

Energy Security Report

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Market Intelligence

At the country and company-level there are growing concerns over energy security. While no one definition of energy security exists, it is often referred to as enough energy supplies to meet demand at an acceptable price that is not detrimental to economic growth. Indices for energy security have been developed but there is no one definitive energy security index.

In terms of the fuel it is estimated that actual reserves of oil and gas will last 46 years and 59 years respectively based on the current rate of consumption. However, for the past 30 years the estimated number of years of oil and gas left has either increased or remained constant due to new discoveries. Moreover, some oil and gas resources may become reserves as newer technologies make the extraction of challenging resources more economical. Therefore the actual price of fuel is more of a concern than supplies of fuel, especially oil and gas. Current volatile prices and uncertainty over demand have created uncertainty for projects to explore for new reserves or develop projects. To compound the issue oil and gas companies are also increasingly developing unconventional oil and gas. 'Unconventionals' come with challenges, for example they are usually more expensive to attract, have unique environmental challenges and may use new technologies, just to name a few problems.

Therefore, companies and countries have started to investigate the use of energy supplies closer to home or from more stable countries. For example, many non-energy companies are hedging their energy supplies and diversifying their energy supplies e.g. airlines are performing test flights with biofuels. Some companies have or are considering onsite electricity and heat generation capacity to meet their electricity demand, or are sourcing electricity generated from renewables to meet CO₂ emission reduction targets, especially in anticipation of or to comply with carbon trading schemes, and to improve their corporate image. Energy efficiency measures are being implemented to reduce energy consumption and energy costs as an overall strategy and in anticipation of rising energy prices.

In the energy sector, companies have focussed on diversifying their energy sources and implementing energy efficiency measures, thus reducing their energy consumption and CO₂ emissions. Uncertainty in the sector is created by uncertainty over carbon trading schemes, incentives for renewable energy generation projects and environmental legislation, to just name a few examples.

The uncertainties facing companies and countries and issues regarding energy security are covered in our report. Included in this report are case study examples.

Highlights

Current fluctuating fuel and electricity prices are making countries and companies consider other options to meet demand. Especially as some oil and gas countries are experiencing civil disturbances, fuel theft and piracy events. For example, piracy takes place off the coast of Nigeria and off Somalia, civil unrest in Libya and oil theft in the delta region of Nigeria.

More pressing than concerns over fuel reserves is supply of electricity. NRG Expert has found that due to a lack of generation capacity in operation, under construction or in the planning stages 2032 is a critical date where world electricity supply will not meet electricity demand. This critical date may be earlier in North America and Europe and perhaps exacerbated following recent announcements by

some European countries to abandon nuclear power. Unless new generation capacity is planned and comes online in the interim and/or actual electricity consumption is reduced equal to or more than the shortfall in generation capacity, there will not even be the capacity to meet demand.

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Table of Contents

1. Executive Summary	10
2. Energy Security	11
3. Fuel reserves	13
4. Electricity prices	22
5. Power generation capacity.....	24
6. Growing Shortage	37
Oil	37
Natural Gas	44
Oil and Gas	49
Coal	52
Biomass.....	53
Hydro	54
Uranium	54
7. Measuring energy security.....	55
CSI.....	55
Energy Security Index developed by the IEA.....	58
Energy Security Index for Korea based on the Hirschman–Herfindahl index (HHI)	59
Measures of Oil Import Dependence	60
Security of Gas Supply.....	61
US Energy Security Risk Index	62
8. Risks for the energy sector	64
Regulation & Environment.....	64
Environmental pollution and liability	67
Increasing emissions performance	68
Standards	69
Uncertainty of political commitments.....	69
Renewable Energy Policy uncertainty.....	70
Policy changes	73
Oil	73
Gas	74
Technological Risks	74
Scarcity of essential mineral components.....	74
Financial & Investment Risks	75
Future demand uncertainty	75
Electricity	77
Impact of pricing fluctuations.....	77
Oil and Gas.....	77

Coal	80
Electricity	80
Cost of unconventional resources	81
Carbon price uncertainty	85
UN Clean Development Mechanism	85
EU Emissions Trading Scheme.....	85
New Zealand Emissions Trading Scheme	86
Longevity	86
Carbon prices	87
Theft from Smart Grids	87
Operational Risks	89
Political threats in unstable regions.....	89
Drug lords	89
Pipelines	89
On land installations	89
Maritime piracy	89
Unconventional resources.....	90
Failing infrastructures in changing climates	90
Newer or cleaner technologies making existing infrastructure obsolete.....	90
Electric vehicles	91
Distributed power.....	92
Cyber threats to smart grids.....	92
Skill shortage.....	93
Reputational Risks	93
Environmental damage resulting from difficult to extract fossil fuels	93
Shale gas.....	94
Oil sands (tar sands)	94
Pollution from new technologies	95
Accidents.....	95
Case Studies	100
Duke Energy.....	100
Iberdrola	103
Peabody	103
Petrobras.....	104
Shell.....	107
9. Risks for business.....	109
Financial and Regulatory Risk	109
Carbon Price Uncertainty	109

