

SESSION: The global energy crisis. Myth or reality?



# LONG TERM EU ENERGY SECURITY STRATEGY

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**5** INTERNATIONAL  
RENEWABLE ENERGY  
CONGRESS

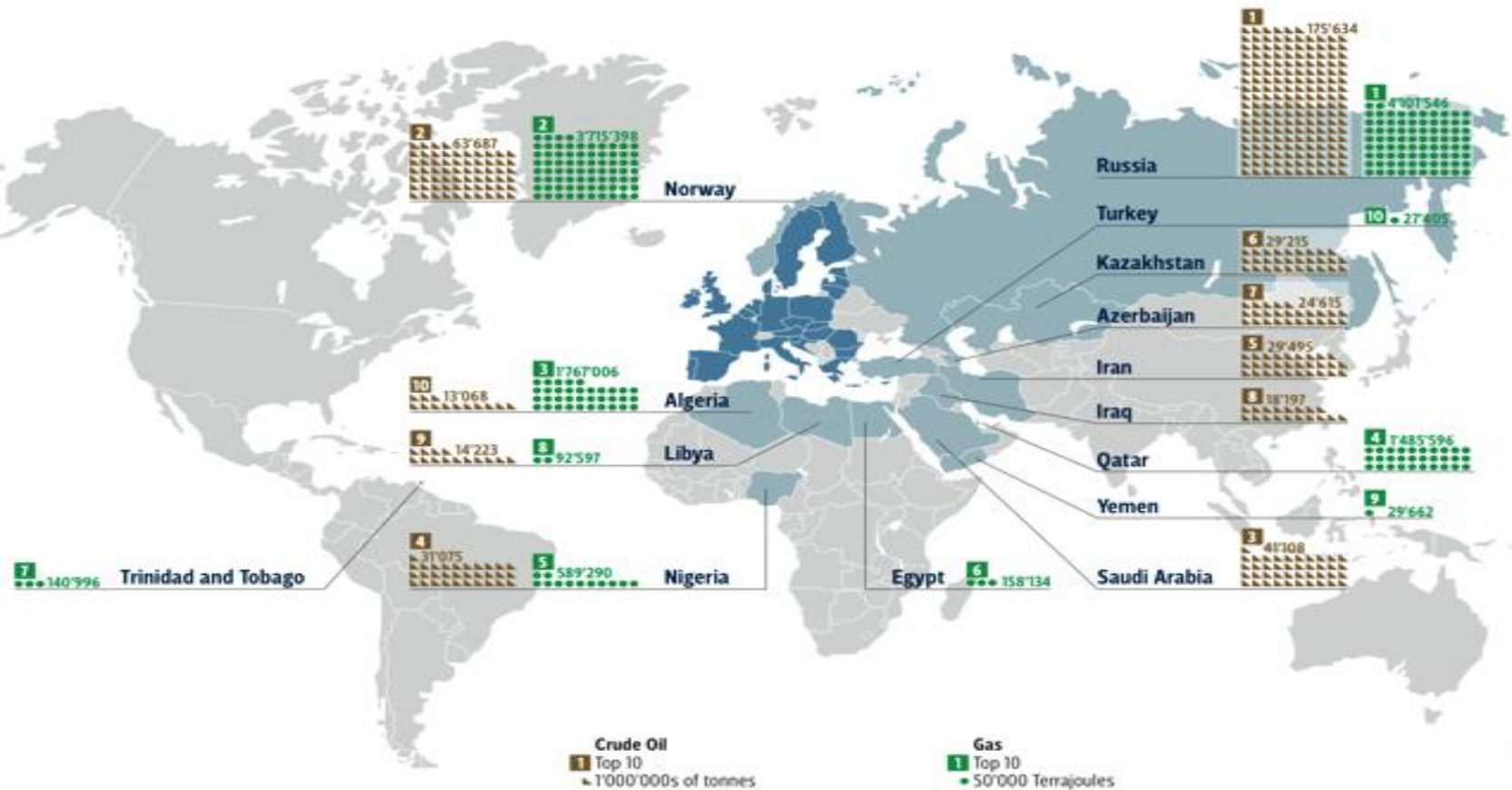
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## Projections of possible shifts in energy sources up to 2050

