better idea of its supply. Until the market is convinced that the group has significantly cut production, oil prices are unlikely to react to Opec’s efforts. In fact, since the cartel’s announcement on October 24 that it would cut 1.5m b/d of its output from November 1, oil prices have fallen from \$64 a barrel to \$53.

Lawrence Eagles, head of commodities research at JPMorgan, adds that early data show a “reasonable” degree of compliance, in the range of 1.1m-1.2m b/d.

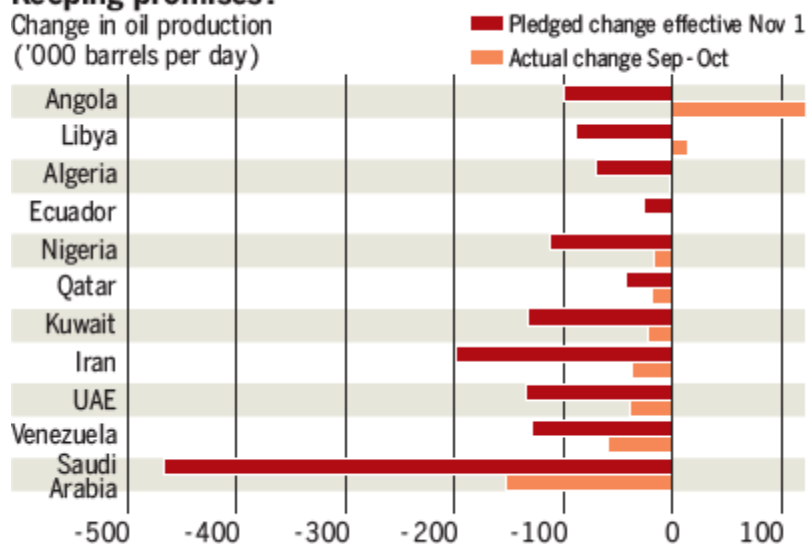
Whether that is enough to keep up with the dramatic fall in demand is unclear. If the answer is No, then Opec will have the chance to deepen its cuts at its meeting in Cairo or in Oran, Algeria, on December 17.

Banks and hedge funds buy the tankers-trackers’ monthly reports even though some of them believe that they are educated guesses rather than factual data. Nonetheless, the data move international oil prices every once in a while.

The hope for Opec is that the next bunch of tanker-tracking data show enough compliance with the cuts already announced to move the oil price higher.

Keeping promises?

Change in oil production
('000 barrels per day)



Source: OPEC

OPEC TO DISCUSS ANOTHER ROUND OF PRODUCTION CUTS

Crude-Price Plunge of the Past Four Months Raises Stakes for Cartel's Members, Who Will Meet Saturday in Cairo

By [Neil King Jr.](#) and [Spencer Swartz](#)

Having failed twice in two months to calm plunging oil markets, OPEC ministers are set to weigh another round of steep production cuts as the world's economic travails continue to drive crude prices to levels unseen in years.

The Organization of Petroleum Exporting Countries has scrambled since September to stem the fall in oil prices, which is putting pressure on OPEC budgets from Ecuador to Kuwait. Ineffective in blunting the price spike earlier this year, the organization is proving similarly hapless in putting a floor under collapsing prices.

OPEC's secretary-general, Abdalla Salem El-Badri, said the crude-oil market is oversupplied, as he arrived Thursday in Cairo for Saturday's meeting.

The group's 12 ministers will meet Saturday in Cairo to decide whether to move ahead on another cut of a million barrels or more after agreeing to a total cut of two million barrels a day at two meetings over the past two months.

Their message going into the Cairo session has been mixed at best, with most ministers suggesting that any firm decision be postponed until they meet again in formal session next month in Algeria.

After hitting a record of nearly \$150 a barrel in July, crude prices have since fallen to nearly a third of that in just four months, the steepest price collapse since formal futures trading began in 1981.

Thursday afternoon, the front-month January Brent contract on London's ICE futures exchange was down 36 cents at \$53.56 a barrel.

Floor trade on the New York Mercantile Exchange was closed for the Thanksgiving holiday.

The cartel's de facto leader and the world's largest exporter, Saudi Arabia, finds itself in a bind. Most OPEC members will face real economic problems if crude prices see a sustained drop below \$50 a barrel.

But at the same time, Saudi Arabia risks cutting supply and reducing fuel inventories at a time when the global economy is wrestling with a multifront crisis.

OPEC's ability to affect the market either way has been minimal, though, as demand continues to fall across the industrialized world and investment flows dry up.



Some analysts now predict that global demand could turn negative both this year and next, adding to a growing spare supply cushion that the world hasn't seen for years.

OPEC countries appear so far to have abided fairly well by pledges made since September to cut supply.

OPEC provides around 40% of the 86 million or so barrels of oil the world consumes daily. But that cohesion could begin to fray as exports and prices both fall.

With financial and social pressures rising, some OPEC nations are nearing an inflection point economically that could result in members such as Venezuela, Ecuador and Nigeria flatly ignoring additional production cuts.

A Nigerian oil official said the country doesn't want any more output reductions because Nigeria already is pumping below its OPEC allocation due to militant attacks on oil infrastructure that have shut around 600,000 barrels a day of production in past months. Nigeria is pumping around 1.95 million barrels a day, below its quota of 2.05 million barrels a day.

"We would have to go even farther below our quota if OPEC cuts more and that would hurt our government budget," the official said.

The Nigerian government could slash its 2009 budget by more than 10% below 2008 levels based on a current draft budget, leading to all sorts of reductions in social spending in one of Africa's poorest nations.

Ecuador Oil Minister Derlis Palacios this month said the country will seek an exemption from further OPEC output cuts because of the negative economic effect pumping fewer barrels would have on oil revenues and the country's battered economy.

Ecuador, OPEC's smallest member by production, is flirting with default on hundreds of millions of dollars of debt.

Citing falling oil prices and rising financial pressures, Angolan President Eduardo dos Santos said this week the West African nation mightn't have all the economic resources to fully implement a \$42 billion plan to rebuild infrastructure in the country.

PFC Energy analyst David Kirsch says no OPEC nation, not even the lowest cost producer Saudi Arabia, can maintain macroeconomic stability and all their current and planned budget expenditures if oil prices fall and stay under \$50 a barrel.

The cost of lower oil prices is hitting Venezuela hardest, according to PFC's calculations, as it requires an oil price above \$90 a barrel to maintain financial stability.

Oil prices have fallen roughly 16% since OPEC announced plans to cut production by 1.5 million barrels a day at an emergency meeting in late October.

But what has changed fundamentally since that meeting is the expectation that the global economic downturn will be longer lasting and economic recovery, when it does happen, even more sluggish.

Indonesia won't attend the weekend meeting. It no longer exports oil and will officially drop out of the cartel at the year's end.

5. GLOBAL ENERGY INVESTMENT HIT BY FINANCIAL CRISIS

Thu Nov 27, 2008 3:09pm EST

Nov 27 (Reuters) - The growing financial crisis and plunging energy prices have forced companies to scale back spending and delay projects, with expensive ventures in the Canadian oil sands hardest hit.

Below is a list of energy projects that have been delayed or scaled back in recent months, as well as other related news.

Nov 27 - Royal Dutch Shell (RDSa.L: [Quote](#), [Profile](#), [Research](#), [Stock Buzz](#)) announces a second project delay in its Canadian oil sands holdings. The company said it has withdrawn a request for regulatory approval for its 100,000 bpd Carmon Creek thermal oil sands projects as it tweaks its design to lower costs.

Nov 24 - Russian oil company LUKOIL (LKOH.MM: [Quote](#), [Profile](#), [Research](#), [Stock Buzz](#)) may delay investment at its Bulgarian refinery, but the plant will keep its crude processing targets for this year and next.

Nov 18 - British energy group BP Plc (BP.L: [Quote](#), [Profile](#), [Research](#), [Stock Buzz](#)) said it will close its Australian solar-cell factory by end-March 2009 to focus on bigger, lower-cost operations offshore. The factory is the BP's smallest solar plant.

Nov 17 - Petro-Canada (PCA.TO: [Quote](#), [Profile](#), [Research](#), [Stock Buzz](#)) defers construction of an upgrader for its C\$21 billion (\$17 billion) Fort Hills oil sands project. It will not make decision on the mine until 2009 as it expects costs to fall as oil sands projects fall by the wayside. It had planned a go-ahead decision in December.

Nov 14 - Austrian oil and gas group OMV AG (OMVV.VI: [Quote](#), [Profile](#), [Research](#), [Stock Buzz](#)) cuts oil production and gas marketing targets, also reviewing capex.

Nov 13 - Harvest Energy Trust (HTE_u.TO: [Quote](#), [Profile](#), [Research](#), [Stock Buzz](#)) defers C\$2 billion (\$1.6 billion) expansion of Come By Chance refinery in Newfoundland. Instead of 75,000 bpd expansion,

which would have boosted output to 190,000 bpd, it will work on C\$300 million of de-bottlenecking projects.

Nov 6 - Canadian Natural Resources Ltd (CNQ.TO: Quote, Profile, Research, Stock Buzz) slows spending on second phase of Horizon oil sands project for 2009 after first phase costs rise to C\$9.7 billion, up 42 percent from 2004 estimate. It also scraps timelines for phase 2, which would lift output to 250,000 bpd from 110,000.

