



**Riding Asia's growth wave:
Shell opens its biggest
fully-integrated
petrochemicals-refinery hub
in Singapore**

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Singapore
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Peter Voser: Riding Asia's growth wave: Shell opens its SEPC complex



Peter Voser was born on August 29, 1958. A Swiss national, he was appointed Chief Executive Officer of Royal Dutch Shell with effect from July 2009.

Prior to his appointment as CEO, he was Chief Financial Officer since October 2004 and up to July 2005 was Chief Financial Officer of the Royal Dutch/Shell Group of Companies. In 2002 he joined the Asea Brown Boveri (ABB) Group of Companies, based in Switzerland as Chief Financial Officer and Member of the ABB Group Executive Committee.

He first joined Shell in 1982 and held a variety of finance and business roles in Switzerland, the UK, Argentina and Chile, including Chief Financial Officer of Oil Products. He was a member of the Supervisory Board of Aegon N.V. from 2004 until April, 2006. He is a member of the Supervisory Board of UBS AG (until April 2010) and a member of the Swiss Federal Auditor Oversight Authority

The successful completion of the Shell Eastern Petrochemicals Complex (SEPC) project in Singapore creates Shell's largest fully-integrated refinery and petrochemicals hub. This will enable Shell to continue to lead in providing petrochemicals to Asia. The project reflects Shell's plans to continue to grow its presence in Asia, building on strong relationships with its partners to ride the wave of economic growth in the region and help meet its mounting energy needs.

Prime Minister Lee Hsien Loong; Trade and Industry Minister Lim Hng Kiang; Colleagues, Ladies and Gentlemen:

The Shell Eastern Petrochemicals Complex (SEPC) is the largest petrochemicals investment ever undertaken by Shell. Today, with the successful completion of the project – on time and with an outstanding safety record – it gives rise to Shell's largest fully-integrated refinery and petrochemicals hub in the world. This will enable us to maintain a leading role in supplying petrochemicals to the expanding Asian market.

So, the SEPC is a crucial chapter in the unfolding narrative of project delivery at Shell. This is something we rightly take pride in: it is all about taking up the challenge to undertake massive and complex, world-scale projects, and getting it done, and done right. Last year, we delivered several big projects, such as our Sakhalin II Liquefied Natural Gas (LNG) project in Russia and the BC-10 deep-water oil field off the coast of Brazil. The retrofitting of the vessel for the BC-10 project took place here in Singapore, at Keppel shipyard, before it set sail for Brazil. Earlier this year, our Perdido deep-water platform off the Gulf of Mexico came on-stream. Meanwhile, construction work is proceeding well on our Pearl Gas-to-Liquids (GTL) and Qatargas 4 projects in Qatar, which are scheduled to be completed by the end of this year.

These projects are major undertakings. They take time, lots of technology and innovation, and require both capital and commitment. I am told that there is a wise Chinese saying that goes something like this: don't be afraid to make progress even if it takes awhile, be afraid instead of standing still. This is very much in line with our thinking. The SEPC has been a long journey and a challenging one for all of us. Work on this project began in October 2006. Since then, we have built three new chemical production units and modified our refinery and its infrastructure. The SEPC includes a new ethylene cracker complex (ECC) and a butadiene unit on Pulau Bukom, near to our refinery, and a mono-ethylene glycol (MEG) plant on Jurong Island. We designed the new facilities to maximize the benefits of locating refining and petrochemicals production in a single manufacturing hub: Bukom and Jurong islands.

Just to give you a sense of size and scale of the challenge - at its peak, some 15,000 workers were involved in construction work on the project, and on-site kitchens kept them well-fed with 25,000 meals each day, consuming some 3 tons of rice a day. The amount of concrete needed was enough to build the Empire State Building in New York, and the steel used for the cracker was enough for not one or two, but three, Eiffel Towers. Building the facilities on islands also had its challenges as many things had to arrive by boat.

Modifying an existing refinery is also quite a feat. Some have likened it to doing open-heart surgery. We had to make invasive changes to a fully-functioning plant and keep it pumping out fuels all the while. It called for careful planning, steady hands and disciplined delivery for this complex work to be done successfully, and most importantly, while keeping our workers and operations safe. So I am especially pleased that the project has managed to clock 38 million man-hours without injuries, setting a new record within Shell's many operations. It gave me great pleasure to visit the construction teams on site last year to recognise their outstanding safety performance.

