Rise to the challenge, Al-Naimi tells WPC

By NJ Watson

Saudi Arabian oil minister Ali Al-Naimi has echoed calls made earlier in the week for the US and other countries to give explorers access to acreage that is presently off-limits, as the industry strives to meet the world's growing demand for energy.

Delivering the 19th WPC's Dewhurst lecture, Al-Naimi stuck to the familiar theme that there are significant volumes of oil yet to be discovered, but that politics keeps getting in the way.

"The limits to future petroleum supplies have more to do with politics than geology and resource availability," he said. "For example, the most promising acreage remaining in the US is offshore, most of which is off-limits to the industry."

Separately, he urged governments to create conditions that would encourage investment in technologies that could "empower us to transform our energy system". Said Al-Naimi: "Government policies can be a major source of uncertainty, slowing or even derailing work on promising new technologies."

On Wednesday, Linda Cook, Shell's executive director for gas and power, also called on the US to open up areas for exploration that are closed to upstream activity - including the Atlantic and Pacific coasts, the eastern portion of the Gulf of Mexico, and the Arctic National Wildlife Refuge.

Al-Naimi also told delegates that it is not enough just "to get the carbon out" and that oil and gas development must be done safely and in a socially and environmentally responsible way.

But he said that the oil industry has the capability to rise to this challenge and singled out carbon capture and storage as an important technology for a sustainable energy future - a message delivered by other speakers this week, including Shell's chief executive, Jeroen van der Veer.

Al-Naimi also stressed that while alternative energy sources have a place in the world's energy mix, oil remains unrivalled in its ability to provide safe, efficient and cost-effective energy for the world. "It is highly risky at this early stage to assume that unproved technologies could quickly replace petroleum on a large scale," he said.

Producers and consumers poles apart, but consensus is vital

By Tom Nicholls and Derek Brower

There is nothing like $145 a barrel oil to get the blood pumping. Debate at the 19th World Petroleum Congress has covered a variety of themes, including the environment and social responsibility. But it has focused in particular on the causes and effects of high oil prices.

The differences of opinion between consumers and producers are stark. For all the friendliness at Wednesday's luncheon - attended by IEA executive director Nobuo Tanaka and Opec secretary-general Abdulla El-Badri - relations between Opec and the IEA are strained.

The IEA says we're in the third oil shock; Opec says "absolutely not". The IEA says supply isn't keeping up with demand; Opec sees spare capacity now and in the future and blames speculators, refinery bottlenecks, the dollar and geopolitics for the rising cost of crude. The IEA worries about security of supply; Opec about security of demand.

Tanaka says those insecurities are "two sides of the same coin". And both sides at least agree that the data they supply one another needs to be more transparent and reliable. They also agree that sustained high oil prices will end up hurting everyone.

Opec admitted this week that it is getting "annoyed" with the situation. Chakib Khelil, the group's president, and Abdulla El-Badri, its secretary-general, both built a robust defence of Opec's production policy, pointing out that its output is still higher - according to the IEA's own figures - than the call for its crude.

And they also said the rest of the world could do something to bring oil prices down, too. US policy in the Middle East took some flak, and so did the Federal Reserve's monetary policy. Fix the dollar, said Khelil, and you can help fix the oil price. Build some more refineries to handle heavier crude and prices will fall.

"The limits to future petroleum supplies have more to do with politics than geology and resource availability" – Ali Al-Naimi
Producers and consumers poles apart, but consensus is vital (continued from page 1)

Western countries such as the US also need to open up more of their own upstream, said Khelil and Saudi Arabia’s oil minister Ali Al-Naimi (see page 1) – a point that is also frequently made by the oil majors.

There was broad agreement at the Congress that the problem is not a lack of geological resource. There are around 0.5 trillion barrels of conventionally recoverable oil yet to be found in undiscovered fields and “probably” over 100bn barrels in the Arctic, according to Donald Gautier, a geologist at the US Geological Survey. His view is that “the question of whether the third trillion exists is not really much of an ‘if’.”