Nov 6 - ConocoPhillips (COP.N: Quote, Profile, Research, Stock Buzz) and Saudi Aramco halt bidding on 400,000 bpd joint-venture Yanbu refinery in Saudi Arabia. Saudi Aramco previously sought to renegotiate contracts for equipment and a refinery venture with France's Total SA (TOTF.PA: Quote, Profile, Research, Stock Buzz).

Nov 5 - Saudi Arabia may renegotiate contracts for long-term projects such as the giant Moneefa oilfield expansion and the Karan gas scheme.

Nov 5 - Sunoco Inc (SUN.N: Quote, Profile, Research, Stock Buzz) to save \$375 million by scrapping upgrade of Tulsa, Oklahoma refinery; still looking to sell plant, which accounts for nearly 10 pct of 910,000 bpd capacity.

Nov 4 - BG postpones decision on whether to proceed with Phase III of Karachaganak field development, which aims to lift oil output to 16 million tonnes per annum (tpa) from 11 million.

Oct 30 - Royal Dutch Shell Plc (RDSa.L: Quote, Profile, Research, Stock Buzz) to delay investment decision on second expansion of Athabasca oil sands project.

Oct 29 - Thai refiner and petrochemical company IRPC IRPC.BK reviews \$1.5 billion investment plan. Has delayed a refinery expansion and cut run rate by 10,000 bpd.

Oct 27 - FPL Group (FPL.N: Quote, Profile, Research, Stock Buzz), the largest wind-power operator in the U.S. to slash 2009 spending nearly 25 percent to \$5.3 billion and new wind-power generation to 1,100 megawatts from 1,500 megawatts.

Oct 23 - Suncor Energy Inc (SU.TO: Quote, Profile, Research, Stock Buzz) delays oil sands upgrader for C\$20.6 billion Voyageur expansion by one year to 2013. Expansion boosts production from Suncor's oil sands operations near Fort McMurray, Alberta, to 550,000 bpd from 350,000.

Oct 23 - Nexen Inc (NXY.TO: Quote, Profile, Research, Stock Buzz) and Opti Canada Inc (OPC.TO: Quote, Profile, Research, Stock Buzz) delay second phase of Long Lake oil sands project to 2009. Expansion would double production of synthetic crude to 120,000 bpd. First phase cost C\$6.1 billion and is now just starting up.

Oct 23 - Value Creation Group's C\$4 billion Heartland upgrader near Edmonton, Alberta, reported halted. First phase would have processed 77,500 bpd of bitumen into synthetic crude. Privately held company has regulatory approval for plant with 260,000 bpd capacity.

Oct 22 - Baker Hughes Inc (BHI.N: Quote, Profile, Research, Stock Buzz) expects about 200 oil and gas rigs in North America to be idled during fourth quarter.

Oct 16 - Solar panel maker Evergreen Solar (ESLR.O: Quote, Profile, Research, Stock Buzz) warned it will not be able to fund a \$400 million production facility needed to meet 2010 contracts if credit markets do not improve in the next nine months. (Compiled by Scott Hagggett and Michael Szabo) (Reporting by Scott Hagggett)

6. CHINA, INDIA CUT WEST AFRICAN CRUDE IMPORTS AS DEMAND DECLINES

By Nesa Subrahmaniyan and Alexander Kwiatkowski

Nov. 28 (Bloomberg) -- Asian refiners cut West African crude oil imports for loading in December by as much as 27 percent after buyers led by China Petroleum & Chemical Corp. lowered purchases because of falling demand for fuels.

China's imports will drop to between 420,000 barrels and 460,000 barrels a day from November's 570,000 barrels a day, according to five traders surveyed by Bloomberg. Indian Oil Corp. and refiners in the nation will cut purchases by 21 percent to about 280,000 barrels a day in December from November.

Asian oil-processing plants are reducing output as product prices have fallen faster than crude oil, lowering the profit to make gasoline and other fuels, after a global economic slowdown reduced consumption. China Petroleum, Asia's biggest refiner, cut crude oil processing by 10 percent this month from July's record, company officials said last week.

"Interest for West African grades were lower for December cargoes because of refinery run cuts and weak demand," said Vienna-based consultant JBC Energy GmbH.

Brent crude oil, a benchmark for Europe and Africa, has declined 63 percent from a record \$147.50 a barrel on July 11. The contract for January settlement fell as much as 53 cents, or 1 percent, to \$52.60 on London's ICE Futures Europe exchange today.

Asian refiners also pared West African imports for December as Far East crudes from Malaysia, Vietnam and Indonesia were relatively cheaper, JBC Energy said.

West African oil shipments in January to China may rise to 548,000 barrels a day in January, mainly because of increased refinery production, survey respondents said.

India has booked shipments of about 251,000 barrels a day for January, the traders said.

Most crude oil from West Africa is classified as light and sweet. They yield more gasoline, diesel and kerosene after processing compared with Middle Eastern varieties.

7. IRAQ CENTRAL GOV'T, KURDISTAN AGREE OIL EXPORTS

By Mohammed Abbas
Thu Nov 27, 2008 2:40pm EST

BAGHDAD, Nov 27 (Reuters) - Iraq's oil ministry and the country's largely autonomous northern Kurdish region have agreed to export oil from Kurdistan to Turkey, an Oil Ministry spokesman said on Thursday.

The initial agreement represents a breakthrough in a dispute between the two Iraqi authorities. Disagreement between the Baghdad central government and the Kurdistan Regional Government has held up development of oilfields for export.

"There has been an initial agreement to export Iraqi oil from the Tawke oil field," Iraqi Oil Ministry spokesman Asim Jihad said.

Exports of 100,000 barrels per day are expected to begin from the Tawke oil field, where Norwegian oil firm DNO (DNO.OL: Quote, Profile, Research, Stock Buzz) has a concession, at the beginning of next year, KRG Natural Resources Minister Ashti Hawrami said.

Tawke is expected to be connected to Iraq's main northern export pipeline, which reaches the Turkish port of Ceyhan, by the end of this year. A second Kurdistan oil field, Taq Taq, is due to be linked to the pipeline three to four months later, Harami said.

Exports from Tawke and Taq Taq combined are expected to reach 250,000 barrels per day by the end of next year, he added.

The right to sign oil deals with foreign oil firms has been a sore point between the KRG and the central government. Baghdad does not recognise deals the KRG signed without its consent.

Earlier on Thursday, South Korea's SK Energy (096770.KS: Quote, Profile, Research, Stock Buzz) said it would not raise investment in Kurdistan without central government approval.

The firm is a member of a consortium developing the region's Bazian oil field. It said it would not join a separate \$2.1 billion oil-for-infrastructure package that Korea National Oil Corp signed with the KRG in September.

An oil law, which could help ease the passage of foreign deals, has been held up by its link to other legislation contended by the KRG and the central government. Tensions have appeared to rise between the two authorities in recent months as they struggle to assert their authority.

Iraq's oil minister met with KRG officials on Monday to discuss the disputed foreign contracts and they agreed to link the Ceyhan pipeline to two Kurdish oil fields.

Iraq has the world's third-largest proven reserves, at around 115 billion barrels. In the absence of an oil law, Baghdad has been negotiating contracts with oil majors under old laws. (Additional reporting by Shamal Aqrabi in Arbil: Editing by Dan Grebler)

8. KURDS SAY TO PRODUCE 250,000 BARRELS A DAY IN 2009

By Fatima Kamal
Azzaman
28 November 2008

Iraqi Kurds say volume of oil produced from their semi-independent region will hit 250,000 barrels a day by the end of 2009.

Most of the crude will come from three main oilfields the Kurds have developed via deals with foreign firms in the past few years.

The fields are situated in the Iraqi Kurdish Province of Dahouk and are not far from the Turkish borders.

The twin Iraqi pipeline carrying crude to terminals in Turkey passes through the province and the Kurds say they have obtained the green light from the central government to export their crude to international markets via the pipeline.

According to Ashti Horami, Minister of Natural Resources in the Kurdish regional government, the Kurds have a production target of up to 1 million barrels a day in the future.

There are billions of crude oil reserves in the Kurdish enclave which currently includes the three provinces of Dahouk, Arbil and Sulaimaniya.

The Kurds want to annex the oil-rich Province of Kirkuk to their enclave. Though still a thorny issue, the annexation of Kirkuk will turn the Kurdish region into one of the largest in the world in terms of reserves.

Kirkuk reserves are estimated at more than 15 billion barrels.

A visit by Oil Minister Hussain Shahrstani to the region recently seems to have removed hurdles preventing the Kurds from exporting the crude.

Oil Ministry spokesman Asem Jihad said the Kurds were permitted to use the twin pipeline to Turkey to export oil produced in Dahouk.

However, he declined to say whether the royalties will go to the Iraqi Central Bank or the Kurdish coffers.

9. THE OCTOPUS

What does a company making \$250 billion a year do for an encore?