	2011	reference scenario (= current policies)		decarbonisation scenario (new policies to reduce the share of CO <sub>2</sub> emissions)	
		2030	2050	2030	2050
renewables	10	18.4 - 19.3	19.9 - 23.3	21.9 - 25.6	40.8 - 59.6
nuclear	14	12.1 - 14.3	13.5 - 16.7	8.4 - 13.2	2.6 - 17.5
gas	24	22.2 - 22.7	20.4 - 21.9	23.4 - 25.2	18.6 - 25.9
oil	35	32.8 - 34.1	31.8 - 32.	33.4 - 34.4	14.1 - 15.5
solid fuels (coal, lignite)	17	12.0 - 12.4	9.4 - 11.4	7.2 - 9.1	2.1 - 10.2



10 biggest suppliers of oil and gas to Europe

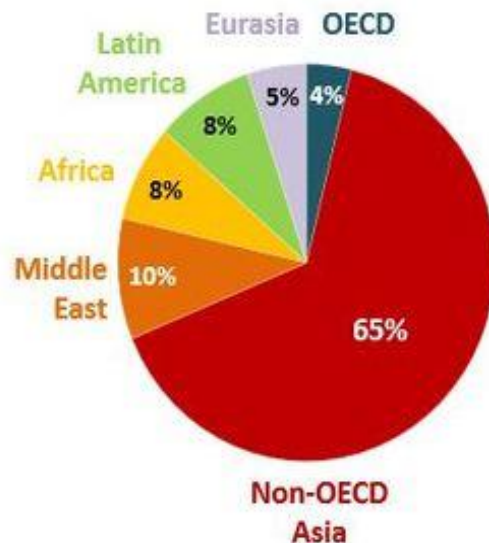
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## Global energy demand by 2035

Primary energy demand, 2035 (Mtoe)



Share of global growth 2012-2035



## EU response to uncertain energy future

Completion of the internal energy market,

Ensuring financing of energy infrastructure:

Decarbonisation the energy sector

Increasing energy efficiency

Improving Security of Supply via:

- Diversification

- External dimension: speaking with one voice in negotiations

- Generation adequacy

- Addressing the vulnerability of security

Adaptation of regulatory system to the market from supply/demand and from transmission/distribution



## Energy policy – Main legal acts

### Internal market:

Its completion follows from the implementation of the third legislative package adopted in July 2009. Some of its provisions contribute to the internal security of supply not only in the sense that they ensure the unhindered flow of gas and electricity all over Europe but also in the sense of network reliability :

*Directive 2009/72/EC 13 July 2009 concerning common rules for the internal market in electricity*

*Directive 2009/73/EC of 13 July 2009 concerning common rules for the internal market in natural gas*

*Regulation (EC) No 713/2009 of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators (ACER)*

*Regulation (EC) No 714/2009 of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity*

*Regulation (EC) No 715/2009 of 13 July 2009 on conditions for access to the natural gas transmission networks*

The extension of the internal market to the Western Balkans, Ukraine and Moldova is ensured through the Energy Community Treaty (entered into force in 2006)

*Council Decision of 29 May 2006 on the conclusion by the European Community of the Energy Community Treaty [2006/500/EC]*

## Energy policy – Main legal acts

### **Security of supply (oil, gas, electricity):**

*Directive 2009/119/EC of 14 September 2009 imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products*

*Regulation (EU) No 994/2010 concerning measures to safeguard security of gas supply*

*Directive 2005/89/EC of 18 January 2006 concerning measures to safeguard security of electricity supply and infrastructure investment*

### **Safety of oil- and gas-related activities:**

*Directive 2013/30/EU of 12 June 2013 on safety of offshore oil and gas operations*



## Energy policy – Main legal acts

### **Infrastructure:**

Besides provisions of the 3<sup>rd</sup> legislative package which contribute to the consistent planning of energy infrastructure the main financing instrument for networks is:

*Regulation (EU) No 347/2013 of 17 April 2013 on guidelines for trans-European energy infrastructure* [linked to the CEF]

### **Energy efficiency:**

*Directive 2012/27/EU on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU*

*Directive 2010/31/EU of 19 May 2010 on the energy performance of buildings*

*Directive 2010/30/EU of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products*

*Directive 2009/125/EC of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products*

### **Energy from Renewable sources:**

*Directive 2009/28/EC on the promotion of the use of energy from renewable sources*