But getting at it is another question: much of the world’s most prospective acreage is off-limits to exploration by private-sector companies.

Resource nationalism is another flashpoint. Khelil rounded on Western governments that have criticised Opec for not producing enough oil. “We’re only 5% of the world. What are you focusing on Nopec [suppliers]? They meet 60% of demand.”

But the Western oil majors would frame the same argument in different terms: most of the big gains in reserves and production are to be had within Opec countries. With the odd exception, such as Russia, the upside is limited in the non-Opec world. Give us access and we will invest too, they would say – even if it means operating under terms that are less attractive than those offered to nations that have been willing to offer the same level of access.

Upstream protectionism may be the biggest barrier, but there are others. Are there enough people to do the work? Probably not. The IEA, Opec and oil companies and services firms generally agree that the industry’s ability to grow is at risk because of a shortage of skilled workers. For example, Alberta’s oil sands need “probably” over 100bn barrels a day (b/d) by 2020. However, high oil prices should at least boost investment upstream. Indeed, Saudi Aramco has said it will spend $20m acquiring geoscience reports of shale gas and coal-bed methane by offering new terms to potential investors.

High prices are also needed to justify the large investments the industry must make in new capacity. Speculators may build on other forces in the market, but the fundamental fact is that the marginal price of oil – around $70 to $80 a barrel, according to Khelil – is now itself higher than the price of crude was in 2006.

But can the large investments that are needed upstream be made in a way that is environmentally sustainable – another potential barrier to development? That might be the biggest issue of all – for the industry and the wider world. China, India and other developing countries could tip the balance of the world’s air quality and global warming.

But they could also help preserve the environment. Japan, pointed out Tanaka, is the world’s most efficient energy consumer – and should be a model for how its neighbours in Asia develop.

That isn’t an academic argument, but one that cuts to the heart of the difficulties facing the energy industry. The world needs more energy, the industry needs to invest more money delivering it, and it all has to be sustainable: clean, efficient and around for the long term.

As Tanaka told the congress: “If the green model does not prevail, we will fail.”

The quality of speeches has been very high and they have generated a great deal of useful, topical discussions, such as the outlook for oil production and factors influencing prices” – Jorge Seregles, chairman of the Spanish Organising Committee.

ECOTELP EYES ACQUISITIONS IN PURSUIT OF 1M BOE/D TARGET

By Tom Nicholls

COLOMBA’S Ecotel is planning acquisitions to help it reach its 2015 production target of 1m barrels of oil equivalent a day (boe/d), according to Javier Gutierrez, the firm’s chief executive.

The Spanish company’s investment in exploration and production between now and 2015 will amount to $38bn – in Colombia and overseas. That, Gutierrez told WPC News, should lift recovery factors at the firm’s existing fields in Colombia to “at least” 30% from the present average of 23%, as a result, he said, fields that were once writing off their oil reserves should be pumping 410,000-420,000 boe/d in 2015. New discoveries will add 450,000-460,000 boe/d, with a further 130,000-140,000 boe/d coming through acquisitions, bringing total output to around 1.5m boe/d.

Total capital investment to 2015, including downstream, should be pumped to $60bn. Gutierrez is “confident” the firm has the financial capacity to fund that investment programme, which will flow and by raising the company’s gearing from zero at present to up to 10-15%.

More funding could be generated by placing another chunk of Ecotel’s shares, although there are no immediate plans to do this, said Gutierrez. The company floated 10.1% of its equity in 2007 on the Colombian Stock Exchange, raising $43m. It is entitled to list up to 20% of its shares.

Ecotel is producing 440,000 boe/d, including 350,000 b/d of oil. Colombia is producing 0.56m b/d of oil and 0.695m b/d of oil and gas.

NOVA SCOTIA REVAMPS TERMS TO ATTRACT FIRMS

By Derek Brower

THE CANADIAN province of Nova Scotia is hoping to boost offshore exploration of its deep-water and onshore production of shale gas and coal-bed methane by offering new terms to potential investors – and offer the findings to interested companies for free. A streamlined licensing process, cheap entry terms and a generous royalty regime are also on offer.