Christopher Helman
Forbes
11.24.08

The nerve center of Saudi Aramco is tucked in a windowless, high-security room in the center of its massive headquarters compound in Dhahran. To get there you pass through three checkpoints manned by armed guards, as well as a handful of X-ray machines and electronic turnstiles. Called the Operations Coordination Center, it features a curved wall 12 feet high and 240 feet long covered with a digital screen of 200 million pixels. Maps and schematics depict the real-time volumes of crude oil and natural gas wending their way from Aramco's 102 fields through 48 gas-oil separators and 11,000 miles of pipelines into 7 refineries and chemical plants, 19 tank farms and 3 terminals feeding a dozen waiting supertankers.

Around the clock two dozen engineers monitor this movement of 9.4 million barrels of crude oil a day. Each of them has spent upwards of 15 years in the field, so when he sees something on the big screen, he can see in his mind's eye the miles of gleaming stainless steel traversing the burning desert sands under a dusty sky. Numbers on the screens go up and down, but not much really changes as long as operations are running smoothly--except for one thing. At the top of the screen in the middle of the curved wall is a live quote of the market price for a basket of Saudi crude oil. The box that said \$146 in July now says \$67.

Aramco is not panicking--not yet anyway. At this price the world's biggest oil company is still wildly profitable. Indeed 18 months ago \$70 a barrel seemed an improbably high price for crude oil. Amid the year's ups and downs, 2008 will mark a record for global oil demand, at 87 million barrels a day. While U.S. oil demand is off 5.5% in the past year to its lowest level since 2002, China's is up 6.5%.

What price is too low? Ibrahim Al-Muhanna, adviser to the Saudi oil minister, is cagey on the subject. "The right price is that which brings good money to the producers and does not hurt the global economy, especially that of the developing countries," he hedges. "We say that always, and we mean it." Oil analysts reckon the dividing line is \$49--below which the Saudis would have to start relying on deficit spending to keep their economy chugging along.

But why, with prices dropping and a steep worldwide recession looming, would Aramco go all out on the most ambitious expansion plan in its 75-year history? Over the next five years it will invest \$129 billion to boost its oil production capacity to 12 million barrels a day, build new refineries and petrochemical plants and pursue a high-tech exploration and production program. Executives promise that within 20 years this will increase the kingdom's proved recoverable reserves from today's 260 billion barrels to 450 billion barrels or more. "These are concrete targets to which we are going to be held accountable and of which we are confident," says Abdullah Al-Naim, vice president of petroleum engineering for Aramco.

That confidence springs from cash, mountains of it, and know-how. The 100% state-owned Aramco manages all its own projects and invests in the latest technology. It's easily the most profitable company on the planet: This year, after amortization of capital expenses, it should net upwards of \$250 billion on \$300 billion in revenue. With government budgets set for \$45 oil, Saudi Arabia will likely end 2008 with a \$150 billion surplus. It has \$400 billion in foreign assets. That puts it squarely in fat city--at a time when oil-tethered economies in Venezuela, Iran and Russia are in precarious shape.

Saudi Arabia's ambitions reach well beyond oil. The largest economic power in the region (Iran is a distant second), it is seeking to expand and diversify its economy with \$600 billion worth of projects over the next 12 years aimed at doubling power generation, including the building of nuclear power plants, petrochemical plants and plastics factories. Six new so-called economic cities are to spring forth from the desert to provide millions of white-collar jobs to the 50% of the population now under the age of 20.

Cutting output, as OPEC agreed to do on Oct. 24 in a vain effort to firm up sinking crude prices (so many countries cheat), is relatively easy. Much tougher is the ability to increase production quickly, and here the Saudis have taken the lead. In June, as the price was shooting past \$130 a barrel, King Abdullah bin Abdulaziz Al Saud summoned international oil officials to Jidda and decreed his intention to pop the oil-price bubble, ordering Aramco to increase output from 9.45 million barrels a day to 9.7 million, adding, "We are ready to meet any additional [demand] in the future." This represented a complete reversal of policy: In January and April the king turned down an appeal by President Bush to accelerate production.

Over the last few years King Abdullah has been throwing around his political heft--and cash--to check Iran's influence in the Middle East. In Iraq, historically a counterweight to Iran, the Saudis (like the U.S.) have paid armed Sunni groups to quit the violence, turn against al Qaeda and join the political process. The kingdom has hosted quiet negotiations between Afghanistan and the Taliban. In Syria the Saudis are encouraging President Bashar al-Assad to rein in the influence of Iran's proxy Hezbollah. "The Saudis are not unhappy to see lower oil prices squeezing Iran," says George Friedman, chief executive of the Austin, Tex. intelligence outfit Stratfor. "They just don't want prices to get low enough that it forces Iran to do something crazy."

Or anything to jeopardize Aramco's supply--as Saudi Arabia once feared from Saddam Hussein after he invaded Kuwait in 1990. Periodically warnings about so-called peak oil rear up, as they did three years ago when Aramco's cushion of standby supply tightened to only 1 million barrels a day. Gadflies like Houston investment banker Matthew Simmons seized on the vanishing supply cushion, insisting in his bestseller *Twilight in the Desert* that Saudi output would soon crest, triggering a crisis that would drive oil prices to the moon and bring on a global depression.

That didn't sit well with the Saudis. Determined to dismiss the concerns, they are investing \$65 billion to bring online 2.5 million barrels a day of new capacity from giant fields that were partially developed or untouched. "I am putting on fresh reserves, so what peak are you talking about?" asks Amin Al-Nasser, Aramco's senior vice president of exploration and production. "We are bringing 50 billion barrels of new proved reserves on stream." That, he boasts, represents a total larger than what the world's largest oil companies own--combined.

Start with Khurais, a field with 27 billion barrels of estimated reserves, which will be able to produce 1.2 million barrels a day next year. At a cost of \$12 billion, Khurais is Aramco's biggest oilfield ever brought online all at once (Ghawar, the largest in the world, discovered in 1949, was done in stages). It features two pipelines that carry 1 million barrels a day of seawater to be injected into the field to maintain pressures that force up the oil. There's Shaybah, with 18 billion in estimated reserves, where output is rising from 500,000 barrels a day to 750,000. Hit by delays in building a natural gas processing plant, the Khursaniyah field was supposed to start producing 500,000 barrels of oil and 1 billion cubic feet per day of natural gas but should be ready to go in 2009. Another monster is offshore Manifa, with 18 billion barrels of less desirable heavier oil, which will give up 900,000 barrels a day starting in 2011. Aramco says that by 2012 it will boost natural gas production by 40% to 13.2 billion cubic feet a day with the startup of the offshore Karan field.

"We go really slow and soft," says Al-Naim, the engineering chief. "Ghawar we treat as you would a young woman." Every Aramco well is fitted with an adjustable steel choke that restricts a standard 3-inch-diameter well bore down to a quarter-inch or less. Slowing the well reduces the amount of water that is produced alongside the oil, and a gentler flow protects the reservoir from damage.

Aramco's oldest operating well, Ain Dar 1, was drilled in 1948. This single well in the Ghawar complex has produced 152 million barrels from its original casing. The well's free-flow rate is now 8,000 barrels a day, but Aramco restricts it to 2,500. It insists that rumors of Ghawar's demise are premature. The field has given up some 45 billion of at least 100 billion barrels of original oil in place (only Aramco knows for sure, and it's not telling), yet still easily produces 5 million barrels a day; its overall water cut has declined in recent years to only 28%. Says Nasser, "If I needed more production I could go to Ghawar and boost it to 10 million barrels a day."

The world's publicly traded oil companies do not have this luxury. Shareholders want a quick return. In places like Venezuela and Russia, an international oil company wants to extract what it can as quickly as

possible because there's no telling when it might get the boot. Aramco says the depletion rate of its fields is on the order of 2% a year. Compare that with the average 6% in the rest of the world.

The chokes on its wells give Aramco the unique ability to increase output at a moment's notice. This year, as Saudi Arabia decided to add 500,000 bpd of output, Aramco didn't bring entire fields online. All it did was open some spigots wider. It was as easy as a few mouse clicks.

10. THIEVES FORCE NIGERIA LNG TO DECLARE FORCE MAJEURE

By Nick Tattersall

Thu Nov 27, 2008 12:26pm EST

LAGOS, Nov 27 (Reuters) - Thieves tapping into energy pipelines in southern Nigeria have forced Nigeria LNG Limited, supplier of 10 percent of the world's liquefied natural gas, to warn it may not be able to meet all of its export obligations.

NLNG said on Thursday it had warned buyers of possible disruption after Royal Dutch Shell (RDSa.L: Quote, Profile, Research, Stock Buzz) was forced to shut down its Soku gas plant, which contributes 40 percent of NLNG's feed stock, to repair pipeline damage caused by thieves.

Shell declared force majeure on its gas supplies to the NLNG plant in Rivers state in the Niger Delta earlier on Thursday following a sharp rise in illegal connections on pipelines to Soku in recent months.

"The level of theft from this pipeline has meant we had to remove more than 50 illegal valves in August and September alone," Mutiu Sunmonu, managing director of Shell's SPDC subsidiary in Nigeria, said in a statement.

"Over the last few weeks the situation has deteriorated rapidly and resulted in a situation where safety concerns dictated we had to shut in. We also approached a stage where we have questions regarding the integrity of the pipeline which we will check," Sunmonu said.

SPDC said the force majeure would last for the duration of the shut down.

