

Growing Threats to Energy Security

Dr Fatih Birol, chief economist at the International Energy Agency believes recent events highlight the need for governments to take a more proactive role in dealing with energy security risks.

The World Energy Outlook 2004 - the latest edition in the IEA's landmark series - appeared last November during an extremely volatile and uncertain moment in modern energy history. Soaring oil, gas and coal prices, dwindling spare oil-production capacity, exploding energy demand in China, war in Iraq and electricity blackouts across the world were among the signs and causes of the profound transformations through which the energy world was (and is still) passing.

The report painted a sobering picture of how the global energy system is likely to evolve from now to 2030. In the absence of new government policies or accelerated deployment of new technology, world energy demand is set to rise by 60%. Some 85% of this increase will be in the form of carbon-emitting fossil fuels: coal, oil and natural gas whilst two-thirds of the new demand will come from developing countries. The world will need to invest a staggering amount of money to maintain and expand energy supply to ensure this demand is met. Serious concerns emerge from these projected market trends. Perhaps most pressing of which is that short-term risks to energy security will grow.

Greater dependency on imported oil

Major oil importers - including most OECD countries, China and India - will become ever more dependent on imports from distant, often politically-unstable parts of the world. This trend results from the steady growth in demand in all regions and the increasing concentration of production in a small number of countries with large reserves. The terrorist threat combined with political instability and conflict in key producing regions has brought home to everyone the dangers of becoming overly reliant on imports of oil from unstable regions. World oil demand is projected to reach 121 million barrels/day in 2030. OPEC countries, mainly in the Middle East, will meet most of the increase. By 2030, they will supply well over half of the world's oil needs - an even larger share than in the 1970s. ▶



In response to the growing mismatch between demand and supply, net inter-regional oil trade will more than double. Booming trade will strengthen the mutual dependence among exporting and importing countries. But it will also exacerbate the risks that wells or pipelines could be closed or tankers blocked by piracy, terrorist attacks or accidents. Of particular concern is the growing traffic through a small number of critical chokepoints. These include the Straits of Hormuz in the Persian Gulf and the Straits of Malacca in Asia through which a total of 26 million barrels of oil currently pass every day. Traffic through these and other vital channels will more than double by 2030. A disruption in supply at any of these points could have a severe impact on oil markets. Maintaining the security of international sea-lanes and pipelines will thus take on added urgency.



Power security and gas supplies

Energy security concerns are not confined to oil. Power failures in North America and in several European countries and incidents at Japanese nuclear reactors have reminded us that energy security extends to other forms of energy. In terms of gas, all regions that are currently net importers will see their imports rise, and a growing number of countries and regions will become net importers for the first time. Gas production is set to increase most in Russia and in the Middle East, which between them hold most of the world's proven reserves. Much of the incremental output in these regions will be exported to North America, Europe and Asia, swelling the surge in international energy trade.

Liquefied natural gas, the bulk of which will be used in power stations, will account for most of the increase in traded gas. OPEC countries will continue to dominate the supply of LNG. The recent disruption in liquefied natural gas supplies from Indonesia demonstrated the risks of relying on imports of gas from politically sensitive regions. On the other hand, the expected expansion of international LNG trade could alleviate some of the risks of long-distance supply chains if it leads to more diversified supplies. Increased short-term trading will also make LNG supplies more flexible. ►

Liberalisation of downstream gas and electricity sectors also raises concerns about energy security. In promoting efficiency and increasing the diversity of supply, market reforms should, in principle, reinforce energy security. But this depends on the design of those reforms and the incentives for investors to provide the degree of security demanded by consumers. Pressures to reduce costs could also compromise security.

Need for concerted effort

These developments point to a need for the governments of IEA members and of non-member oil- and gas-importing countries to take a more proactive role in dealing with the energy-security risks in fossil-fuel trade. Measures to deal with short-term supply emergencies or price shocks will have to be stepped up. Improving relations with energy suppliers will also need to form a central plank of their security strategies. Governments will have to look at new ways of diversifying their fuels, as well as the geographic sources of those fuels. They will also need to devise new, cost-effective approaches to securing reliable gas and electricity supplies within a competitive market framework. In particular, they will need to lower regulatory and market barriers and ensure that the investment climate is sufficiently attractive.

In closing, I would like to underline the threat to energy security faced by developing countries. As economies in such regions are often far more energy intensive, they are even more vulnerable to high-priced fuel supplies than the industrialised economies. In recognition of this I believe it is crucial that we keep working with these countries to share experiences and knowledge on the importance of energy security and help them develop policies to design appropriate response plans and strategies. After all, the sustained economic growth these countries need will not be possible in the absence of secure energy supplies. ■

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