Deputy energy minister Allan Scott said the efforts had begun to work, with two offshore parcels nominated by industry recently put out to tender.

The Sable offshore gas project is the province’s largest energy development, producing 0.5bn cubic feet a day (cf/d) for local industry and markets – and generating $30-50m a year for the province. An EnCana-led offshore project, Deep Panuke, is due on stream in 2010, producing 0.5cf/d.

Nova Scotia estimates its resource potential to be at least 40 trillion cf of gas and 2bn barrels of oil. An independent study put the shale-gas potential to be 69 trillion cf.
Aconcagua, 22,841 feet. So you’ll have an idea how deep we go in the pursuit of energy.

What’s driving the US?

Americans’ taste in motor vehicles are changing as a result of high oil prices and climate change

By Anne Feltus

A

MERICANS love their cars. According to the UN, the US has more passengers cars per capita than any other country. In fact, the country has more cars than drivers who are licensed to operate them. Americans love their trucks, too. Since the start of the decade, sales of pick-up trucks have consistently outpaced those of passenger cars and, for more than 25 years, the Ford F-series full-size pick-up trucks have ranked as the top-selling vehicles in the nation by a significant margin.

But with gasoline prices close to their highest levels ever, the love affair is starting to turn sour. The number of cars and light trucks sold in the US fell from 16.5m in 2006 to about 15.9m in 2007. Sales of full-sized pick-up trucks dropped by 16.5% in the first quarter of 2008 compared with the first three months of 2007, while sales of full-size sports utility vehicles (SUVs) fell by 26%. But sales of sub-compact cars rose by almost a third during the first quarter, as Americans traded in gas-guzzlers for smaller, more fuel-efficient models.

Keen on green

To survive, US automakers increasingly are looking to develop vehicles that can operate, at least partially, on unconventional fuels. But high fuel prices are not the only incentive for these manufacturers to go green. The Energy Independence and Security Act, signed into law late last year, requires automakers to increase the average mileage of the cars and light trucks they produce to 35 miles per gallon (mpg) by 2020.

By comparison, the average fuel economy for both cars and light trucks in the US market peaked at 26.2 mpg in 1987, but has dropped since then, with the increasing weight of newer vehicles and the growing demand for SUVs and trucks. Federal fuel-economy standards today are 27.5 mpg for cars and 24 mpg for light trucks.

To generate more consumer interest in green vehicles, Congress already offers tax incentives to motorists who purchase alternative-fuel vehicles, such as hybrids – bi-fuelled vehicles that can switch at different speeds between a gasoline-burning internal-combustion engine and an electric motor powered by a rechargeable battery – and those that run on compressed natural gas (CNG). Purchasers of certain new electric vehicles were also entitled to a one-off federal tax credit until the end of 2006.

Another reason has more patriotic roots. By using more vehicles powered by unconventional fuels, US consumers can reduce the country’s dependence on imported oil. And then there is the growing threat of global warming: increasingly, US consumers are looking to environmentally friendly vehicles to provide a solution.

Although hybrid models represent only about 3% of US car sales, a recent survey by Cars.com showed 39% of automobile shoppers who purchased or would consider buying a hybrid as their next vehicle.

US automakers are responding to that interest by adding hybrids to their line-up. GM, the country’s largest car manufacturer, introduced the first full-size hybrid pick-up trucks – the first hybrids produced by a US manufacturer – in 2004, then the world’s first full-sized hybrid SUVs in 2007. It intends to offer eight hybrid models by the end of this year.

Ford, the second-largest US automaker, introduced the first compact hybrid SUV to the market in 2004 and rolled out its fourth and fifth hybrids this year. And Chrysler, the smallest of Detroit’s big three automakers, is also jumping on the hybrid bandwagon: gasoline-electric versions of the Chrysler Aspen and Dodge Durango full-size SUVs are scheduled to arrive this year.