It said repair work had to be carried out on pipelines outside the perimeter of the Soku plant itself but that the facility had to be shut down for safety reasons. It did not specify how long it would take for repairs to be completed.

LNG is gas cooled to liquid form and shipped in special tankers to markets in the developed world where it can be used for power generation or making chemicals. International demand has been fuelled in recent years by volatile oil prices.

NLNG, which exports 22 million tonnes per year of compressed gas, said it had warned buyers that it was bound to lose some cargoes as a result of Shell's shut-in.

It said it was trying to optimise feedgas from other suppliers but would not be able to make up all of the shortfall.

NLNG, whose export plant is located on Bonny Island, an industry hub in the restive Niger Delta, is controlled by a group of Western companies including Shell, Total (TOTF.PA: Quote, Profile, Research, Stock Buzz) and Eni unit Agip (ENI.MI: Quote, Profile, Research, Stock Buzz). State-run NNPC owns 49 percent.

Militants have blown up crude oil pipelines and kidnapped foreign workers in the delta in recent years to push demands for a fairer share of the region's natural wealth, but the gas industry has largely been unscathed by the unrest.

Armed gangs have taken advantage of the insecurity to tap into pipelines and engage in a lucrative trade in stolen crude worth millions of dollars a day.

11. POWER WOES TO WORSEN

This Day (Lagos)
28 November 2008

Nigeria's power generation problems may worsen following the shutting down of a major gas facility belonging to Anglo Dutch giant, Shell Petroleum Development Company (SPDC), at Soku, the country's oil and gas nerve center.

Power generation has already dropped by over 800 megawatts owing to inadequate gas supply to Egbin and Sapele Power Stations.

Also, Nigeria's gas export and domestic supply yesterday suffered major setbacks as Nigeria Liquefied Natural Gas Ltd (NLNG), supplier of around 10 per cent of the world's LNG, declared force majeure on gas delivery to its customers.

This action came after Shell shut down its Soku Gas Plant to repair pipelines damaged by vandals and also declared force majeure on gas supply to NLNG.

Shell's Soku Gas Plant supplies 40 per cent of NLNG's gas requirements.

The declaration of force majeure enables companies to miss contractual obligations to their customers without incurring any legal liabilities due to circumstances beyond their control.

SPDC spokesman Precious Okolobo said in a statement that the temporary shut down of the Soku Gas Plant in Rivers State was to enable the company carry out urgently needed repairs resulting from damage caused by a significant increase in condensate theft from the plant's pipelines.

"SPDC has declared force majeure on gas supplies to Nigeria Liquefied Natural Gas Limited (NLNG) for the duration of the shut down," he said.

"In recent months the number of illegal connections on pipelines has increased significantly and they are encroaching on the Soku plant itself, increasing safety risks to an unacceptable level. To ensure the safety and security of staff, contractor staff and communities, urgent repair work must be carried out immediately on the pipelines outside of the perimeter of the plant. To do this safely, the plant must be shut down. SPDC will also clean up nearby environmental damage caused by condensate spilled in these illegal operations," Okolobo added.

In a reaction to this development, SPDC Managing Director, Mr. Mutiu Sunmonu, said the company's first responsibility was for the health and safety of its staff and neighbours.

"The level of theft from this pipeline has meant we had to remove more than 50 illegal valves in August and September alone. Over the last few weeks the situation has deteriorated rapidly and resulted in a situation where safety concerns dictated we had to shut in. We also approached a stage where we have questions regarding the integrity of the pipeline which we will check," Sunmonu said.

Following the shut down of the Shell's gas plant, General Manager, External Relations of NLNG, Siene Allwell-Brown, said in a statement that the liquefied natural gas giant had also notified its customers that it would be unable to meet all its obligations due to the impact of the shut down of the gas plant by Shell.

"Following the declaration of a force majeure by Shell Petroleum Development Company (SPDC), Nigeria LNG Limited has similarly notified its buyers that it will be unable to meet all its obligations because of the impact of the shut down of the SPDC's Soku Gas Plant which contributes 40 per cent of NLNGs feed

stock. NLNG is committed to making the optimum use of the available feed gas it receives from other suppliers," she said.

The declaration of force majeure by NLNG will also worsen the supply of Liquefied Petroleum Gas (LPG), otherwise known as cooking gas to the domestic market.

NLNG is committed to making available 150,000 metric tonnes of LPG to the local market this year.

Through the intervention of the NLNG in the supply of cooking gas, the price of 2.5 kilogramme cylinder of the commodity was crashed from N10, 000 at the beginning of this year, to around N2,700 as at last week.

Explaining the current epileptic power supply, the Management of PHCN said in a statement that the recent increase in load shedding nationwide is due to the disruption of gas supply to Egbin and Sapele power stations.

"As a result of this gas supply limitation, we are losing about 800 mw generation capacity from the national grid as Sapele Power Station is completely shutdown while Egbin is running at reduced capacity," the statement said.

"Consequently, we have no alternative than to adhere strictly to the nationwide 12-hourly zonal power rotational rationing to maintain system stability and ensure even distribution of the limited generation output from the functioning plants," the statement added.

Nigeria's gas export will also suffer setbacks as NLNG's Bonny Island plant, the third world's largest, supplies gas to mostly European customers including Gas Natural of Spain, BOTAS of Turkey, Gaz de France and TRANSGAS of Portugal, with the biggest being the Italian electric power giant ENEL, which agreed to buy 3.5 billion cubic metres (bcm) per year of LNG for over 22 years.

The company is jointly owned by the Nigerian National Petroleum Corporation (NNPC) (49 per cent), Shell (25.6 per cent), Total LNG Nigeria Limited (15 per cent) and Italy's Eni (10.4 per cent).

The company runs five LNG production lines, the fifth of which was started in February 2006 while the sixth was scheduled to start up last year.

With the completion of Train 6, the NLNG Plant has an overall capacity of some 22 million tonnes of LNG yearly and 4 million tonnes of Liquefied Petroleum Gas (LPG), otherwise known as cooking gas.

THISDAY also gathered that the plant will utilise about 3.5 billion cubic feet per day (bcf/d) feedgas intake at full production.

It was also gathered that Shell, ConocoPhillips and ExxonMobil are among the companies that supply gas to the plant.

Shareholders in the project also plan to build Train 7 that will lift the total production capacity to over 30 million tonnes per annum (MTPA) LNG by 2011, as part of the efforts by the government to ensure that revenue from gas equals that of oil.

Meanwhile, the regulatory agency in the power sector, Nigerian Electricity Regulatory Commission (NERC) has spoken out on the adverse effects of the stoppage of the National Independent Power Project (NIPP), saying it does not augur well for the development of the sector.

Fielding questions yesterday at the pioneer power consumer assembly held in Awka, the Anambra State capital, NERC Chairman Ransome Owan explained that the stoppage of the project would not only stall the availability of power to all sections of the country but would eventually lead to more costs being incurred to complete the power plants under construction.

Represented by Mallam Abdulrahman Ado, Vice-Chairman of the commission, Owan also decried the wholesale condemnation of NIPP contractors by the House of Representatives' probe panel without taking cognisance of those who had done well.

From Ahamefula Ogbu in Port Harcourt, Patrick Ugeh in Awka and Alike Ejiofor in Lagos

12. VENEZUELA, CHEVRON VENTURE OPERATING BELOW CAPACITY SINCE OCT.

By Steven Bodzin

Nov. 27 (Bloomberg) -- Petroleos de Venezuela SA and Chevron Corp.'s heavy-oil producing joint venture has been operating below capacity since an October power outage, an executive for Venezuela's state-owned energy company said.

The Petropiar venture's upgrader, a specialized plant that converts tar-like heavy oil into a lighter grade for export, lost a sulfur unit in the blackout, cutting output to 135,000 barrels a day, said Petroleos de Venezuela Vice President Eulogio Del Pino. The project is designed to handle 180,000 barrels of crude.

Venezuela's power grid, strained by years of consumption that has outpaced capacity, has failed three times this year, causing nationwide blackouts. All four of Venezuela's upgraders broke down because of the blackout, including a two-week stoppage at Petrozuata, the only one without a private-sector partner, Del Pino said. A smaller outage on Oct. 13 closed the Puerto La Cruz refinery.

"We had problems with the startup, with the coker unit, but we have resolved them quickly," Del Pino said yesterday in an interview in Caracas. "We're installing a 200-megawatt back-up system soon so this doesn't happen again."

Petropiar is repairing the sulfur unit and is trying to move planned maintenance from February to January, he said. Petroleos de Venezuela is trying to complete as much maintenance as possible while the Organization of Petroleum Exporting Countries has reduced output limits in place, Del Pino said.

An official at Chevron's press office in Caracas said that as a minority partner, the company couldn't comment on Petropiar. Chevron owns 30 percent of the project.

13. PETROBRAS TOOK LOAN DUE TO 'TEMPORARY' PROBLEMS -MINISTER

Thu Nov 27, 2008 3:46pm EST

BRASILIA/RIO DE JANEIRO Nov 27 (Reuters) - Brazil's state-run oil giant Petrobras took a loan from a state-owned bank due to "temporary" financial problems, the country's energy minister said on Thursday.