Increasing Legislation and Standards on Efficiency	110
Consumer Pressure for CO ₂ Emissions Disclosure	111
Technological Risks	111
Safety of Smart Grid.....	111
Operational and Supply Chain Risks	112
Higher and Volatile Energy Prices	112
Fuel and Electricity Supply Disruptions.....	112
Electricity	112
Fuel.....	113
Lack of standardised global carbon and climate policy.....	114
Business Reputation	114
Scrutiny of Portfolio and Company Operations.....	114
Delivery of Services compromised by Energy Disruptions	114
Case Studies	114
Amtrak	114
Apple	115
British Telecom (BT).....	115
Coca Cola.....	116
Google	116
Hapag-Lloyd	117
IKEA	117
Lufthansa.....	118
McDonalds	119
Proctor & Gamble (P&G).....	120
Tata Steel.....	120
10. Water security	122
11. Sources	125

Tables

Table 3-1: Global Peace Index (GPI)	18
Table 5-1: Electricity supply disruptions for the first three quarters of 2011	30
Table 5-2: Ofgem’s four scenarios for the electricity grid in the UK.....	32
Table 5-3: Impact of different stresses for Ofgem’s four grid scenarios	33
Table 7-1: Projected import dependence of the EU and EU-30 in 1998, 2010, 2020 and 2030	55
Table 7-2: Energy diversification by selected countries based on CSI data for 2008	57
Table 7-3: CSI score for selected countries.....	58
Table 7-4: Energy security cost (Ci) for various disruption periods in electricity generation in South Korea.....	60
Table 7-5: Measures of oil import dependence.....	60
Table 7-6: Risk matrix for security of gas supply	61
Table 8-1: Examples of renewable energy subsidies or target being reduced or cancelled due to economic conditions.....	70
Table 8-2: Measures undertaken the Brazilian government in 2010 to control regulated costs and guarantee sustainability in the electricity system, EUR million	72
Table 8-3: Frontier resources and unconventional oil and gas.....	81
Table 8-4: Cyber-vulnerabilities in the smart grid system.....	87
Table 8-5: Specific potential points of weakness in the smart grid	88
Table 8-6: Four states that sponsor terrorism according to the US Department of State	89
Table 8-7: Details of the Deepwater Horizon, Exxon Valdez and Fukushima accidents.....	96
Table 8-8: Proposed rate increases for Duke Energy customers for February 2012	102
Table 8-9: Peabody’s 2050 energy success, economic growth and environmental solution goals....	104
Table 9-1: Estimated airline bills from the EU ETS in 2012.....	109
Table 9-2: BT’s energy efficiency measures.....	115
Table 9-3: Tata Steel’s purchased power consumption for the 2010/2011 and 2009/2010 financial years.....	120
Table 10-1: Water demand/impact of transportation fuels	122
Table 10-2: Water use and consumption for electric power generation	123

Figures

Figure 2-1: Supply chain in the gas sector.....	12
Figure 3-1: Global primary energy consumption, million tons of oil equivalent, 1965 to 2010	13
Figure 3-2: Proven oil reserves, thousand million barrels, 1980 to 2010	14
Figure 3-3: Proven natural gas reserves, trillion cubic metres, 1980 to 2010	14
Figure 3-4: R/P ratio of global oil reserves, years, 1980 to 2010.....	15
Figure 3-5: R/P ratio of global natural gas reserves, years, 1980 to 2010	15
Figure 3-6: Global electricity generation, TWh, 1990 to 2010	16
Figure 3-7: Spot crude prices, USD per barrel, 1972 to 2010	16
Figure 3-8: Natural gas prices, USD per million Btu, 1984 to 2010.....	17
Figure 3-9: Coal prices, USD per tonne, 1987 to 2010.....	17
Figure 3-10: Oil consumption and production in China, thousand barrels per day, 1965 to 2010	20
Figure 3-11: Oil consumption and production in India, thousand barrels per day, 1965 to 2010	21
Figure 4-1: Utility coal and petroleum stocks and stocks per electricity generated, 1949 to 2009.....	22
Figure 4-2: Average retail electricity prices in the US, USD cents per kWh including taxes, 1960 to 2009	23
Figure 5-1: Actual and projected world electricity, capacity, generation and consumption, MW, 1990 to 2050	24
Figure 5-2: Actual and projected electricity generation and consumption in the G8 and BRIC countries, MW, 1990 to 2020	24
Figure 5-3: Actual and projected electricity generation and consumption in North America, Europe, Asia Pacific and Middle East, MW, 1990 to 2020	26
Figure 5-4: Actual and projected world generation capacity by type, MW, 1990 to 2020	29
Figure 5-5: Peak load reduction and utility costs per energy saved, 1989 to 2008.....	32
Figure 5-6: Key timings for projects to fulfil future shortfalls in the UK's electricity sector	35
Figure 6-1: Oil production and consumption, thousand barrels per day, 1965 to 2010.....	37
Figure 6-2: Oil refining capacity, throughput and oil consumption and production, thousand barrels per day, 1965 to 2010	38
Figure 6-3: Refining margins in US Gulf Coast (USGC), North West Europe (NWE - Rotterdam) and Singapore for different generic refinery configuration (cracking, hydrocracking or coking), USD per barrel, Q1 1992 to Q4 2010	39
Figure 6-4: Oil production in thousand barrels and proven reserves in billion barrels in OPEC and major non-OPEC countries at the end of 2010.....	40
Figure 6-5: Proven oil reserves in North America and in Major European producing countries, billion barrels, 1980 to 2010	41
Figure 6-6: Proven oil reserves by region, billion barrels, 1980 to 2010	41
Figure 6-7: Net crude oil and oil product trade movements in 2010, thousand barrels per day.....	42
Figure 6-8: Net oil imports for the US and Europe, thousand barrels per day, 1980 to 2010	42
Figure 6-9: Global biofuel production, thousand barrels per day, 2000 to 2010.....	43
Figure 6-10: Natural gas production and consumption, bcm, 1970 to 2010.....	44
Figure 6-11: Proven natural reserves by region, tcm, 1980 to 2010	45