In the late 1890s all-electric cars outsold their gasoline-powered counterparts by 10-to-one

But not all of the hybrids being marketed in the US are coming from domestic manufacturers. Toyota reported that sales of its Prius mid-sized sedan, the first hybrid available in the US market, reached a record 21,757 units in April, an increase of 53.8% over the same period in 2007. With this growing interest in dual-fuel vehicles, the US Department of Transportation estimates that by 2015, about 25% of the trucks and 15% of the cars offered by the largest automakers will be hybrids.

According to the Electric Auto Association, in the late 1890s all-electric cars outsold their gasoline powered counterparts by a 10-to-one margin before they were overshadowed by the popularity of mass produced gasoline-powered cars. Now these zero-emissions vehicles are making a comeback.

Earlier this year, California carmaker Tesla Motors delivered its first electric roadsters to US customers. With a sticker price of more than $100,000, this stylish model is beyond the budget of the average US motorist, but the company plans to introduce a less expensive version, either all-electric or hybrid, by 2010.

In fact, 2010 could be the watershed year for electric vehicles; Toyota plans to put a plug-in version of its Prius on the market and GM and Nissan both intend to introduce electric models to US consumers.

Cars and trucks that use hydrogen fuel and oxygen from the air to produce electricity could provide an emissions-free option for the future. Although hydrogen-fuel cell vehicles are not expected to enter the marketplace en masse for several more years, a number of automakers are getting a jump start by introducing versions on a limited basis in areas where hydrogen fuelling stations are already in place.

In late 2005, Ford delivered a handful of its Focus hydrogen-gasoline hybrids to Sacramento, California, as part of a 30-car worldwide exercise to conduct real-world testing of fuel-cell technology. Honda has a similar goal with a three-year pilot that starts this summer and involves leasing several dozen of its CFX Clarity fuel-cell four-door sedans in California for $600 a month each to evaluate the vehicle’s feasibility.

The ethanol option

Until cars and trucks that can run free of fossil fuels enter mainstream US life, flexible-fuel vehicles (FFVs) can provide a more environmentally friendly alternative that could even reduce motorists’ fuel costs. Although most cars can operate on gasoline that is mixed with up to 10% ethanol, FFVs are equipped to handle not only unleaded gasoline, but also gasoline blended with up to 85% ethanol, a product known as E85.

According to the Environmental Protection Agency (EPA), the number of FFVs travelling the US’ highways has grown from a few hundred in 1993 to more than 6m. As a result of federal mandates to replace increasing volumes of gasoline with cleaner-burning ethanol must reach at least 36bn gallons by 2022 – FFVs are likely to continue to grow in popularity.
Part of the solution to global warming are buildings that give back to the environment – like trees – says architect and design visionary William McDonough.

By Alex Forbes

“I remember as a child listening to ox carts go out of Tokyo at night, taking sewage to the farms. And I remember the carts bringing the food from the fields in the morning. It was all seen as a very positive cycle: waste equals food. So when I saw sewage I didn’t see it as something bad, I saw it as a nutrient for the farmers. Then I went to the US and saw profligate consumerism. That was quite a contrast – coming to a country that was very wealthy and had materials planned for obsolescence.”

It was experiences such as these, says William McDonough, that set him on the path he finds himself on today. Born in Tokyo in 1951, he is variously described as a “design visionary”, a “green-design guru” and “the father of sustainable design”. He describes himself as an “architect and author who has thought deeply about the design implications of a sustaining world”.

In January, at the inaugural World Future Energy Summit in Abu Dhabi, he gave a presentation on one of his firm’s projects: a conceptual design for a skyscraper that can do “everything a tree can do except replicate”.

Much of what McDonough says during our interview would not sound out of place round a camp fire in the Green Fields of the Glastonbury Festival. And yet he runs a successful firm in the US that specialises in sustainable architecture. His clients include Google, Ford and Gap.

So when Fortune magazine decided to run a feature on the skyscraper of the future, it was to McDonough and his firm, William McDonough + Partners, that the editorial team turned. “Fortune magazine realised that its reading public – that work there, in terms of energy, in performance buildings – high-performance parts. They should be seen as high-performance, that use daylight intelligently, that potentially promote renew- able energy in the form of solar or some- times wind power, and that have metering systems that ensure they can be operated with knowledge about how they are performing at all times. But what about the economics of ‘green’ architecture?”