Riding Asia's growth wave

Let me take a few minutes to share with you how and why we embarked on this journey, and what it means for all of us, now that we have arrived at our destination.

Shell views the Asia Pacific region as a major growth market. According to the International Energy Agency, over 90% of the increase in global primary energy demand by 2030 will come from non-OECD countries, with China and India accounting for the bulk of this. Similarly, energy demand in South-east Asia will almost double by 2030. One sign of this is that the number of vehicles on the roads in South-east Asia could triple to 92 million. That's a lot more cars, which will need fuel to power them, petrochemicals for their manufacture, oils to lubricate their engines, and bitumen for the roads they will run on – all of which we make and supply at Shell.

The demand for petrochemicals in Asia is also soaring. These are the basic building blocks for manufacturing many of today's critical consumer goods. Just look around you - the paint on the walls and the carpets under our feet, to

the clothes that we wear, the bottles for the water you drink, your computers and handphones - all of these require inputs from today's petrochemical industries.

Shell wants to remain a leader in Asian petrochemicals, so we took the decision to expand our manufacturing capacity in the region.

Our next decision: where to build that capacity? Singapore was a natural choice. After all, we have existing assets here. This year, we will mark our 120th year in Singapore. In fact, this region is the "cradle" of Shell.

Much of the company's first exploration for oil more than a century ago took place in Sumatra and Borneo. Singapore has been at the heart of our business since Shell's first tanker, the S.S. Murex, unloaded 4,000 tons of kerosene at Freshwater Island in 1892. That was the first bulk carriage of oil and marked the start of the international oil trade. Today, Freshwater Island is called Pulau Bukom. And today, Singapore is also at the heart of the region's energy and petrochemicals supply.

What made Singapore and the SEPC project such a winner for Shell was the opportunity to integrate our new cracker with the Bukom refinery. Cracking is the process of breaking large hydrocarbon molecules down into smaller ones at very high temperatures. The purpose is to turn them into higher value products or feedstocks.

The Bukom refinery, which is Shell's largest in the world, processing 500,000 barrels of crude oil every day, has been upgraded to enable it to produce a variety of feedstocks for the new cracker complex, which is designed to deal with this flexibility in supply. This gives us the advantage of changing feedstocks based on market conditions. It also means more secure

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supplies for our customers. Products from the cracker can be shipped to customers via a new jetty, or piped directly via sub-sea pipelines to the petrochemicals manufacturing hub on Jurong Island.

One of these customers on Jurong Island is our new MEG plant, or for the chemists among you, Mono-Ethylene Glycol (MEG). This is a world-scale plant – one of the largest in the world – which will produce 750,000 tonnes of MEG a year. That's more than enough to make one polyester shirt for every person on the planet today.

This plant will be the first Shell plant to use our award-winning OMEGA (Only MEG-Advantage) technology. This produces higher yields with almost no waste. The plant also costs less to build and operate and has lower energy and water consumption than a conventional MEG plant.

The SEPC will support Shell Chemicals' strategy to grow selectively in the Asia-Pacific and Middle East, where the market is growing. For example, Asia currently accounts for around 70 per cent of global MEG consumption. Much of the product is exported to the textile and packaging industries in the Asia Pacific region. So, the next time you walk into a store in one of your gleaming malls in Orchard Road, remember that some of the merchandise could have begun as MEG from this plant.

Singapore's "can do" support

The completion of the SEPC project marks the start of a new chapter in our long relationship with Singapore, which is already Shell's largest petrochemical production and export centre in Asia. The SEPC spells opportunities for both Shell and Singapore. Our decision to expand our petrochemicals capacity in Singapore is leading

other chemicals companies to locate their plants here as well. These producers can benefit not only from additional feedstock that Shell has made available but also from the excellent infrastructure and logistics on Jurong Island. SEPC therefore supports the government's efforts to move Singapore's chemicals industry into its next phase of growth.

