



MINISTRY OF ECONOMY

# Energy Policy of Poland until 2030

Conference  
Trends in the European Energy Industry  
*National Energetic Concepts  
of the European States*  
24th of May 2011



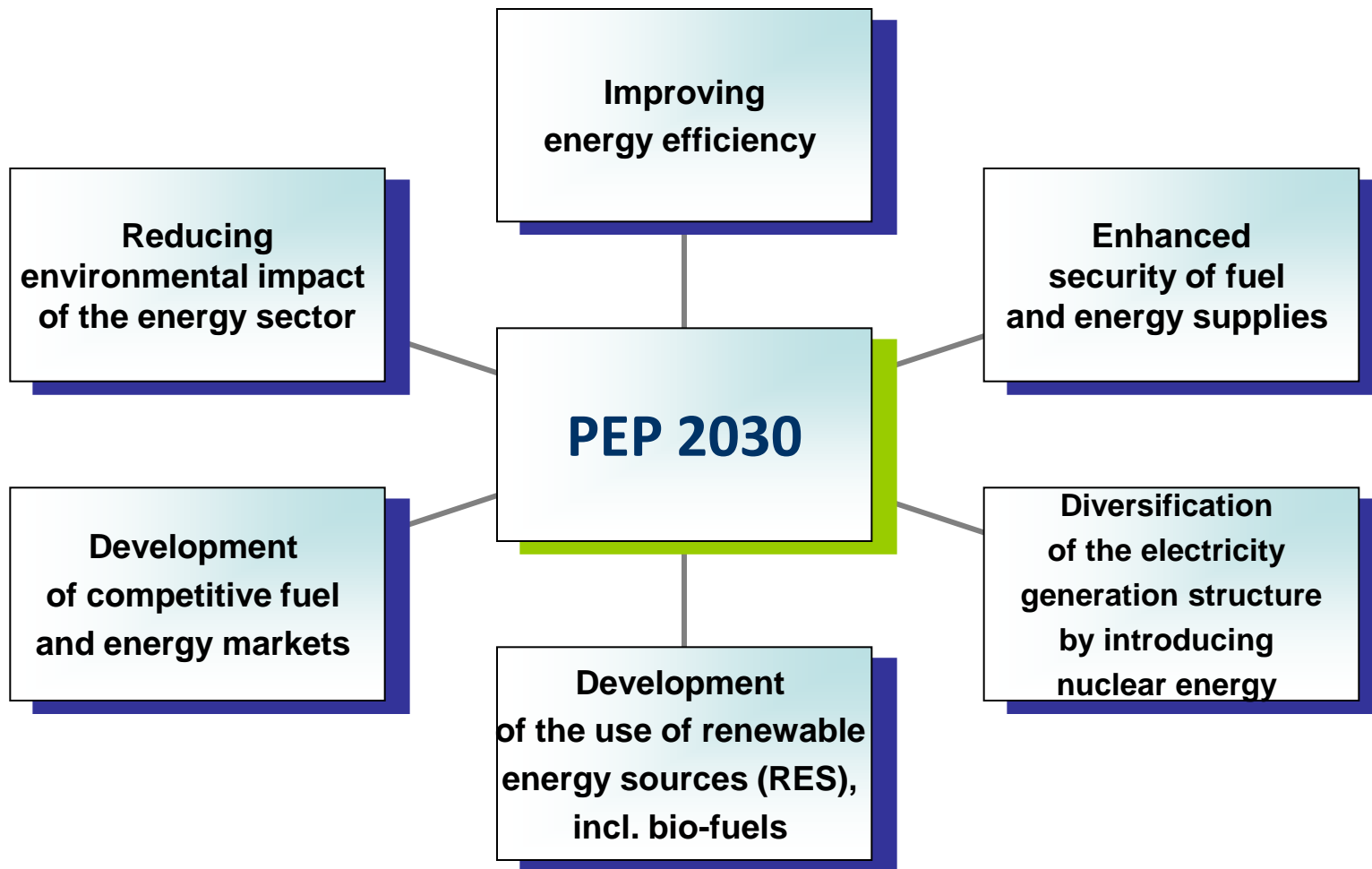
## ***The Energy Policy of Poland 2030* was approved by the Council of Ministers in November 2009**