Super energy-efficient
The general approach, says McDonough, is to construct buildings that are “super energy-efficient”, that use daylight intelli- gently, that potentially promote renew- able energy in the form of solar or some- times wind power, and that have metering systems that ensure they can be operated with knowledge about how they are performing at all times. But what about the economics of ‘green’ architecture?”

Eureka!

A building like a tree, in a city like a forest
A building that receives its energy from the sun, that grows food, that builds soil, that provides a habitat for hundreds of species, that changes colours with the seasons, that creates micro-climates, that would purify water. A building that would do just about everything a tree would do except self-replicate. A building like a tree standing in a city like a forest. We’ve already done a building – at Oberlin College in Ohio – that generates more energy than it needs to operate and that purifies its own water.”

“A milestone on McDonough’s path was a best-selling book on sustainable design, entitled Cradle to Cradle, pub- lished in 2002. “He’s a chemist,” says McDonough, “so all of a sudden I was able to look very deeply into the mate- rials and systems of human production through his lenses, through the scien- tist’s lenses. That connected to our design lenses and that’s why we created what we call ‘design chemistry’ – where we de- sign for whole systems, in ways that are characterised down to the molecule, for ecological and human health.”

Commenting on the role of archi- tects and construction firms in helping to tackle climate change, McDonough says: “Around 40% of the climate-change emissions and waste come from construc- tion and buildings – so we have a crucial role to play. If we can cut the energy con- sumption of buildings in half, which isn’t that hard to imagine, we can have a dra- matic effect. And if we can do buildings that are energy-positive – that produce more energy than they need to operate – then we’re ahead of the game.”

So how would his tree-emulating skyscraper function? “The south, southeast and southwest sides are covered with solar collectors built into the skin of the build- ing. The windows open. It has east and west gardens that purify the rain-water and the water from the lavatories. And it has a north side that is covered with mosses.”

Social responsibility
Friday 4 July 2008

A building that would do just about everything a tree would do except self-replicate

www.19wpc.com
Going global

Adjusting to life in an industry where international assignments come with the territory has its challenges

By Lynda Armstrong

INTERNATIONAL assignment has positive effects on both your career and on your personal development. These include faster career advancement, more marketable skills, such as strategic thinking, flexibility and negotiation ability, improved decision-making, greater confidence and authority, maturity and better people-management proficiency.

An overseas posting also provides an opportunity to broaden personal horizons – providing exposure to different working environments, and different cultures and lifestyles.

This requires flexibility, adaptability and an understanding of differences in customs: you must adapt quickly to new cultural norms and show willingness to understand the way business is done in your new country. The characteristics that got you to where you are now might not go over so well in a foreign country, so you must carefully watch your colleagues for cultural signals. If your approach is open, flexible and sensitive you should have no problems making friends, adapting to your new home and having a rewarding professional experience.

I certainly have benefited from a global career. Yet there are some tough decisions to be made along the way. The move may disrupt your family’s routine or partner’s career. It will take time to adjust to the new country or readjust to your home country after the assignment. You may lose contact with your existing network.

Nonetheless, with more companies establishing divisions and offices in far-flung countries, as globalisation takes a firmer grip on developing countries, and the internet brings the boundaries of the world closer, organisations remain heavily reliant on managers with global and cross-cultural business experience. That is certainly the case at Shell.

Shell has about 8,000 people expatriated at any one time. A significant proportion of them will spend most of their careers working away from their base country, although this is beginning to change as the focus on the development of local talent increases. The number of women working as expats has increased slowly, but is still only about 10% of the expatriate workforce. I believe this reflects the extra challenges women face in making the difficult decision to move overseas.