Right from the start, this project has had the strong support of the Singapore government, in particular, the Economic Development Board (EDB), JTC Corporation (JTC), Public Utilities Board (PUB) and other government agencies for the provision of land, labour, infrastructure, incentives for training, and the generally proactive, "can-do" approach to making things happen. We at Shell appreciate this strong support. The business-friendly policies and outlook of the Singapore government make this an ideal location for chemical and many other industries.

For our part, Shell has demonstrated strong support for initiatives such as the Singapore government's drive towards greater resource self-sufficiency through projects such as Newater, Singapore's own brand of high-grade, reclaimed water. We are the largest industrial user of Newater.

Shell also strives to be a good neighbour in all our operations and we have worked closely with our partners in the community on projects such as the West Coast Marshland rejuvenation. We have also shared our deeply-ingrained worksite safety culture through the Trainee Safety Advisor Programme (TSAP). This has helped to train safety managers not only for Shell but also for the Singapore construction industry, and will be a lasting legacy of this project. I am happy to note that our Shell Singapore country chairman Lee Tzu Yang also chairs a national panel to boost worker safety.

Growing upstream and downstream

Like Singapore, we at Shell see the SEPC as very much part of our plans to ride the wave of Asia's growth, and to meet its rising demand for energy and related products. Take, for example, natural gas, which is an increasingly important source of energy. For most countries, using more gas in power generation can make the biggest contribution to lowering CO2 emissions. Natural gas plants produce half as much CO2 compared to coal-fired power plants, and are cheaper and faster to build.

Asia is both gas-rich, and gas-hungry.

According to the International Energy Agency, natural gas use in the power generation sector is expected to grow rapidly in both India and China by 2030. On the flip side, South-east Asia is an important exporter of LNG to the rest of the world, with Malaysia and Indonesia being the world's second and third largest LNG suppliers, after Qatar. Australia is also a rich source of

Natural gas is a growing part of Shell's upstream production. By 2012, it will be more than half of our production, growing further beyond that. We are working with partners around the region to tap its resources and meet the energy needs of Asia. Last year, PetroChina and Shell signed agreements for the supply of LNG from the Gorgon project in Australia, as well as Shell's global LNG portfolio. In March, Shell and PetroChina also announced a joint bid to buy Australia's Arrow Energy, with a view to developing a gas business which will eventually meet China's needs. Shell and PetroChina are also working together on projects to try and develop tight gas and shale gas reservoirs in Sichuan. Since April last year, we have also been exporting LNG from our project in Sakhalin, Russia, which now supplies nearly 8% of Japan's gas needs and 5% of South Korea's.

Asia is equally important for our Downstream business. Take products such as lubricants and bitumen, both of which enjoy growing markets in this part of the world. I mentioned earlier that there could be 92 million cars on the streets in South-East Asia by 2030. With its growing number of vehicles and industries, Asia Pacific will be a powerful growth engine of the future. In November 2009, we opened our sixth lube oil blending plant in Zhuhai, Guangdong province, China, where we are the top supplier of lubricants. Similarly, last year, Shell Bitumen moved its R&D to a new state-of-the-art facility in Bangalore, and commissioned our second bitumen plant at Savli, Western India. This added to the existing two Solutions Centres in the East, one in Thailand and the other in the Philippines, to grow our markets in this region. The success of these efforts might perhaps be seen in the fact that Shell was picked to provide the high-grade bitumen needed to build and maintain the street circuit for the world's first-ever night time Formula One race here in Singapore. Last year, Prime Minister Lee and I enjoyed this together, taking in the sights - and sounds - of the event, in the heart of your vibrant city.

Conclusion

So, Prime Minister, ladies and gentlemen, as you can see, the successful completion of the SEPC is clearly very much part of our plans to keep growing our business in Asia, by forging strong relationships with key players here.

Let me conclude by paraphrasing another Chinese saying, which calls for the sharing of the joy of success, just as we pull together to overcome challenges along the way. This reflects

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our belief in Shell in the need to work closely with our partners, and it is precisely what we have done here in Singapore on the SEPC.

Today, we are happy to share with you this opening of one of our key projects in the world, which will be a critical part of Shell's strategy to help deliver the energy and modern materials that Asian consumers are demanding to power up and improve their lives.

Thank You.

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