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MEC



Role of Natural Gas in the International and European Energy Mix.

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- ▶ **WEC - World Energy Scenarios: key messages**
- ▶ Energy system complexity will increase by 2050
- ▶ Energy efficiency is crucial in dealing with demand outstripping supply
- ▶ The energy mix in 2050 will mainly be fossil based
- ▶ Regional priorities differ: there is no one-size-fits-all solution
- ▶ A low-carbon future is not only linked to renewables: carbon capture, utilisation and storage is important and consumer behaviour needs changing
- ▶ CCUS technology, solar energy and energy storage are the key uncertainties up to 2050
- ▶ Functioning energy markets require investments and regional integration to deliver benefits to all consumers

- We are confronted with unprecedented uncertainty for the energy sector
- Energy demand will continue to increase
- The pressure and challenge to develop and transform the energy system is immense
- There is no sustainable global/European energy policy
- Energy becomes more and more a political weapon+

Energy mix in 2050

In 2050 fossil fuels will still play a crucial role for transport and power generation.

Coal is going to play an important role in the long run - in particular for power generation in China and India

Oil will continue to remain dominant for transport

Natural gas, especially from unconventional sources, will play an increasing role and gain more importance in the energy share as a transition energy source towards a low-carbon world

Nuclear remains a matter of energy security

Large increase in the share of **renewables**,. mainly in solar PV, wind and hydro.

Share of different energy carriers in the end user market (%)

	2010	2050
Solids	24	10
Liquids	40	31
Gas	15	19
Electricity	17	32
Other	3	8

Source: WEC

Europe is seeking to diversify its gas supply from Russia, but this will take some effort as most CIS gas-rich states are falling under the influence of Russia.

The added complication of pricing gas under long-term contracts or spot prices will add uncertainty and time to the construction of transnational pipelines.

With the development of unconventional oil and gas resources in North America, the US and Canada have now got the potential to protect themselves from any oil/gas price volatility in the future and seeking to develop its export market.

Moving forward, Middle Eastern oil and gas producers will increasingly supply the growing markets of China and India.

Natural gas - the cleanest fossil fuel - is expected to play an important role in the European transition towards a low-carbon economy by 2050.

At a time when European primary energy resources are being depleted and energy demand is growing, the gas import dependency of the EU will continue to grow significantly in the coming years.

New sources of unconventional gas could change the world's energy markets with potential consequences for the EU.



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