Oil outlook and investment challenges

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Outline

Oil outlook to 2030: reference case
Alternative scenarios
Investment requirements
Associated challenges and implications
Concluding remarks
Energy demand is set to grow

Energy demand by fuel type
Reference case

- Economic growth, rising population and social progress have led to increased use of energy
- However, many still lack access to modern energy services
- Fossil fuels will continue to play the key role in energy mix
- Resources are plentiful
- Deliverability and sustainability are the key issues

Oil demand outlook, reference case

By region

Developing countries’ demand will rise fast, but per capita consumption will remain much lower than in OECD

Key sector: transportation
Both OPEC crude and other sources of oil supply will rise

Global oil supply
Reference case

- Resource base is sufficient
- Supply from sources of oil other than OPEC crude will increase
- OPEC crude share not markedly different from today
- Sustainability of large biofuels supply and use is questionable

Capacity additions are needed in the downstream

- Growth in product demand and shift towards lighter products
- More stringent quality specifications
- Large capacity additions needed by 2020, particularly in distillation, desulphurisation and upgrading units
- Crude and product regional trade expanding, with progressive shift towards Asia
Demand uncertainties translate into large uncertainties for required OPEC oil

The demand for OPEC crude oil in three scenarios

- Higher growth
- Reference case
- Lower growth

Risks to demand are skewed towards the downside

Investment challenges

- How much capacity?
- Upstream and downstream economics
- Developing and deploying technology
- Protecting the environment
How much capacity?

- Uncertainties over required OPEC crude translate into a wide range of possible upstream investment needs.
- Consuming country policies add uncertainty.
- Over-investment: waste of precious resources and poor return to investors.
- Under-investment: the needs of consumers are not met.
- The key role of OPEC spare capacity.
- Security of demand and security of supply go hand-in-hand.

Upstream and downstream economics

- Globally, availability of capital is not an issue.
- Oil is an exhaustible natural resource.
- Oil projects are capital intensive, with long lead times.
- Are market signals reliable and conducive to appropriate levels of investment?
- Petroleum projects are facing a huge increase in costs.
- Shortages in skilled labour: need to restore and redevelop the industry’s image to appeal to young people.
Developing and deploying technology

- Technology has always had substantial impacts
- Technological progress and innovation contributed to additions in petroleum resources/reserves, increased recovery, cleaner fuels, etc.
- R&D spending was reduced significantly in the 1990s; this trend needs to be reversed
- Of increasing importance: the development of technologies that enable an increased use of fossil fuels in a carbon-constrained world

Protecting the environment

- Growing concern over local pollution and potential climate change
- Huge progress made in reducing tailpipe emissions
- The petroleum industry will adapt to a carbon-constrained world by developing cleaner fossil fuel technologies
- This includes carbon dioxide capture and storage
- Developed countries should take the lead in the development and deployment of this technology
Concluding remarks

- Energy is crucial for sustainable development
- OPEC Fund for International Development (Algiers, 1975)
- Poverty alleviation, economic growth and social progress can be made compatible with the protection of the environment
- Energy interdependence is a key ingredient for long-term market stability
- The OPEC Long-Term Strategy calls for improved dialogue and co-operation among all parties: prime example is the International Energy Forum