Petrobras (PETR4.SA: Quote, Profile, Research, Stock Buzz) (PBR.N: Quote, Profile, Research, Stock Buzz) borrowed 2 billion reais (\$877.6 million) from Caixa Economica Federal in October, raising questions about the company's financial health.

This month Petrobras posted a record third-quarter net profit.

Congress ordered the chief executives of Petrobras and Caixa, respectively, to explain the loan at a public hearing. Opposition legislators wanted to know why Petrobras needed a loan and why it used a state bank instead of a private bank.

Energy Minister Edison Lobao said unexpected one-time costs had forced Petrobras to seek the loan.

"It had temporary difficulties due to unforeseen taxes," Lobao told reporters in Brasilia.

The poor financial performance of state companies in October caused a lower-than-expected consolidated primary budget surplus for the month. Petrobras had grappled with costly investments, as well as royalty and tax payments in the period, a central bank official had said.

Petrobras Finance Director Almir Barbassa said Petrobras had chosen to borrow from the state-owned bank because it offered the best conditions at the time.

"The Brazilian financial system is much healthier than the international one," he told Reuters.

Petrobras shares fell 1.8 percent to 20.15 reais on Thursday. The stock has fallen more than 50 percent this year as oil prices CLc1 have shed more 40 percent.

"Petrobras didn't give a lot of information about the loan," said Vladimir Pinto, analyst at Unibanco. "It's an uncertainty that could (hurt its share price)."

Fears that a recession in major economies will hurt demand for metals and oil have hit commodity stocks, which make up a large share of Brazil's main stock index, the Bovespa .BVSP.

Petrobras discovered major oil reserves in 2007, a find that could turn the Latin American country into a major oil producer.

(\$1=2.279)

14. IDEMITSU TO CUT CRUDE REFINING FURTHER IN OCT-DEC

Thu Nov 27, 2008 9:49pm EST

TOKYO, Nov 28 (Reuters) - Idemitsu Kosan Co (5019.T: [Quote](#), [Profile](#), [Research](#), [Stock Buzz](#)), Japan's third-biggest oil refiner, said on Friday it would cut its October-December crude oil refining volume further amid slowing oil demand.

The company now plans to refine 7.4 million kilolitres of crude oil during the quarter, down 15 percent or 1.3 million kl from the same period a year earlier, it said in a statement.

It cited slower-than-expected sales of kerosene and other oil products.

The company in September had initially expected to refine 7.5 million kl of crude during October-December, down 14 percent or 1.2 million kl from a year ago. [ID:nT135565]

Idemitsu said it has not yet decided refining volumes for January-March since it is difficult to predict sales in the current volatile market.

It said it would provide an outlook after the situation becomes clearer in December.

In September, Japanese oil product sales fell to their lowest in two decades, government data showed last month, suggesting that the economic crisis is taking a toll on the world's third biggest oil consumer.

The blow has been widely felt, with Nippon Oil Corp (5001.T: [Quote](#), [Profile](#), [Research](#), [Stock Buzz](#)), Japan's top oil company, planning to cut its crude runs by 18 percent in December from a year ago. (Reporting by Osamu Tsukimori and Miho Yoshikawa)

15. BRUCE POWER COMPLETES SASKATCHEWAN NUCLEAR STUDY

Thu Nov 27, 2008 4:34pm EST

CALGARY, Alberta, Nov 27 (Reuters) - Bruce Power LP said on Thursday the western Canadian province of Saskatchewan could support a nuclear plant producing up to 1,000 megawatts of electricity, as it completed a feasibility study for a facility and narrowed down potential sites for a reactor.

The company, which operates the 4,700-megawatt Bruce nuclear complex in Ontario, said it's looking to site Saskatchewan's first commercial reactor somewhere within a broad swath in the west central region of the province.

"We think it is feasible for Saskatchewan to host a reactor," said Steve Cannon, a spokesman for Bruce Power. "Something up to 1,000 megawatts of nuclear generation probably would fit nicely, but this is just a start."

The area the company is mulling runs from Lloydminster on the Alberta border to the Prince Albert in the heart of the prairie province.

Bruce Power has yet to finalize a site, or pick a reactor design, Cannon said. It plans to pick a site and then begin looking for environmental approvals, a process that could take up to three years.

A nuclear plant could be operating there by 2020 if Bruce receives needed clearances and goes ahead with construction.

The company, which has also proposed to build new reactors in Alberta and Ontario, said a Saskatchewan facility would create 2,000 construction jobs and 1,000 permanent jobs after its complete.

Bruce plans to talk to SaskPower, the provincially owned utility, about project power demand and improving Saskatchewan's power grid.

Bruce Power is a partnership owned by pipeline and power firm TransCanada Corp (TRP.TO: Quote, Profile, Research, Stock Buzz), uranium producer Cameco Corp (CCO.TO: Quote, Profile, Research, Stock Buzz) and BPC Power Generation Infrastructure Trust. (Reporting by Scott Haggett)

16. SHELL MOVES TO SLOW CANADIAN OIL SANDS PROJECT

Thu Nov 27, 2008 12:36pm EST

CALGARY, Alberta, Nov 27 (Reuters) - Royal Dutch Shell Plc (RDSa.L: Quote, Profile, Research, Stock Buzz) is delaying another Canadian oil sands project, saying on Thursday it has withdrawn a regulatory application for its 100,000 barrel per day Carmon Creek thermal project as it looks to shave costs by revamping the project.

The delay is the latest blow to what had been an ambitious schedule of projects for Canada's oil sands. The oil sands region of northern Alberta contains the largest oil reserves outside the Middle East, but they are technically challenging and expensive to extract.

Shell, one of the biggest players in the oil sands, last month delayed an expansion of its oil sands mining operation when costs rose and oil prices fell.

Adrienne Lamb, a spokeswoman for the company, said Shell is reviewing and redesigning the Carmon Creek project and plans to submit a new application to regulators. The company hasn't yet decided when that will take place.

"The review is looking at opportunities to reduce costs and improve the profitability of the project," Lamb said. "As a result of that we expect there will be some changes ... Rather than update the application we decided the best path forward is to submit a new application."

Shell had been expected to make an investment decision on Carmon Creek in 2010. However Lamb said that will now be delayed because of the changes and the company hasn't decided on a new schedule.

Shell had not released a cost estimate for the project, which was to have been built in two 50,000 barrel per day tranches.

Unlike the company's mining operations, Carmon Creek would use thermal techniques to produce the reserves, pumping steam into the ground to liquefy the tar-like bitumen so that it can be pumped to the surface.

Along with Shell, Suncor Energy Inc (SU.TO: [Quote](#), [Profile](#), [Research](#), [Stock Buzz](#)), Nexen Inc (NXY.TO: [Quote](#), [Profile](#), [Research](#), [Stock Buzz](#)), Petro-Canada (PCA.TO: [Quote](#), [Profile](#), [Research](#), [Stock Buzz](#)), Canadian Natural Resources Ltd (CNQ.TO: [Quote](#), [Profile](#), [Research](#), [Stock Buzz](#)) and others have said they'll delay or defer projects in the region because falling oil prices have squeezed profits while costs stay high.

A shortage of skilled labor in the remote region has helped push up costs as companies compete for a small pool of tradesmen and contractors. (Reporting by Scott Haggett; editing by Peter Galloway)

17. NK-BP COULD FREEZE NEW PROJECTS IN 2009

The Moscow Times
28 November 2008

TNK-BP may have to freeze new refining and marketing projects next year as Russia faces its biggest financial crisis in a decade.

"Next year won't be easy, just as for any other company," Alexander Kaplan, an interim vice president for refining and marketing, said Thursday. The board will decide on the 2009 business plan on Dec. 11, he said.

Russian oil companies are already struggling with falling output at mature fields, a drop in crude prices and rising costs for starting projects in harder-to-reach regions.

TNK-BP, the country's third-largest oil producer, survived a shareholder dispute earlier this year that threatened to cut spending plans.

The company may have to trim 15 percent of managers in its refining and marketing division because of the economic slowdown, Kaplan said.

TNK-BP will spend \$500 million on refining and marketing this year, he said, with \$160 million dedicated to maintenance and the rest to new projects.

Currently, the company is orienting itself to an oil price of \$60 to \$70 a barrel, Kaplan said, adding that a scenario of \$50 crude is also under consideration.

While TNK-BP has not experienced a significant drop in retail sales, commercial customers are reducing their demand, Kaplan said.

18. GERMANY CUTS CARBON-DIOXIDE EMISSIONS TO BELOW KYOTO TARGET

By Jeremy van Loon

Nov. 28 (Bloomberg) -- Germany reduced carbon-dioxide emissions to below levels required under the Kyoto Protocol, an international agreement aimed at stemming climate change.

The nation's factories, power plants and other emitters released a combined 957 million tons of CO2 last year, a decline of 2.3 percent from the previous year, the environment ministry reported today in an e-mailed statement.

Germany, home to Europe's largest economy, encouraged homeowners and businesses to cut air pollution by using electricity generated by wind turbines, solar panels and by burning plant material. A law requires producers of renewable energy to be paid a supplement over the standard price.

Under Kyoto, which limits greenhouse gas emissions for wealthy countries, Germany pledged to curb output to an average of 974 million tons a year during the 2008-2012 measurement period, a 21 percent reduction from 1990 levels.