## Energy policy – Main legal acts

### **Nuclear:**

*Regulation 302/2005 on Euratom safeguards*

*Council Decision of 12 February 2008 establishing Statutes for the Euratom Supply Agency*

*Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation*

*Council Directive 2014/87/Euratom of 8 July 2014 establishing a Community framework for the nuclear safety of nuclear installations*

*Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste*

*Council Directive 2006/117/Euratom of 20 November 2006 on the supervision and control of shipments of radioactive waste and spent fuel*

### Completion of the internal energy market

Development of single market design at European level, going beyond the adoption and implementation of market rules:

Increased competitiveness as well as security of supply through the sharing EU-wide of existing resources rather than their duplication at national level.

This requires a EU-wide network to do so, hence the need to improve coordination between transmission operators and to secure acceptance of the public at local level, as well as set tariffs at the right level for financing.



Ensuring financing of energy infrastructure

The infrastructure (network, storage, generation) has to be financed from private sources, which ultimately means through tariffs.

Although general principles governing tariff setting are set at EU level there are two issues to address: This "new" infrastructure is in fact only partially new (transition to low carbon), most of it is replacing ageing networks and plants even for the same level of supply.



### Decarbonisation the energy sector

- this means bringing to the market low-carbon technologies which are competitive with hydrocarbon-based ones
- restoring a working ETS so as to generate carbon price at levels which would trigger investment in low-carbon technologies
- providing support in R & D programmes to such technologies. This could imply that support budget for renewables are shifted from deployment to R & D.



### Increasing energy efficiency

- contributes to both competitiveness and security of supply. NB: something that is often forgotten: the ratchet effect of energy efficiency policies, i.e. once more cost-efficient devices/processes are put in place, there is no going back even if the price of energy would go down. One would not replace a class A lamp with a class D when the electricity tariff goes down.
- A key issue is to match financial means and instruments with demand for investment in energy efficiency
- Design energy efficiency energy policy in a way that is not detrimental to the ETS and therefore to the level of the carbon price
- Apart from financing issues this will not be possible, at least in the residential sector, until enough transparency is achieved on energy bills, which calls for sustained deployment of smart meters and the termination of regulated prices, a major political issue in some MSs.

Improving Security of Supply via:

Diversification

External dimension: speaking with one voice in negotiations

Generation adequacy

Addressing the vulnerability of security



### Improving Security of Supply via:

#### Diversification

both internally (renewables as well as unconventional resources) and externally: away from Russia and, to some extent, away from fossil fuels. Well known mantra but given the time span, in Western countries at least, to achieve major developments in all respects (agreeing volume and price, building the infrastructure across several borders), this has to remain a priority at the highest level



Improving Security of Supply via:

External dimension:

speaking with one voice/delivering the same message remains an unfinished business although MSs are more willing to have COM assisting in negotiations





### Improving Security of Supply via:

#### Generation adequacy

the public tend to read Security of Supply as mostly an EU vs. non-EU issue while it is also an internal problem. This issue is compounded by the rapid deployment of renewable energy and its priority in terms of dispatching (priority access to the grid) as well as (this may be short-term lived) competition from low-price US coal, which makes gas-based generation capacities unprofitable leading to possible shortage and concerns about generation adequacy. While one would expect the generation adequacy issue to be sorted out by the end of the decade this is by no means certain.



Improving Security of Supply via:

Addressing the vulnerability of security infrastructure (networks and facilities) to cyber-threats and other threats (both natural – sun radiation, or man-made ) should be a priority.



### Long term prospects

The three primary objectives set in the Treaty – security of supply, competitiveness and sustainability – will continue to set the priorities of the EU energy policies although with more emphasis on the first two, especially security of supply as geopolitical concerns (Russia and Middle East) will not vanish away even after stabilisation in Ukraine.

More abundant and cheaper fossil fuels (unconventional gas and oil) will make it more difficult for low-carbon technologies to compete and for broad support to climate action to be sustained.

Global trends and shifts in production capacities and consumption patterns will keep EU on track of implementation of already initiated policies with more consistency and long term perspective in mind.



# THANK YOU FOR YOUR ATTENTION

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***Director General***



**General Secretariat of the Council**  
Directorate-General Environment, Education,  
Transport and Energy

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