The ‘Asian Century’

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ASIA-PACIFIC SPECIAL REPORT 1: The ‘Asian Century’

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We are assertively deploying our advanced technology and applying our expertise to the region to help meet unprecedented demand.

“Asia is a vitally important region to our business,” Chairman Dave O’Reilly said during a visit last year. “It’s clearly going to be the ‘Asian Century’ in many respects.”

“If you look at energy demand growth from emerging economies, particularly those in Asia, a tremendous impetus is provided for companies like ours to be part of the equation,” says Bill Higgs, Chevron general manager for Strategy.

Chevron has strategically positioned itself across Asia-Pacific in many ways:

- We’re the region’s No. 1 producer and resource holder among international oil companies (IOCs). Our operations in the area account for more than one third of our international oil production.
- Our geothermal operations in Indonesia and the Philippines make Chevron the world’s largest producer of geothermal energy.

We have interest in six refineries representing one third of our global manufacturing capacity.
- Our strong Caltex retail brand in the region dates back to 1936.

“Our aspiration is to maintain our position as the leading IOC in the region,” says Jim Blackwell, president of Chevron Asia Pacific Exploration and Production. “We have to focus on safety and execution to keep that position.”

Merging with Unocal in 2005 was a strong strategic fit because of Unocal’s key areas of operations in Asia-Pacific, a region Chevron had already identified as having enormous potential for economic growth.

“The merger was a milestone for us in Asia. We saw the potential demand growth and what Asia meant for the global energy picture -- and we got ahead of the competition,” says Higgs.
"With a significant position in Asia-Pacific, our focus is on moving our discovered resources to production and delivering the energy needed for economic growth in the region," says George Kirkland, executive vice president, Global Upstream and Gas.

"We have a lot of resource potential there," adds Kevin Chambers, general manager Asia Pacific Strategy and Planning. "World-class LNG projects in Australia, world-class conventional natural gas developments in Thailand, Bangladesh and China, and in Indonesia we have a potential deepwater LNG project. We’re also managing the decline and extending the life of the very mature but huge multi-billion barrel oil assets on Sumatra, including Minas and Duri."

"Our business model for the region is straightforward," Higgs explains. "It’s about delivering quality products to an energy-hungry marketplace."

"We expect significant growth in demand over the next 20 years in Asia-Pacific," adds general manager of Downstream Strategy and Planning, Shahid Ahmed.

**Significant Downstream Presence**
That’s why Chevron maintains a significant Downstream presence in Asia-Pacific. Our six refinery partnerships include a 50 percent share of the 680,000-barrel-per-day Yeosu refinery in South Korea, recently upgraded to increase its ability to process heavier crude oils.

During the overhaul, the world’s largest vacuum distillation unit was installed as was a hydrocracker and a lubricant base oil facility. "This will enable us to deliver more motor gasoline, diesel, LPG and lubricant products to the marketplace," Ahmed adds.

In Australia, Chevron has a 50-50 partnership in Caltex Australia Ltd., the country’s top refiner with two separate facilities. We also have a 50 percent interest in Singapore Refining Co. Pte. Ltd.

We have smaller interests in manufacturing plants in New Zealand, Pakistan, Thailand and India where we have a 5 percent stake in Reliance Petroleum Ltd. whose refinery at Jamnagar will be one of the world’s largest when it begins operations later this year. Fuels and lubricants are marketed throughout the region under our long-established Caltex brand.

"Our success to date has a lot to do with us being respected as a good partner for the national energy companies in the region,” says Higgs. “They’re going to continue to be energy seekers, so how can we partner with them globally to fulfill their energy needs? This is the big challenge and opportunity for us going forward.”

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**Manufacturing – Addressing the Fundamentals in a Changing Market**
Chevron does not own or operate a single large refinery on its own in Asia-Pacific primarily due to regulations in the host countries. But by operating our assets in the region as a connected system, we can create a more flexible manufacturing network and leverage our Asia manufacturing presence for further growth.

"The question is what does that really look like?” says general manager of Downstream Strategy and Planning Shahid Ahmed. "What do we produce, and where does it go? Those are some of the fundamental questions we are in the process of answering.

"For instance, we are exploring whether it might be more profitable in the future to produce more petrochemicals or base oils in our Asia-Pacific refineries, rather than concentrating on producing fuels almost exclusively. Refining investments are very long term and so we have to get the right configuration upfront," Ahmed says. "We can then build on it over time and make sure that we have the right infrastructure and are in the right markets."

Malaysia, the Philippines, Singapore and Thailand are all examples of large existing markets on which we have focused, Ahmed explains, but emerging markets that are just now opening to downstream competition - such as densely populated Indonesia – may be where we find our future success.

"We’re definitely going to grow in Asia,” Ahmed says. “We are figuring out how to take what we have now and build it into something that can really respond to the energy needs of these markets over time.”
Natural gas, in particular super-cooled liquefied natural gas, provides the key to future growth in the region.

Chevron is a natural gas powerhouse in Asia-Pacific. Over the next decade, natural gas is expected to grow from 32 percent to 40 percent of our company’s total energy production. And much of that gas is located in the Asia-Pacific region.

"Nearly half, or about 67 trillion cubic feet, of Chevron’s natural gas resources are located in Asia-Pacific," says Jim Blackwell, president of Chevron Asia Pacific Exploration and Production.