The country has also benefited from the collapse of polluting industries in the former East Germany, which contributed half of the overall CO2 reductions.

"Kyoto is only a first small step," Sigmar Gabriel, the environment minister, said in the statement. "We still need more efficiency and lower electricity use."

19. THE ENERGY OPTIMIST'S LEXICON

Kurt Cobb
Scitizen
25 Nov, 2008 05:52 pm

The world's energy optimists often employ a particular lexicon to make their case for abundance far into the future. Whether the lexicon is used cynically or out of ignorance, the result is the same: false impressions.

It is understandable that when people want to argue their case effectively, they use the terms most favorable to their argument. We should expect that in any spirited debate. But when it comes to the debate over the world's energy future, those arguing for continued abundance are sometimes ignorant of the full implications of the terms they use and sometimes just intellectually dishonest.

To help readers sort through the thicket of loaded terms often used by the energy optimists, I've constructed a short list of the most pernicious words and phrases that are often used to fool audiences rather than inform them.

Above-ground factors -- The optimists argue that there is plenty of oil, usually for many decades to come, so long as "above-ground factors" don't prevent its extraction. Factors cited often include wars, social unrest, lack of investment, environmental restrictions on drilling, and political restrictions on foreign ownership or participation in oil development in countries thought to have high potential for oil discovery. (Most, but not all of these, are in the Middle East.)

Of course, the optimists are correct that all these factors can depress oil output. But the assumption behind their lament is that somehow we can easily brush aside these factors. Do these optimists propose that we simply threaten countries or perhaps invade them to force them to allow their untapped fields to be explored and developed? Do they advocate the wholesale dismantling of environmental regulations? Do they have a plan for forcing the oil industry to make the necessary investments in exploration and infrastructure? Usually, they don't say.

But what readers need to understand is that the oil infrastructure is both an above-ground and below-ground system inextricably intertwined. Future petroleum-based fuel supplies will rely on whether this system can produce increasing amounts of crude oil and refined products. Simply ignoring or complaining about "above-ground factors" won't make them go away. Above-ground factors are likely to continue to have a mostly negative effect on the rate of production for oil and probably also natural gas for a long time. (For more on "rate of production", see "Resource" below.)

At current rates of consumption -- Quite often energy optimists will say the world has X years of oil, natural gas, coal or uranium "at current rates of consumption." Sometimes they just leave off the phrase "at current rates of consumption" which makes their claim very vague indeed. And, when referring to natural gas and coal, quite often the X is a triple-digit number that implies we have nothing to worry about in our lifetimes.

There are two problems with this measure. First, rates of consumption are not steady. In fact, for oil, natural gas and coal, they are rising exponentially. From 1980 through 2006 the growth rate for worldwide oil consumption was 1.15 percent per year. For worldwide dry natural gas consumption the growth rate was 2.65 percent. For coal it is was 1.9 percent. For the period from 2000 to 2006, a period reflecting the high growth in energy use by rising giants such as India and China, the annual worldwide growth rates in consumption for oil, natural gas and coal were 1.7 percent, 2.8 percent, and 4.8 percent, respectively. (These calculations are based on historical production information available from the U. S. Energy Information Administration website.)

A rule of thumb is that 70 divided by the annual growth rate gives us the time to the doubling of consumption. Using the 2000 to 2006 numbers that would mean 41 years for oil, 25 years for natural gas, and 14.5 years for coal. This implies huge increases in consumption. Clearly, such growth rates would drastically reduce the number of years of future supply for any one of these fossil fuel resources.

But, there is a second problem. Fossil fuels are finite and that means that their rate of production will peak long before we run out of them. This decline in the rate of production after the peak poses serious problems for world society whose systems are based on ever-increasing rates of energy consumption. Projections for peak production for oil range from today to 2037. For gas they include projections that range from a few years from now to about 2040. For coal one estimate puts the world peak in production around 2025 though others put it decades later.

These two problems render essentially meaningless any estimates given in years at current rates of consumption.

Clean coal/Carbon capture and sequestration -- Energy optimists base their optimism partly on the idea that coal remains abundant and will be for perhaps a century or two. (See "At current rates of consumption" above and "The Coal Question Revisited" for a corrective to this view.) But they must somehow convince policymakers and the public that coal can be burned at increasing rates without serious pollution and climate effects. It is true that there has been considerable progress in removing harmful impurities from coal, especially sulfur and mercury. But the successful sequestration of carbon dioxide, the main greenhouse gas, in the gargantuan quantities required (i.e., billions of tons per year) remains science fiction. It is true that pilot projects have demonstrated that it can be done. But no one has demonstrated where and how such huge quantities could ever be sequestered safely, not just for centuries, but millennia.

Beyond this, the term clean coal is often used to mean only the removal of harmful pollutants, but not the sequestration of carbon dioxide. Whenever someone uses this term, find out whether it includes the sequestration of carbon dioxide. That way the speaker won't be able to glide over the greenhouse gas problem.

Demand destruction -- This term is a staple among economists. Simply put, it means individuals, households, businesses and even governments stop using something or use less of it when it becomes too expensive. In the case of oil, the record high price last summer caused just such behavior. Two positive things resulted from this behavior: 1) People figured out how to do what they wanted to do with less oil and 2) people sought lower-priced substitutes. (See "Substitution" below.)

But it is the negative effects that economists don't like to talk about. Some people, particularly in poor countries, simply had to forgo the benefits of oil altogether or use far less of it. That wasn't just an inconvenience; it meant hardship for those living on the edge. For some poor areas which rely on diesel-generated power, it meant little or no electricity. Loss of services like that can be life-threatening, especially if there is a medical emergency or if basic sanitation such as sewage treatment or water purification is affected. Demand destruction is no benign process. It can destroy a lot of people.

Then, there's the problem with substitution. There are no ready substitutes for oil on any scale beyond tiny and at any cost except expensive. That means many will have to do without the services of oil if it returns to its old highs. (This is a not-so-unlikely event given the depletion rates of existing oil fields and the recent drastic reduction in exploration and development expenditures in the oil industry.)

Resource -- "Resource" is a widely abused word in the field of energy. Energy optimists are fond of saying that the Earth's resources of oil, natural gas, and coal are very, very large. That is true. But, properly speaking, a resource in the ground is often something only presumed to exist based on sketchy geological surveys. Even when a resource has actually been shown to exist, this does not necessarily mean it is recoverable using current technology and at current prices. Something that is proven and recoverable at current prices using current technology is called a "reserve." And then, even if something is classified as a reserve, this says nothing about the rate at which it can be produced.

Here is the crux of the matter. World economic growth depends not on the size of the resource, but on the rate of extraction. To date we have exploited the resources that are easiest to find and extract which is an entirely rational approach. That leaves the more difficult-to-extract resources. And that means that we cannot expect to extract these resources at the same rate as we have in the past. We already know that unconventional sources of oil and natural gas such as tar sands and shale gas can only be extracted at considerably lower rates than the conventional (read: easier-to-extract) resources we're used to.

An analogy might be useful. If you inherit a million dollars with the stipulation that you can only draw out \$500 a month, you may be a millionaire, but you will never live like one.

In addition, because of the increasing difficulties of reaching the remaining hydrocarbons, we are unlikely to recover the same percentage of these resources as we did of the previous easy-to-extract hydrocarbons. No resource can be recovered at 100 percent. Recovery of conventional oil in place has averaged between 35 and 40 percent. Expect recovery of unconventional resources to be lower.

Be aware that "resource" and "reserve" are often used interchangeably; but the difference between them is the difference between the Atlantic Ocean and the North Sea. One is quite a bit smaller than the other.

Substitution -- This may also be communicated using the words "substitutes," "alternatives," and "alternative energy." Substitution can take place when prices of existing energy sources rise. Higher prices encourage the development of alternatives and enhance demand for them. All of this is true enough. But there is no guarantee 1) that substitutes will emerge, 2) that they can or will grow to a large enough scale, 3) that in financial or energy terms they will be as cheap as current energy sources, or 4) that they will be deployed in time to prevent significant disruptions to world society. (This is sometimes referred to as the rate-of-conversion problem.)

Energy optimists love to talk about substitution, but they often merely assert that market forces will allow a smooth transition from one energy regime to another. And, since by definition no one can prove anything about the future, such assertions become part of what I call "faith-based economics." One must simply believe while disregarding the rather large risks involved. (See "Demand Destruction" above.)

Technically recoverable -- Rocks on the moon are "technically recoverable." We've already proven that during several moon landings. But we wouldn't mine the moon for roadway aggregates. Resources that are technically recoverable may never be economically recoverable and may never provide an energy surplus. In order for a resource to be an actual source of energy, the energy spent to find, extract, refine, transport and utilize that resource must be less than the energy produced by burning or consuming it. Otherwise, it is what is called an energy sink, i.e., it is absorbing rather than providing energy. Many resources that are technically recoverable are actually energy sinks.

