



UNITED NATIONS  
UNIVERSITY  
CRIS

Institute on Comparative Regional Integration Studies



## Future Trends Series - GR:REEN Project

### Title of the report

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**World Energy Outlook 2013**

### Area

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Energy and Environment

### Reporter

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International Energy Agency (IEA)

### Type of the Reporter

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International Organisation

### Periodically updated?

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Yes

### First issued year

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1994

### Latest update

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2013

### Official website

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<http://www.iea.org/>

### Language available

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English

### Short summary

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In this report, the implications of different sets of choices for energy and climate trends to 2035 are examined, providing insights that can help policymakers, industry and other stakeholders find their way in a fast-changing energy world.

### Key trends

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- Energy demand will switch decisively towards emerging economies, particularly China, India and the Middle East, which will drive up global energy use by one-third
- China is about to become the largest oil-importing country and India will become the largest importer of coal by the early 2020s. The United States is moving steadily towards meeting all of its energy needs from domestic resources by 2035
- The links between energy and development are clearly illustrated in Africa, where, despite a wealth of resources, energy use per capita will be less than one-third of the global average in 2035
- Taking into account the impact of measures already announced by governments to improve energy efficiency, support renewables, reduce fossil-fuel subsidies and, in some cases, to put a price on carbon, energy-related CO<sub>2</sub> emissions are still expected to rise by 20 per cent by 2035

- While regional differences in natural gas prices narrow, they will nonetheless remain large through to 2035 and, in most cases, electricity price differentials will persist
- The United States should see a slight increase in its share of global exports of energy-intensive goods, providing the clearest indication of the link between relatively low energy prices and the industrial outlook. By contrast, the European Union and Japan should both see a strong decline in their export shares – a combined loss of around one-third of their current share
- There is also potential in some regions, notably China, parts of Latin America and even parts of Europe, to replicate at smaller scale the US success in developing its unconventional gas resources, though uncertainty remains over the quality of the resources, the costs of their production and, in some countries, public acceptance for their development.
- The potential for energy efficiency is still far from exhausted: two-thirds of the economic potential of energy efficiency is set to remain untapped through to 2035
- The capacity of technologies to unlock new types of resources, such as light tight oil (LTO) and ultra-deepwater fields, and to improve recovery rates in existing fields is pushing up estimates of the amount of oil that remains to be produced
- The role of OPEC countries to provide the world's demand for oil will be reduced temporarily over the next ten years by a rising output from the United States, from oil sands in Canada, from deepwater production in Brazil and from natural gas liquids from all over the world. But, by the mid-2020s, non-OPEC production will start to fall back and countries in the Middle East will again provide most of the increase in global supply
- Around 2030, China will overtake the United States as the largest oil-consuming country and Middle East oil consumption will overtake that of the European Union. The shifting geography of demand will further be underlined by India becoming the largest single source of global oil demand growth after 2020
- Oil consumption will be concentrated in just two sectors by 2035: transport and petrochemicals
- Net North American requirements for crude imports will all but disappear by 2035 as the region becomes a larger exporter of oil products. Asia will become the unrivalled centre of global oil trade as the region draws in – via a limited number of strategic transport routes – a rising share of the available crude oil
- Renewables will account for nearly half of the increase in global power generation by 2035, with variable sources – wind and solar photovoltaics – making up 45 per cent of the expansion in renewables. China will see the biggest absolute increase in generation from renewable sources, more than the increase in the European Union, the United States and Japan combined.

## Suggestions

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## Methodology

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Research from primary and secondary sources and modelling

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

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- WEO Special Report: Southeast Asia Energy Outlook, 2013
- WEO Special Report: Redrawing the Energy Climate Map, 2013