There is no doubt that to reach senior levels in a global company you have to work outside your home country and I have been fortunate to have worked in the UK, The Hague, Oman and South America, as well as spending short periods in most of our operating units across the world. An overseas posting provides an opportunity to broaden personal horizons

But balancing the need to progress my career with the career of my husband and stability for my daughter meant compromises had to be made. I preferred to stay in the UK when my daughter was young and I moved to the Netherlands when she went to senior school. For my first years in the Netherlands, I commuted weekly back to the UK so my husband could continue his job. I only moved out of Europe once my daughter was at university and reasonably independent.

Making the decisions of when and where to move is a very personal one that needs to be worked through with your partner and family. It can be a very hard decision to make, particularly if it is in a remote location – it can almost seem like a gamble. But there are three factors that can affect an assignment abroad, and either help or hinder its success, both from the organisation and expatriate point of view. These are:

* An appropriate expatriate or relocation package;
* Attention given by the organisation to the needs of the expatriate’s spouse, or family if applicable; and
* A career plan for further upward opportunities – or an idea of where this new role will take you in your career;

In Shell, we have a sophisticated and long-established expatriate remuneration system that includes incentives to work overseas, recognition of the living conditions in your host country and ties back to your base country.

Dedicated transfer teams handle an international move and each employee is assigned a transfer adviser who manages all activities relating to their transfer and continues to liaise with the expatriate until the expatriate is settled. Advice on education is available and Shell is often directly involved in running schools in a number of countries. Orientation tours are usually provided to give families some exposure to the local language and society before the move. Shell Outpost provides assistance to expatriates and their families on the move.

Staffed by Shell spouses and partners, the network provides inside information and professional services on most aspects of life abroad. Based on his experience of volunteering help in Oman, my husband is now running the Global Outpost network. It is a long way from his profession as an IT Consultant, but is a good illustration that flexibility is required from all the family to successfully balance personal and professional needs.

Lynda Armstrong is vice-president of Shell Energy team would also like to thank all those who attended the workshops & networking lunch, making it a success in bringing together women from across the energy business. The positive energy team would also like to extend a big thank you to Ernst & Young who have hosted & greatly supported positive energy events throughout the 19th WPC.

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Positive Energy at the 19th WPC

The crowds gather at the Ernst & Young stand to hear Crispian McCredie, managing director, Petroleum Economist, and Sandrine Dixson-Declève, director, Hart Energy, in Tuesday’s negotiating skills session.

Marcela Donadio, (Americas oil and gas leader, Ernst & Young, and Rebecca Roberts, President, Chevron Pipeline, were Tuesday’s Leading Lights.

A group-workshop discussion at the Positive Energy stand on Monday.

Calliope Webber, director, Green Gold, leads the panel discussion on Recruiting & Retaining Female Talent with Hannah Chalmers, of Imperial College London, and Karen Schonfelder, manager, Integrity Resource Centre, Nexen, in Thursday’s final session.

All were welcome at the Positive Energy Lunch, but the horse chose to wait outside…

Wendy Fenwick, oil and gas leader for Europe, Middle East, Asia and Africa, Ernst & Young, welcomes guests to the first Positive Energy Networking Lunch on behalf of hosts, Ernst & Young, on Wednesday.

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What a week!
The Spanish Organising Committee would like to extend a “Thank you” to the Sponsors of the 19th World Petroleum Congress for their support and commitment to this prestigious event.
Read all about it!

As well as the pictures that have appeared each day in WPC News, many more are available of speakers events and stands around the exhibition. For further information or to order copies of the pictures contact Eric Kampherbeek, eric@lacouleur.nl  www.lacouleur.nl
Around the exhibition

The Social Responsibility Global Village – a first for the WPC

Taking a stand: Petrobras brings innovation to booth design – it’s recyclable

Photograph © Eric Kampherbeek, www.lacouleur.nl

20th WPC, Doha, Qatar

At the closing ceremony, the Spanish Organising Committee passes on the organisation of the World Petroleum Congress to Qatar

A warm welcome awaits in Doha for the 20th WPC in Doha, Qatar, in 2011

Photograph © Eric Kampherbeek, www.lacouleur.nl

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