The document includes the following attachments:

- Action Plan for 2009-2012
- The forecast of demand for fuels and energy to 2030
- Conclusions from a strategic evaluation of environmental impact of energy policy



# Priorities of Polish energy policy





# **Main challenges for energy policy**

**High demand  
for final energy**

**Inadequate generation and  
transmission infrastructure**



**Significant dependence on  
external supplies of natural  
gas**

**Commitments on  
environment and climate  
protection compel us to take  
decisive actions**

**Almost full dependence on  
external supplies of crude oil**



## Energy policy of Poland...

- ... is consistent with the energy policy of the European Union and its objectives.
- ... answers on the main challenges facing the Polish energy sector.





## Energy efficiency

### The main targets:

- To achieve zero-energy economic growth, i.e. economic growth with no extra demand for primary energy
- Reducing the energy intensity of the Polish economy to the EU-15 level (in 2005)

### The above targets will be realized through:

- Reducing energy consumption
- Enhancing the efficiency of generation
- Decreasing transmission losses





# Energy security

## Polish energy security should be based on:

- Domestic energy resources
- Diversification of oil and gas supplies
- Development of electricity generation capacity
- Development of transmission infrastructure

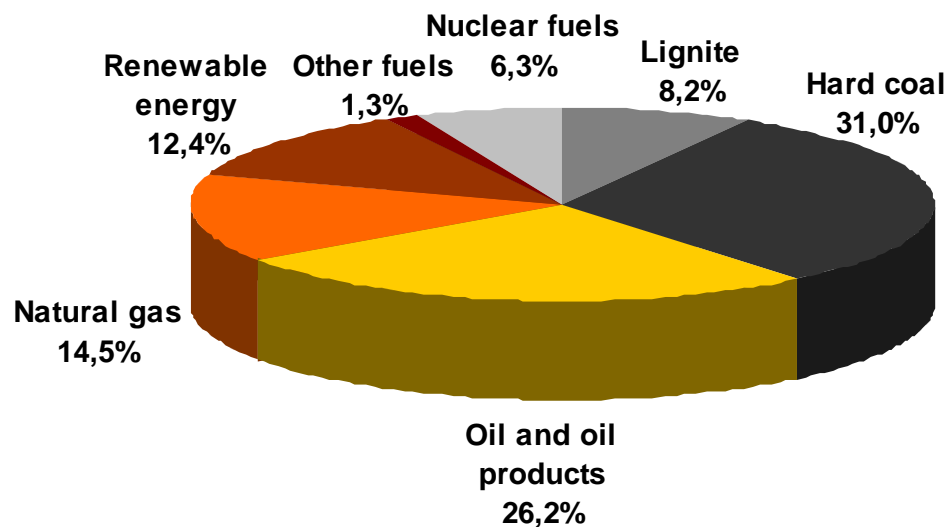
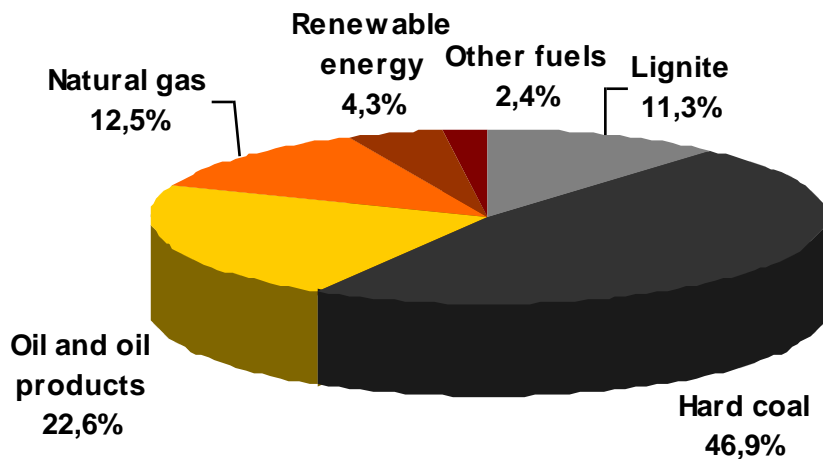




