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# **Gas: to be protected or exhausted?**

## Between different EU policy goals

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Post doc Resilient Societies – Stimulating sustainable energy

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# European Sustainable Energy Strategy – three pillars

## **2020:**

20% energy savings  
20% renewable energy  
20% reduction of CO2 emissions

## **2030:**

30% energy savings  
27% renewable energy  
40% reduction of CO2 emissions

## **2050:**

40% energy savings  
75% renewable energy  
80-95% CO2 emissions

## **European Energy Union policy aims**

### **Sustainability**

- Energy efficiency
- Renewable energy
- Decarbonisation

### **Related policy aims**

- Internal market
- Energy security
- Energy poverty

## Definition of natural resources by EU Commission

European economies depend on natural resources, including **raw materials** such as minerals, biomass and biological resources; environmental media such as air, water and soil; flow resources such as wind, geothermal, tidal and solar energy; and space (land area) (COM 670, 2005)

**But there is no regulation on the use of raw materials**

## **Core objectives of natural (fossil) resources policy**

- Reduce negative effects such as pollutions and emissions
- Improved resource efficiency

**The use of fossil fuels is replaced by RES**

## New policy focus: decarbonisation

2050: 80-95% reductions of CO<sub>2</sub> emissions compared to 1990

The targets of energy savings and renewable energy beyond 2020 **will contribute to reduce 40% of the CO<sub>2</sub> emissions by 2050**

Since 2005 RES has increased by 11% (EEA 2017)  
- needs to be 20% by 2020

In 2015, CO<sub>2</sub> emissions were reduced by 22,1% compared to 1990 –  
reductions will exceed target of 20%

## Natural resource v natural resource

Gas emits 40% less CO<sub>2</sub> than coal, 50-60% less in a new, efficient gas-fired plant

Gas reserves for 50 years, coal reserves for 150 years  
Gas is more expensive than coal

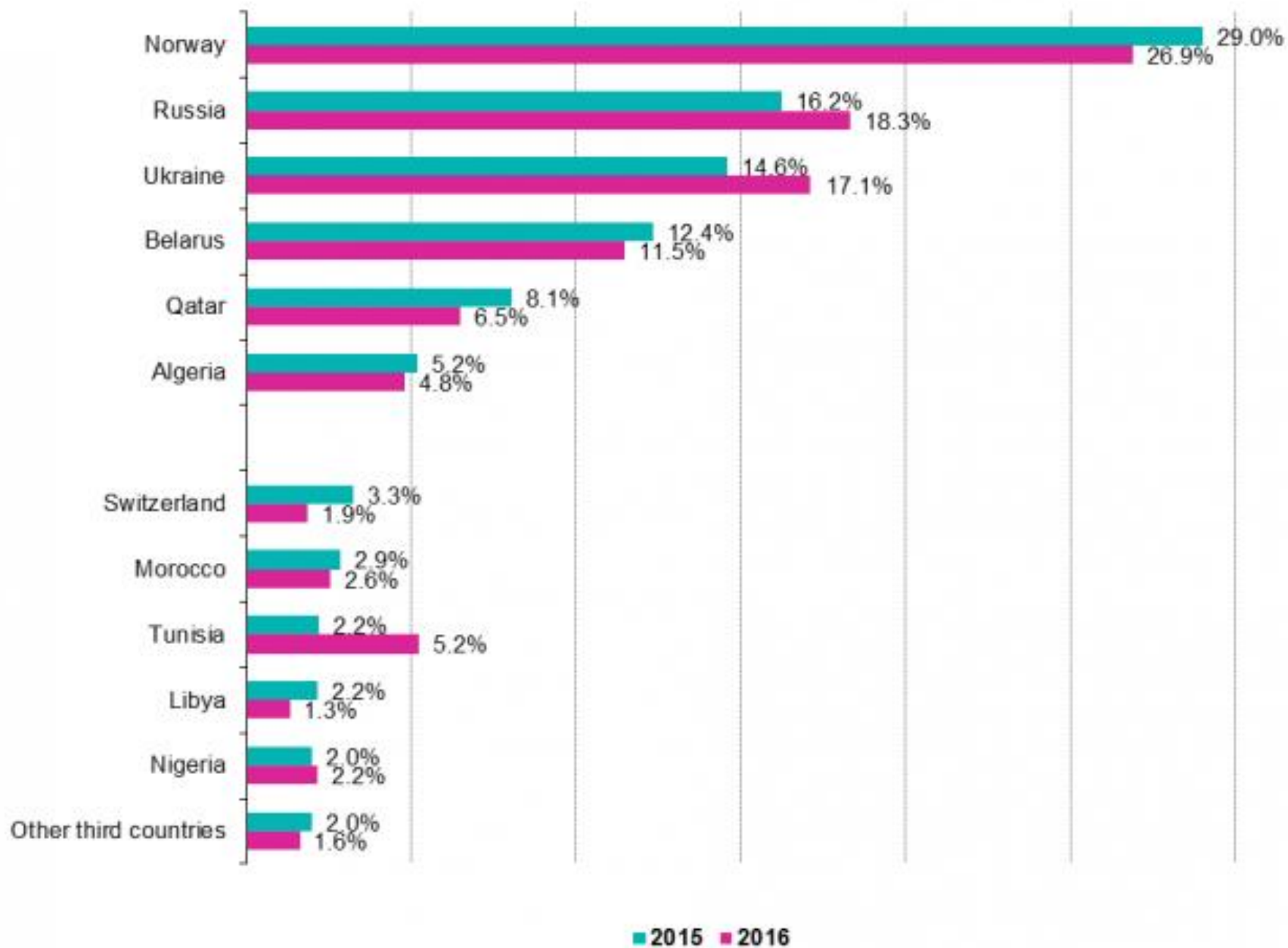
On the short term:

- gasification rather than electrification can contribute to the **reduction of CO<sub>2</sub> emissions**
- More gasproduction in the EU furthermore would **increase energy security** and independence from third states

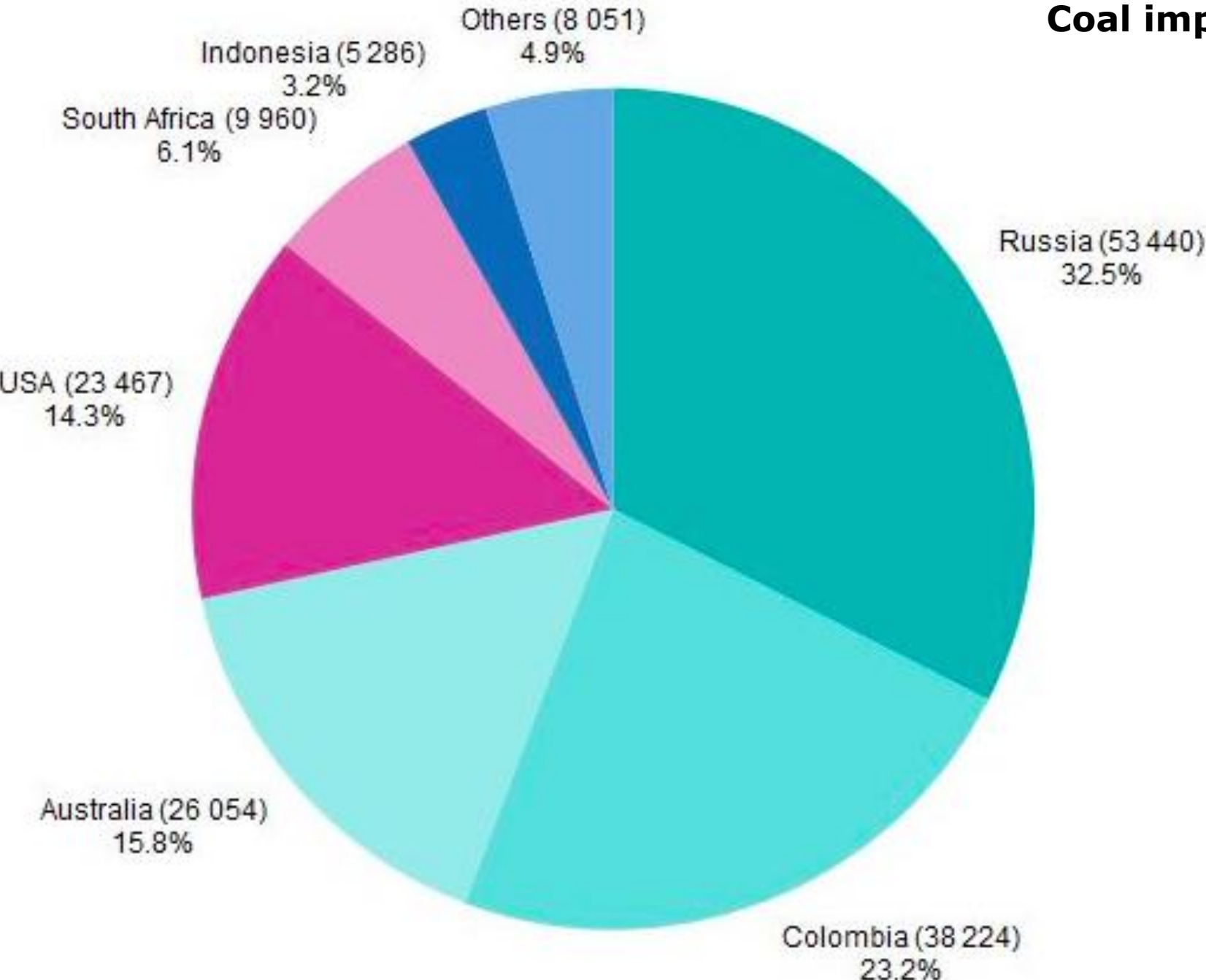
# Energy security



# Percentage of extra-EU imports (entries) of natural gas by country of origin



# Coal import



## Reliance on gas in the EU 2016

**Gas consumption**



7%

**Gas production**



2,6%

**Gas import**



5,5%

## Reliance on gas in the Netherlands 2016

**Gas consumption 2016**



1,7%

**Gas production 2016**



10,4%

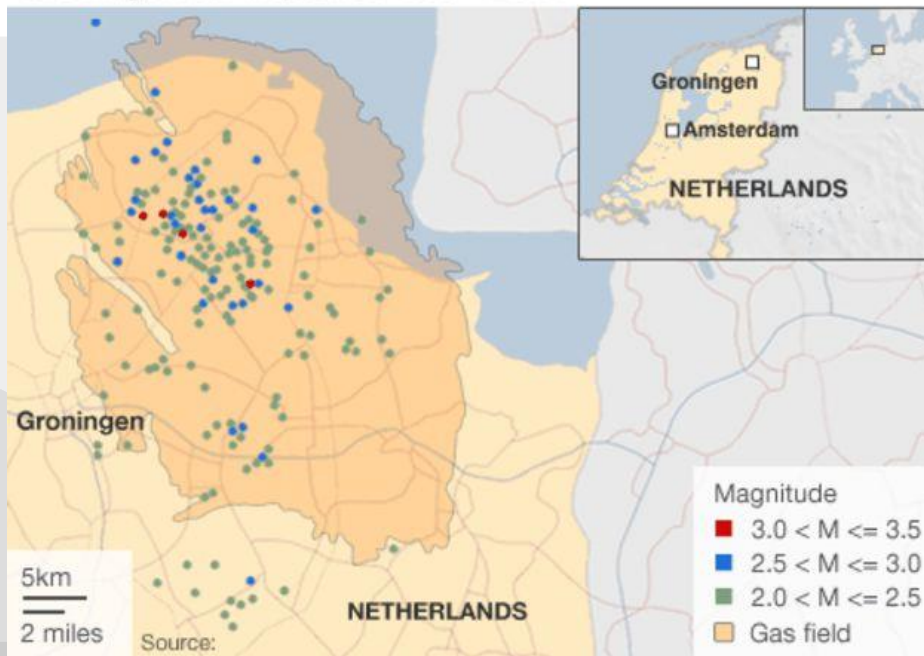
**Total gas import**

44%

# Why not use gas?



Groningen earthquakes 1996 - 2012



The production of gas is limited because

**Earthquakes**

**Emissions**

But, gas is a **better resource than coal** to **increase energy security, decrease energy poverty** and **reduce CO2 emissions**

However, the Dutch reserves have been exhausted for 80% - there are 17 years left of natural gas

What justifies the exhaustion of gas reserves?

## Could the extraction of gas be regulated? 1/3

Article 194 of the Treaty of the Functioning of the EU

1. In the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, in a spirit of solidarity between Member States, to:

- (a) ensure the functioning of the energy market;
- (b) ensure **security of energy supply in the Union**;
- (c) promote energy efficiency and energy saving and the development of new and renewable forms of energy; and
- (d) promote the interconnection of energy networks.



## Could the extraction of gas be regulated? 2/3

2. Without prejudice to the application of other provisions of the Treaties, the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, shall establish the measures necessary to achieve the objectives in paragraph 1. Such measures shall be adopted after consultation of the Economic and Social Committee and the Committee of the Regions.

**Such measures shall not affect a Member State's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply, without prejudice to Article 192(2)(c).**

## Could the extraction of gas be regulated? 3/3

### Article 192

2. By way of derogation from the decision-making procedure provided for in paragraph 1 and without prejudice to Article 114, the Council acting **unanimously in accordance with a special legislative procedure and after consulting the European Parliament, the Economic and Social Committee and the Committee of the Regions, shall adopt:**

**(c) measures significantly affecting a Member State's choice between different energy sources and the general structure of its energy supply.**

The Council, acting unanimously on a proposal from the Commission and after consulting the European Parliament, the Economic and Social Committee and the Committee of the Regions, may make the ordinary legislative procedure applicable to the matters referred to in the first subparagraph.

## **Would we regulate the use of gas?**

To improve energy security and energy poverty

To reduce CO2 emissions

But

Reserves are ending – fast

We are not protection gas as a natural resource, we regulate it because it is dirty