Technology -- When all else fails, energy optimists often claim that technology will solve all of our energy supply problems. (This is part of the faith-based economics ideology mentioned above.) While it is true that there have been impressive advances in energy exploration and production technology in the last few decades, it does not appear to be enough. World oil discovery, for example, peaked in the 1960s when technology was considerably less advanced. And, discovery has been falling ever since. In the race of technology with depletion, technology has triumphed for a very long time and has helped to supply

enormous amounts of energy to the world. But there will come a time when depletion outpaces technology and that time may be near if it hasn't already arrived.

New technology will be an important part of any response to global energy needs. But it may not prevent the need to reduce our overall energy consumption dramatically in the decades ahead. Whether in the future we'll have all the services we've come to expect will depend as much on our ingenuity in using less energy to get the same services as it does in finding new energy sources.

Unproven/Undiscovered -- Energy optimists often try to mumble or at least gloss over these embarrassing adjectives when they must be used. While it is reasonable to assume that unexplored areas of the globe contain additional energy resources, it is not reasonable to assume that these resources will come in the quantities we require, at the prices we like and at the rates of extraction we desire. We have, after all, extracted most of the easy-to-get energy resources. Now comes the hard stuff. Would you make plans for your new dream home based on your still undiscovered wealth? And yet, this is just what public policymakers and corporate planners are doing when it comes to energy.

20. THE FALL OF TRIUMPHALISM

By Michael T. Klare

This article appeared in the December 15, 2008 edition of The Nation.

In a remarkable evocation of the strategic environment of 2025, the National Intelligence Council (NIC), a government intelligence service, portrays a world in which the United States wields considerably less power than it does today but faces far greater challenges. The assessment, contained in *Global Trends 2025: A Transformed World* (dni.gov/nic/NIC_home.html), was released November 20 and is intended to be read by President-elect Obama's transition team as well as the general public. "Although the United States is likely to remain the single most powerful actor," the council notes, "the United States' relative strength--even in the military realm--will decline and US leverage will become more constrained."

The report is devoted largely to an examination of the major trends--political, economic, military and environmental--that will shape the world of 2025. Many of these will be familiar to Nation readers: the rise of China and India as major actors in world affairs; Russia's growing significance as a power broker in Europe; the increasing role of corporations, crime networks and other nonstate actors; and the growing impact of climate change. But two key developments, by the council's own admission, stand out above all others: the decline of America's global primacy and the growing international competition for energy.

One can, in fact, read this extraordinary report on two levels: as a forceful indictment of the policies that have governed US foreign and energy policy for the past eight years and as a clear-eyed look at the devastating repercussions of those policies stretching far into the future.

If the Bush/Cheney administration ever stood for anything, it was the perpetuation of America's dominant international role for decades to come. This vision was first articulated during the Bush I administration, when Under Secretary of Defense Paul Wolfowitz composed the infamous Defense Planning Guidance (DPG) for the fiscal years 1994-99. "Our first objective," the 1992 document affirmed, "is to prevent the re-emergence of a new rival, either on the territory of the former Soviet Union or elsewhere, that poses a threat on the order of that posed formerly by the Soviet Union." Although this precept was repudiated by Bush I in 1992 after the DPG was leaked to the press and aroused a storm of international criticism, it was later embraced by his son, who declared in a key 1999 campaign speech that if elected, he would strive to preserve America's paramount position "not just across the world but across the years."

This vision of enduring primacy was sustained, of course, by a belief that US military power was more than sufficient to overcome any conceivable adversary--with or without the support of allies. And it was with this confidence, this swagger, that the Bush/Cheney team initiated the invasion of Iraq. No plans were made for the post-invasion occupation or the possibility of a persistent insurgency, because it was assumed that the "shock and awe" of American power would produce an aftermath conducive to US interests. Similarly, the reluctance of US allies to join the venture was considered irrelevant, given the

overwhelming military advantage enjoyed by American forces and the presumed availability of Iraqi oil to finance the entire operation.

Now, following years of debilitating fighting in Iraq and the systematic depletion of the Treasury, the prospect of extending American dominance "not just across the world but across the years" appears to have vanished for good. "By 2025," the NIC report suggests, "the US will find itself as one of a number of important actors on the world stage," forced to share power with other key players, including China, India and Russia. Inevitably, "the multiplicity of influential actors and distrust of vast power means less room for the US to call the shots without the support of strong partnerships"--which will be that much harder to form, given America's diminished clout and the competing interests of other players, including allies like Japan and Europe.

Another debilitating legacy of the Bush/Cheney years underscored in the NIC report is the nation's continued reliance on imported petroleum. Along with the epochal shift in political and military power from the United States to its competitors, Global Trends 2025 points to the equally momentous shift in wealth taking place from the oil-importing countries to their major suppliers in the Persian Gulf and the former Soviet Union. "In terms of size, speed, and directional flow, the global shift in relative wealth and economic power now under way--roughly from West to East--is without precedent in modern history." Much of this largesse is being deposited in so-called sovereign wealth funds, huge investment accounts controlled by governments and used (among other things) to acquire large stakes in American banks and corporations--acquisitions that could, in time, provide major leverage over US political and economic policies.

Our continued dependence on imported oil--actively fostered by the Bush/Cheney team in myriad ways--is also contributing to what the NIC report sees as a period of intense geopolitical struggle over diminishing energy supplies. "Perceptions of energy scarcity will drive countries to take actions to assure their future access to energy supplies. In the worst case, this could lead to interstate conflicts if government leaders deem assured access to energy resources to be essential to maintaining domestic stability and the survival of their regime."

Not only will the United States be weaker in 2025 because of the hubris of Bush and Cheney; it will face a world of multiplied dangers, emboldened challengers and a paucity of reliable allies.

Michael T. Klare, Nation defense correspondent, is professor of peace and world security studies at Hampshire College. His latest book is *Rising Power, Shrinking Planet: The New Geopolitics of Energy*. more...

21. GULF'S WOES BODE ILL FOR THE OIL AND GAS WE NEED

Carl Mortished: World briefing
From The Times
November 26, 2008

Alistair Darling's Pre-Budget Report on Monday contained at least one item that raised not a flicker of attention at Westminster but which will have been keenly noticed far away in the Gulf: he has decided that Islamic bonds will not form part of the Government's borrowing programme in the near future.

The scrapping of Britain's first sukuk (a loan instrument that complies with Islamic strictures on the immorality of interest) will be seen as a slap in the face, a cold shoulder at a time when Islamic financial institutions are being buffeted by a catastrophe of real estate, the seeds of which were planted in America and Europe.

Dubai is not bust, but government debt of \$80 billion (£52 billion) casts as big a shadow over the economy as Burj Dubai, the nearly kilometre-high skyscraper under construction in the city-state. As with the tower, no one quite knows how high the debt will go and, in a carefully staged announcement on Monday, nervous property investors were told that the Government of the United Arab Emirates would stand behind Dubai's obligations. Meanwhile, a deal was done to bail out two struggling mortgage banks

that dominate the city-state's overheated property market. Amlak Finance and Tamweel, an Islamic lender, were folded into a shadowy government institution out of which emerged a new entity, Emirates Development Bank.

These tiny statelets were supposed to be rich, floating on a magic carpet of hydrocarbons. The oil is still there, but everyone is learning that the Gulf's economies are as connected to the global financial system as are financial markets elsewhere. From Moscow to Shanghai, via Dubai and Bombay, the tall towers of new money are tottering. Markets are falling in nations awash with petrodollars. Russia's Government is being forced to drain coffers filled with oil earnings to prop up the shaky finances of favoured oligarchs. In an attempt to prop up its sagging stock market, the Saudi Arabian monetary agency reduced its interest rate from 4 per cent to 3 per cent on Sunday, the third cut since October, and sober Abu Dhabi has come to the rescue of skittish Dubai, like an elder brother forced to settle the credit card debts of a reckless sister.

Dubai's problem echoes the one that afflicted Northern Rock: a sudden withdrawal of liquidity from the banking market, compounded by novelty and the bizarre world of the Gulf's new property markets. Vacancy rates are low and there is still rental demand, but the problem is that the investment market has evaporated, according to Colliers International, the real estate consultant. Investors who bought from developers hoping to make a quick turn by selling on the property are now stuck with a flat they do not want. "The music has stopped, finance isn't available and the developer is asking for his money," Ian Albert, of Colliers, said.

No one is lending. Lloyds TSB has cut the maximum loan-to-value ratio on mortgage terms to 50 per cent, effectively getting out of the market. Emirates NBD caused an uproar in Dubai recently when an internal e-mail revealed that the bank had barred lending to expatriate staff of foreign property companies, apparently fearing job cuts. The expatriate community is causing an unusual insolvency problem for Dubai. Local courts have never had to deal with a rash of embarrassing foreclosures, potentially harming the state's image of fun, frolics and finance. Even more problematic, the banks are unsure how to deal with bad debts owed by footloose expatriates. One Dubai banker said: "If I default on my mortgage and I decide to go back to Pakistan, what is HSBC going to do about it?"

There was something distinctly sub-prime about the Las Vegas-style launch of Dubai's Atlantis hotel last week, an explosion of fireworks even as the Emirates Government was rescuing the biggest mortgage lenders. Yet it would be wrong for Britons to feel smug about the financial quicksand in the Gulf. British money and expertise have been pumped into these emerging markets, which employ many Britons, but the main reason to worry is because of the oil and gas that ultimately underpins their wealth. We need that oil and gas and we need more of it and a financial meltdown does not help.