Our presence in the region is significant. We operate nearly 200 platforms in the Gulf of Thailand producing natural gas that generates one third of the kingdom’s electricity. We are the largest international natural gas supplier in Bangladesh, and we’re leveraging our expertise into other gas opportunities in Cambodia, China, Indonesia and Vietnam.

But most of our gas assets in the region are being developed to provide vital exports to countries in need of these natural resources. The key to transporting this gas is turning it into liquid -- liquefied natural gas (LNG).

"In the coming years, we are going to move to the top tier among the competition in terms of gas production, with our LNG business growing dramatically," says George Kirkland, executive vice president, Global Upstream and Gas.

"By 2020, we expect 85 percent of the company’s LNG production to be sourced from Asia-Pacific, dominated by our Australian holdings," adds Blackwell. "Our LNG projects are 'legacy assets' that will provide long-lived production, reserves and earnings for the company."

To make LNG, natural gas is extracted from reservoirs and transported to processing plants where it is cooled to minus 160 degrees Celsius (-256° F). This process converts the gas into a liquid that can be shipped to customers around the world. When it reaches its destination, LNG is returned to its original gaseous form and sent to customers via pipelines.

Our LNG experience began more than 20 years ago when we entered into a joint venture in the sprawling North West Shelf off the coast of Western Australia with a one-sixth interest. That project now consists of five massive trains that process LNG destined for consumers in China, Japan and South Korea.

While the joint venture is currently one of the world’s largest LNG projects, other Chevron discoveries off the Australian coast could potentially dwarf the North West Shelf.

The massive Greater Gorgon gas fields, discovered in 1981, are estimated to contain about 40 trillion cubic feet of gas. Chevron is a 50 percent partner and operator of the Gorgon LNG and domestic gas project.

"We believe the Greater Gorgon Area can yield energy for at least the next 40 years, if not longer,” says Roy Krzywosinski, managing director, Australasia business unit. "Gorgon is an iconic project for Australia, a legacy project for Chevron, and is the..."
largest resource project ever undertaken in Australia.” It is expected to initially produce 15 million-metric-tons-per-year of LNG from three trains with a domestic gas phase of up to 300 terra joules per day.

Other promising offshore projects include the development of our wholly owned Wheatstone natural gas discovery that was made in 2004. This development could become a major natural gas export hub on Australia’s Pilbara coast, with initial production of 10 million metric tons of LNG annually, and a domestic gas plant.

“Our strategy for the past five years has been to build an impact global gas business for Chevron,” says John Gass, Global Gas president. “Gorgon and Wheatstone are the cornerstones of that strategy. They are truly ground zero for our long-term LNG business.”

The use of natural gas to meet increasing energy demand also can serve to lessen the global emission of greenhouse gases. The Gorgon Project will result in 45 million metric tons per annum less greenhouse gases compared to the use of more carbon intensive fossil fuels to supply energy to Asian markets.

Although LNG projects are extremely expensive up-front, the resulting long-term supply contracts are massive, steady cash-generators for our company.

Natural gas, in its liquified state, is shipped in purpose-built LNG carriers, like these two passing each other near the North West Shelf Venture liquefaction plant in Australia. The vessel in the background is a newer type with “membrane” tanks, but all LNG ships are double-hulled and heavily insulated, with an extensive cargo safety system.

“It is a huge value driver,” says Steve Del Regno, Global Gas Asia regional manager. “These are each 10, 15, 20 billion-dollar deals delivering to customers for several decades.”

Also, as LNG production increases and transportation technologies improve, the market is becoming more tradeable – or fungible. Cargos can be shipped within Asia-Pacific and also diverted to customers in Europe, North America and elsewhere.

A characteristic of the natural gas business, and this region in particular, is balancing the supply of natural gas at subsidized prices for the host country’s utilities while also realizing global market prices for exported gas in the form of LNG.

Gorgon is a case in point. Del Regno explains: “The Australian domestic market is not large enough to absorb all the gas that will be produced, and that’s why the LNG is important. Because you can then put it on a ship and move it to another high-value market.”

– End –
‘Natural Wonders’ – Time to Vote

Choose from the stunning 35 final images in this year’s Line Rider Photo Contest.

Our photo contest, on the theme of “Natural Wonders,” proved to be our most popular yet. The judges selected 35 finalists from more than 1,400 entries – now it’s your turn to pick the winners.

And what a challenge it was! Your pictures opened a window to a vast range of landscapes, seas, skies, flowers, insects and animals. You captured glimpses of glaciers and volcanoes, canyons and waterfalls in the far reaches of the planet.

The judges, a team from corporate Policy, Government and Public Affairs including a professional photographer, were taken on an amazing global journey and dazzled by the beauty of the photographs.

How to Vote

Open the finalists’ gallery and a pop-up page will appear showing the 35 finalists. Check the box below each of the five photos you would like to choose, then click “vote” when you’re sure about your final selection. Voting ends December 1, 2008. Please evaluate the photos for technical quality and artistic merit as well as subject matter. The five entrants who get the most votes will each receive Powershot G9 digital camera (or equivalent, subject to availability). Winners will be announced in the December issue of Line Rider. A limited selection of pictures will be used to create a new photo gallery for the popular Inside Chevron homepage feature, “Favorite Photo.”

Use the gallery to select your favorites.