

# The Search for Global Energy Solutions

BY DR RANDY GOSSEN  
PRESIDENT, WORLD PETROLEUM COUNCIL



With the immense changes in the industry resulting from the global economic downturn and its impact on the oil and gas sector, it is only fitting to set the focus of the World Petroleum Council Annual Publication on 'Global Energy Solutions'.

Based on the outcomes from the 19th World Petroleum Congress in Madrid in 2008 we recognise that there are three main drivers: Investment, Innovation and Cooperation.

## Investment in new infrastructure

Economic growth and liberalisation of markets throughout the world have spurred significant demand for oil and gas over the last decade. However, the global financial crisis has resulted in a steep worldwide recession which, along with volatile energy prices, has significantly impacted the oil and gas sector.

The global economic meltdown has resulted in a major cutback in investment in the industry, particularly in mega-projects. The IEA estimates global demand for oil to rise to 106 mb/d in 2030. 80 per cent of all energy comes from fossil fuels and that level is not expected to change very much by 2030. Much of this increase in supply will be coming from unconventional oil and gas which will require higher sustained prices.

These trends call for energy related infrastructure investment of US\$26.3 trillion to 2030, which equals just over US\$1 trillion/year. About half of that will be required by the oil and gas sector. According to the IEA, 64 mb/d of gross capacity needs to be installed between 2007 and 2030 – six times the current capacity of Saudi Arabia – to meet demand growth and offset decline. In the current economic downturn it is unlikely that these levels of investment will be met, although those that are cash rich and have access to credit will be able to pursue new opportunities.

## Technological innovation

Conventional reserves of oil and gas that are easy to access and inexpensive to produce are largely gone. Accordingly, industry is exploring in ever more challenging new frontiers where large oil and gas discoveries are being made. The development of such new discoveries will require deployment of cutting edge technologies delivered in an environmentally safe manner.

Enhanced oil recovery is still one of the more promising areas to increase the reserves and production from existing fields. The development of new technologies is significantly increasing recovery factors and prolonging the life of mature oil and gas fields.

Unconventional oil and gas resources are quickly becoming technically feasible and economically very attractive. Advanced technologies and minimisation of environmental

impact of developing and processing the reserves are key to the further development of these resources.

## Cooperation

Notwithstanding the current economic crisis, many of the largest oil and gas companies are actually maintaining or raising their capital investments to address the ongoing need to add reserves and grow production. This brings about new opportunities for international oil companies (IOCs) to partner with national oil company (NOCs) on a long-term, sustainable basis. The downturn can therefore be a good time to focus on forming and strengthening strategic alliances, particularly with NOCs.

Cooperation between IOCs and NOCs is not without its challenges: there are significant cultural, philosophical and social differences between the two parties that can make working together awkward at best and sometimes impossible. In addition, the possibility of government changing the rules can pose a real risk and induce added uncertainty. Furthermore, government playing the combined roles of policy maker, regulator, partner and investor is a complex mix requiring considerable skill, understanding and flexibility. Notwithstanding these challenges, the potential rewards of enhanced cooperation are significant for both parties and indeed, there are many examples of successful partnerships. The World Petroleum Council (WPC) can facilitate the building of important bridges for the two sides to find ways to work together.

In the new economy, strategic alliances enable businesses to gain competitive advantage through access to a partner's resources, including markets, technologies, capital and people. Teaming up with others adds complementary resources and capabilities, enabling participants to grow and expand more quickly and efficiently. Many fast-growth technology companies use strategic alliances to benefit from more-established channels of distribution, marketing, or brand reputation of bigger, better-known players. Companies might also consider cooperating with other firms by outsourcing the cost of non-core functions, freeing them to focus on key areas.

These challenges were selected as the theme of our 20th World Petroleum Congress which will take place in Doha, Qatar in December 2011. Taking the outcomes from the 19th WPC in Madrid a step further our Congress Programme Committee selected the theme of: Energy Solutions for All – Promoting Cooperation, Innovation and Investment.

We have taken several of the key issues that will be addressed under that heading at the Congress next year and asked senior industry representatives to share with us their views on the challenges and opportunities facing our industry. Please see for yourself what their contributions are in addressing Global Energy Solutions. □