Figure 6-12: Natural gas production and consumption in the US and Russia, bcm, 1970 to 2010.....	46
Figure 6-13: Actual and projected share of primary energy by fuel type, 1970 to 2030.....	48
Figure 6-14: Natural gas production and consumption in China and India, bcm, 1970 to 2010.....	49
Figure 6-15: Oil and gas consumption and imports as a percentage of consumption for China, Europe and the US, 1990 to 2030.....	50
Figure 6-16: China's territorial claim in the South China Sea.....	51
Figure 6-17: Global coal production and consumption, Mtoe, 1981 to 2010.....	52
Figure 6-18: Indian coal production and consumption, Mtoe, 1981 to 2010.....	53
Figure 6-19: Global nuclear consumption based on gross generation, Mtoe, 1965 to 2010.....	54
Figure 7-1: CSI scores for oil in the Asia Pacific region (Australia, Japan, Korea and New Zealand), 1990 to 2008.....	56
Figure 7-2: CSI scores for natural gas and oil in the North America region (Canada and the United States), 1990 to 2008.....	56
Figure 7-3: CSI scores for natural gas and oil in selected countries in the European region, 1990 to 2008.....	57
Figure 7-4: US Energy Security Risk Index, 1970 to 2035.....	63
Figure 8-1: Global CO ₂ emissions, million tonnes, 1965 to 2010.....	66
Figure 8-2: CO ₂ emissions by region, million tonnes, 1965 to 2010.....	67
Figure 8-3: CO ₂ emissions in China, India and the US, million tonnes, 1965 to 2010.....	67
Figure 8-4: Growth in global solar and wind capacity, MW, 1996 to 2010.....	73
Figure 8-5: Actual and projected growth in primary energy consumption OECD and non-OECD, billion toe, 1970 to 2030.....	75
Figure 8-6: Historical and projected growth in demand for fossil fuels in the OECD and non-OECD, mboe per day, 1970 to 2030.....	76
Figure 8-7: Balance of OPEC supply and demand, million barrels per day, Q1 2011 to Q4 2012.....	76
Figure 8-8: Monthly averages of clean spot freight rates.....	78
Figure 8-9: Typical supply curve for a given size of fleet.....	79
Figure 8-10: Ship new build and five year asset value since 2000.....	80
Figure 8-11: Unconventional and conventional gas production costs, USD per GJ, 2008.....	82
Figure 8-12: Costs for new oil supply.....	83
Figure 8-13: Resources to Reserves – Production Cost Curve (including a carbon tax of USD 50 per tonne CO ₂ equivalent emissions).....	84
Figure 8-14: Historical and projected natural gas prices, USD per MMBtu, 1987 to 2025.....	85
Figure 8-15: Number of electric vehicles in use in the US, 1992 to 2008.....	91
Figure 8-16: Retail motor gasoline prices in selected countries, USD per gallon, 1990 to 2009.....	92
Figure 8-17: Tailings pond.....	95
Figure 8-18: Closing share price for BP, USD, 18th December 2009 to 18th August 2011.....	98
Figure 8-19: Closing share price for Halliburton and Transocean, USD, 18th December 2009 to 18th August 2011.....	98
Figure 8-20: Closing share price for Exxon, USD, 25th January 1988 to 25 th July 1992.....	99
Figure 8-21: Closing share price for TEPCO, USD, 11th January 2010 to 11th August 2011.....	100

Figure 8-22: Coverage of Duke Energy and Progress Energy	101
Figure 8-23: Projected oil demand and projected oil supply from existing fields, million barrels per day, 2000 to 2030	105
Figure 8-24: Oil and gas target of Supermajors and Petrobras, thousand barrels per day, 2000 to 2020	105
Figure 8-25: Forecast oil prices and the Petrobras business plan 2010 to 2014, USD per barrel, 1990 to 2030	106
Figure 8-26: Shell's global unconventional gas projects	107
Figure 9-1: Price development of crude oil and kerosene, USD per tonne, 2008 to 2010	119
Figure 9-2: Oil price scenario 2010 and the hedged price for Lufthansa as of February 2011, USD per barrel	119



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