Opec's daily revenues from selling crude have fallen 53 per cent over three months. The benchmark Brent crude price is now two thirds below its July peak, but the Opec basket price is even lower, close to \$40 a barrel, one third below what analysts at the Centre for Global Energy Studies believe is the comfort zone for Saudi Arabia. It is hardly surprising, therefore, that Dubai is looking a bit sickly. The state is a very minor oil producer, but it is dependent on its role as a financial and trading hub for the Gulf.

With \$200 billion of reserves, the Saudis can survive low oil prices for some time without cutting investment. Other states have little room for manoeuvre; Kuwait's Finance Minister recently gave warning that government spending might be cut. In Russia, the downturn has already started, with oil exports shrinking because of lack of investment. Lukoil, one of the biggest exporters, said recently that it would halve its investment if oil fell to \$45 a barrel. The Urals crude price is almost there.

The financial crash has dragged the oil price down with it, but it will not stay there long. Without a continuing injection of cash at ever-increasing pressure, these wells will run dry. There is no question that Saudi Arabia will soon take more drastic steps to reduce its daily exports to shore up the oil price, but the more alarming prospect is next year, when the financial drought begins to shrink the reservoirs of crude.

The mandarins in the Treasury may have bigger priorities at the moment than puzzling over Islamic bond issues, but in the longer term the financial health of the Gulf is critical to our future. The only good news for the Chancellor is the collapse in the oil price, but he should know that such good news is really very bad news, indeed.

22. PLANS FOR THE WORLD'S BIGGEST WIND FARM

By Erica Gies
Herald Tribune
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It is not the usual green suspect. But it hopes to build a 5-gigawatt, deep-water wind farm - the largest in the world, equal to the output from five nuclear plants.

"It" is the Ocean Energy Institute, a tiny research organization founded by Matthew Simmons. An energy investment banker who specializes in oil and gas, Simmons was an energy adviser to President George W. Bush. His main partner, George Hart, is a physicist who consults for the Pentagon on the Strategic Defense Initiative, where he uses supercomputers for the mathematical modeling of complex systems. He also co-invented a laser used for eye surgery and semiconductor manufacturing.

Simmons does not believe in climate change, but he believes in peak oil. His book, "Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy," presciently published in 2005, argued that the world was at or near peak oil production, which would limit supply and drive prices skyward.

The International Energy Agency appeared to support that thesis in a report released Nov. 12, saying that, even if demand remained flat, by 2030, the world would need to find new oil production equivalent to four Saudi Arabias, merely to offset oil field decline.

Simmons predicts resource wars if the world fails to change course; and he is particularly concerned with the future of Maine, where he has a home.

"Understand how dire it is in the state of Maine," said Habib Dagher, an engineering professor at the University of Maine who specializes in composite materials and is working to develop advanced turbines. About 80 percent of Maine residents use oil to heat their homes, and the price of heating oil tracks that of crude. The average family uses about 1,000 gallons, or 3,785 liters a year, so if prices are \$4 a gallon, or \$1.06 a liter, that's about one-tenth of the average family's annual income.

Simmons, referring to the proposed wind farm, said, "If we don't do this, we're going to have to evacuate most of Maine."

The institute's founding mission was to study different forms of ocean energy. But Hart quickly realized that the Gulf of Maine has one of the best wind resources on the planet. The U.S. Department of Energy has rated it up to a Class 6 on a scale of 7.

Gale-force winds there in winter carry as much as eight times more energy than summer breezes. That means more power could be available precisely at periods of greatest demand. "The resource matches the problem the state of Maine faces," Dagher said.

The target generating capacity of 5 gigawatts equals the power required to replace the use of home heating oil in winter, said Simmons. But more could be generated if necessary. The Gulf of Maine has an estimated total wind power potential of 100 gigawatts.

The farm would likely be split into five sections, each about eight nautical miles, or 9.2 miles, or 14.8 kilometers, square, containing 200 turbines generating 5 megawatts each.

Because the winds are strongest several miles offshore, the turbines would be mostly out of sight of land, built on floating platforms anchored some 12 to 20 miles off the coast in waters 100 to 200 meters, or 330 feet to 660 feet, deep.

That should pose no problem. "The oil industry has been using floating platforms for 20 to 30 years," Dagher said. Two main designs exist - the tension-leg platform and the spar buoy. The platform has

horizontal "legs" attached to a buoyant central structure and secured by tensioned cables to gravity anchors - essentially heavy weights - on the ocean floor. "The tension, fighting against the buoyancy of the platform on top, keeps it stable even in storms or heavy waves," Hart said.

A spar buoy "looks like a large pencil floating in the water, point down toward the ocean floor," Hart said. Up to 300 feet long, and mostly submerged, the underwater section acts like a ship's keel to stabilize the structure, which is anchored with mooring lines only "because you don't want it waltzing around the ocean," he said.

Dylan Voorhees, energy director for the Natural Resources Council of Maine, an environmental organization, said: "From our point of view, to take some of those technologies and transform them into renewable power technologies would give us a certain satisfaction. I don't know if I'd call it irony, but justice."

Blue H, a British company based in the Netherlands, and StatoilHydro, of Norway, are experimenting with floating platforms for wind turbines. In 2007 Blue H put a tension-leg prototype in the waters off Italy. StatoilHydro plans to test a spar buoy device off Norway next year.

While environmental impacts have yet to be studied because a precise site has not been chosen, neither fixed nor floating platforms are expected to have a significant effect. Peter Jumars, director of the school of marine sciences at the University of Maine, said, "My biggest concerns would be with seabirds and marine mammals." Seabirds could fly into the turbines, and fish or marine mammals could be disturbed by their noise - they would be louder than land-based machines.

Site location would have to take into account flight patterns, migration routes for mammals like whales, and competing human uses like shipping and fishing.

Still, such a development has potential upsides for the environment, beyond reducing pollution from dirtier energy sources. Studies have shown that oil platforms attract fish and plants, creating a kind of de facto marine sanctuary. Wind platforms could do the same. "I would imagine these would provide wonderful protected areas for fish where you can't trawl," Jumars said.

Dagher pointed out that floating structures could be decommissioned relatively easily at the end of their service life, in a projected 20 to 30 years.

Floating platform technology is well established, and installing turbines on them should present few technical challenges. The main hurdle is cost.

To combat that issue, Dagher and fellow researchers at the University of Maine are developing new composite materials that are lighter and stronger than steel. Expensive as some of these are, they can cut project costs over all.

Composite materials minimize corrosion caused by the ocean environment, extending the turbine's life and reducing the cost of maintenance, Dagher said. And because the turbines weigh less than steel, construction crews can use smaller and less expensive cranes and ships to deploy them.

The strength and rigidity of these materials make it possible to build blades up to 100 meters long, Hart said. Since these would be difficult to transport over land, they would likely be built near the waterfront in Maine.

Manufacturing is just one type of job that supporters hope the project will bring to the state. "I see this as a huge economic development opportunity for Maine," said Angus King, a former governor of the state, who has worked in renewable energy for much of the past 30 years. "This thing could create 20,000 to 30,000 jobs."

Fishermen, who have seen their livelihoods devastated in recent years by falling catches and prices, could find secure jobs while still working on the water.

"You won't be able to outsource the maintenance," Jumars said. "It's one of the few new opportunities on the working waterfront that I can foresee."

In Europe, where there is much greater deployment of wind and solar, Hart said, "they've already created 350,000 jobs in renewable energy."

Hart estimates that it will take five to seven years of testing before a commercial farm can be built. Researchers must first study the ability of the platforms and turbines to survive ocean storms. They must have aircraft industry-level reliability and the ability to self-diagnose problems. "Out at sea, you can't afford to be running out there every other month to perform repairs on these things," he said. Last, the turbines must deliver the promised amount of power.

"Those three qualities - survivability, reliability, and performance - are what investment bankers need to see before they're going to put up the large amount of capital needed to build any of these things," Hart said.

Simmons says that he does not plan to invest himself. He wants the institute to develop a viable business plan for major corporations and foundations to foot the bill. "I want to turn the Ocean Energy Institute into a serious equivalent of a Howard Hughes Medical Institute," Simmons said, referring to the medical research philanthropy set up by Hughes, the billionaire aviation pioneer, in 1953.

Or the wind farm could be like the Tennessee Valley Authority, the U.S. government-owned corporation created in the 1930s to generate electricity and promote regional economic development.

The institute hopes to see full deployment within 10 years. That delay leads Voorhees of the natural resources council to say that, while the project seems promising, Maine should not wait to deploy other clean energy technologies that are ready to go.

"Nobody really knows if a large-scale, deep-water wind project is feasible and economic in the Gulf of Maine right now," Voorhees said. "It needs to be tested."

Still, King praises the project's scalability. "One of the neat things about this energy option is, it's not all or nothing," he said. "With this option, we can build one or two or 10 turbines at a time, see how it works, see how the market develops, and build it out over time as the demand grows."

While most of the team disagrees with Simmons on climate change, they agree that peak oil may affect the way people live sooner, in 10 years against perhaps 50 years for climate change.

"Different people can come to the same conclusion by different paths," King said. "The important thing is that we agree on the solution."

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