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Institute on Comparative Regional Integration Studies



Future Trends Series - GR:REEN Project

Title of the report

Shell Energy Scenarios to 2050; Signals and Signposts

Area

Energy and Environment

Reporter

Shell International BV

Type of the Reporter

Private Organisation

Periodically updated?

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First issued year

2008

Latest update

2011

Official website

<http://www.shell.com/>

Language available

English

Short summary

The publication is the latest update of the Shell energy scenarios to 2050, aiming to provide a better understanding of the latest developments in the world's energy supply, use and needs. The previous report has been updated in order to include considerations of the global economic and financial crisis. The final objective of the publication is to help the company keep a crucial role in the global energy debate but also build its strategic objectives and face energy and environmental issues in the future. It also aims at deepening the collaboration between the private and public sector as well as civil society in order to face the future global energy challenges. The report underlines the important contribution natural gas and low-carbon fuel will make in the future as energy global supply.

Key trends

- Growth in global population is the key driver of the scenario explored in the report as the energy system is likely to face challenges in the face of the increasing demand from global population. Indeed, growing prosperity of emerging nations will lead to a more energy-intensive phase of economic development.
- Energy demands are expected to triple from its 2000 level by 2050 if emerging economies follow the historical patterns of development.

- The financial crisis will have important implications for the future of global energy. The Great modernisation period will not continue at the pre-recession rhythm as economic volatility will increase.
- Growing uncertainty around regulations related to greenhouse gas emission since the Copenhagen Summit on climate change has created increasing tensions as the scientific view is becoming more pessimistic and the public opinion is weakening.
- In the last decade, natural gas developments have been spectacular as tight and shale gas in North America and methane in Australia (both natural gas suppliers) are importantly booming. This has paved the way for other Nations to search for new gas sources, with no certainty on how confident other regions will be in setting new gas infrastructures.
- The new challenges posed by global management of energy will lead Nation States to struggle in protecting their interests as public-private coalitions of the most important players (such as China) are emerging.
- Directions taken by Nation States will vary in the future concerning transparent regulatory emissions schemes in carbon dioxide intensity. "The emissions levels we can expect over the coming decade are largely determined by investment choices made in the past 10 years and will continue to grow at around 2% pa. Most growth will come from the non-OECD countries – especially China and India - as coal-fired power generation surges. However, some countries in the OECD, facing the imminent phase-out of older, inefficient and air-polluting, coal fired power generation, will have the opportunity to move faster and reduce emissions already this decade. CO2 policies adopted in the OECD over the next 10 years will start to impact after 2020 and emissions could begin falling by about 1.5% pa. This will slow overall emissions growth but much more needs to be done in developing economies before an overall emissions reduction is achieved."

Suggestions

- The future of discussions on greenhouse gas emission will need to include the development of regionally integrated and politically feasible measures.

Methodology

Research from secondary sources

Reference to other trends reports? If yes, which reports?

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