# The demand for primary energy by carriers (%)

2010 ~ 90 Mtoe

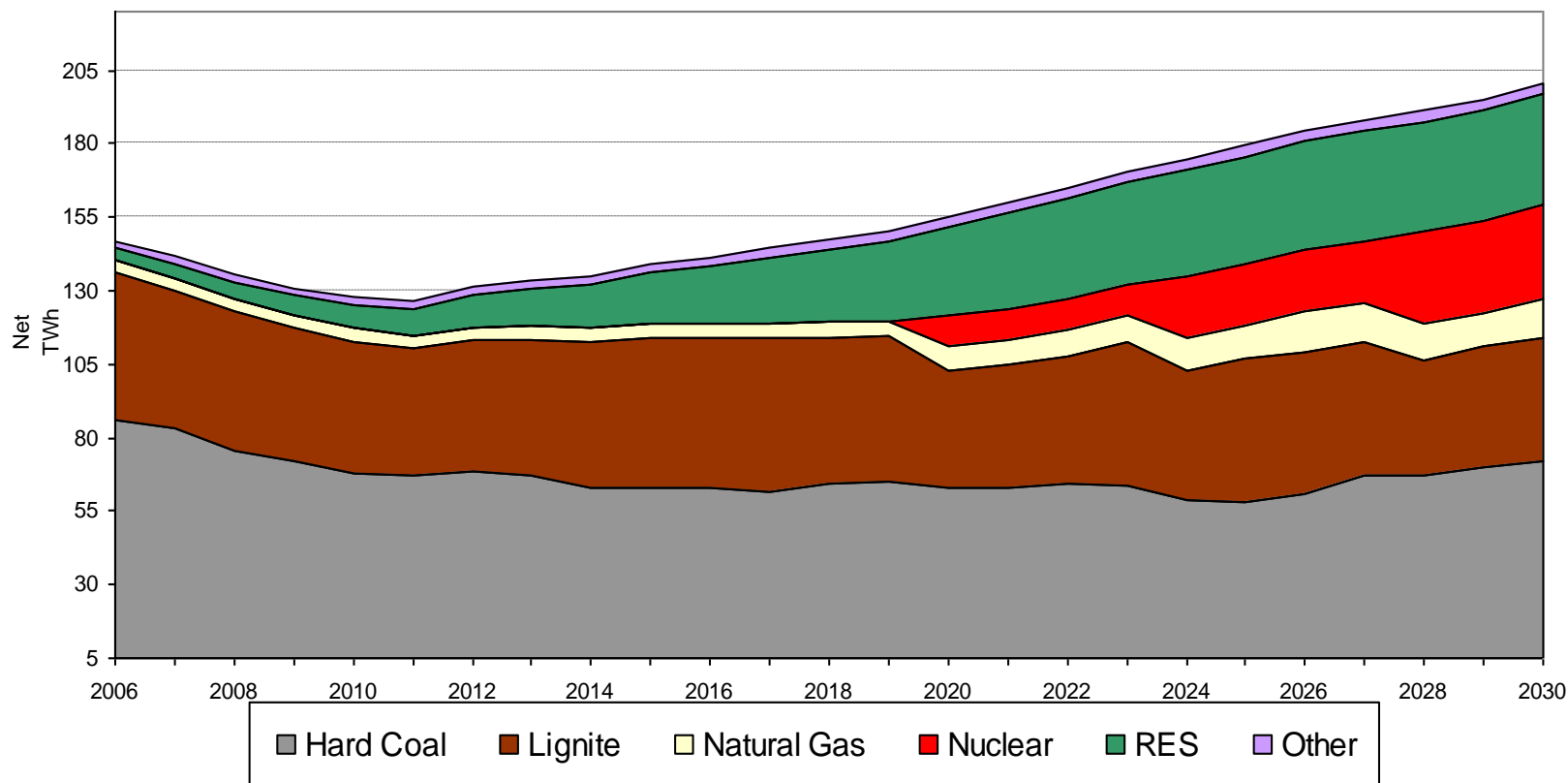
2030\* ~ 118 Mtoe







# Electricity generation by sources (TWh)





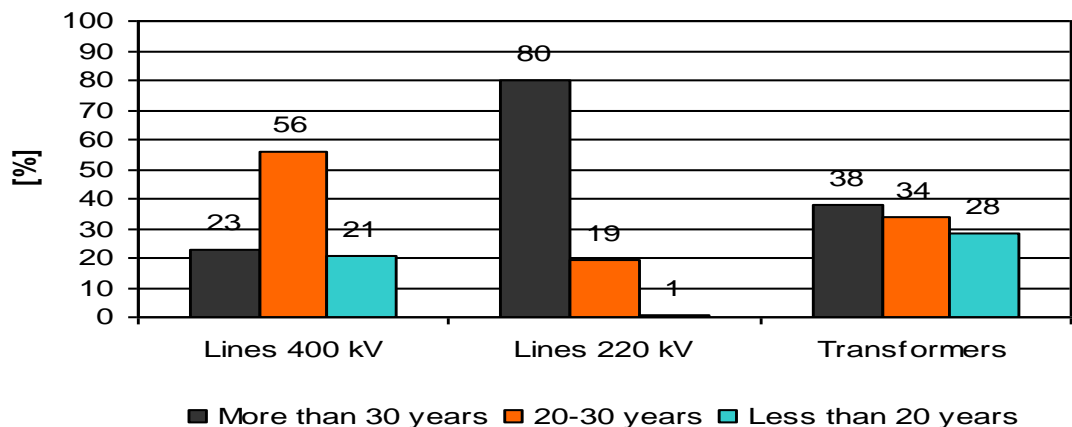
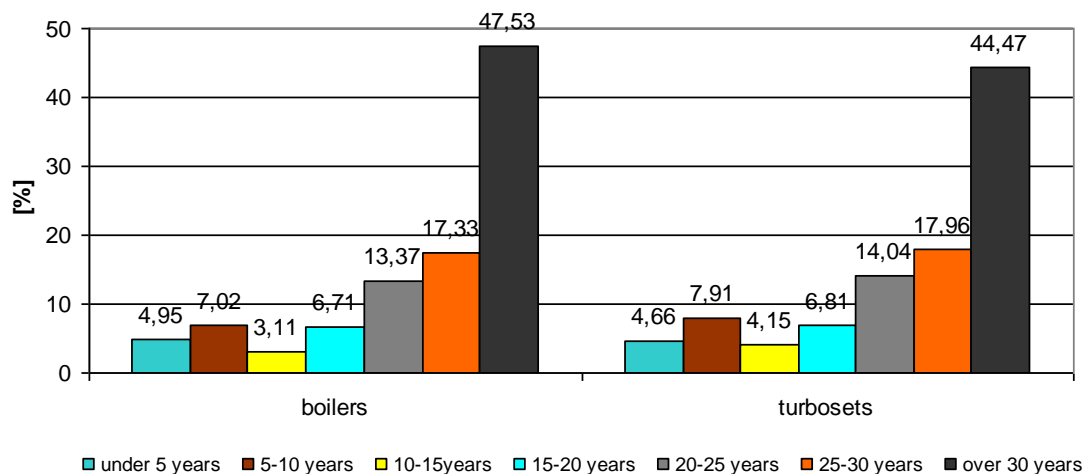
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## Parameters of the Polish Power System in 2010\*

- Installed capacity: 35,5 GW
- Maximum power demand: 25,4 GW
- Gross electricity generation: 156,3 TWh
- Electricity imports: 6,3 TWh
- Electricity exports: 7,6 TWh
- Domestic consumption of electricity: 154,9 TWh

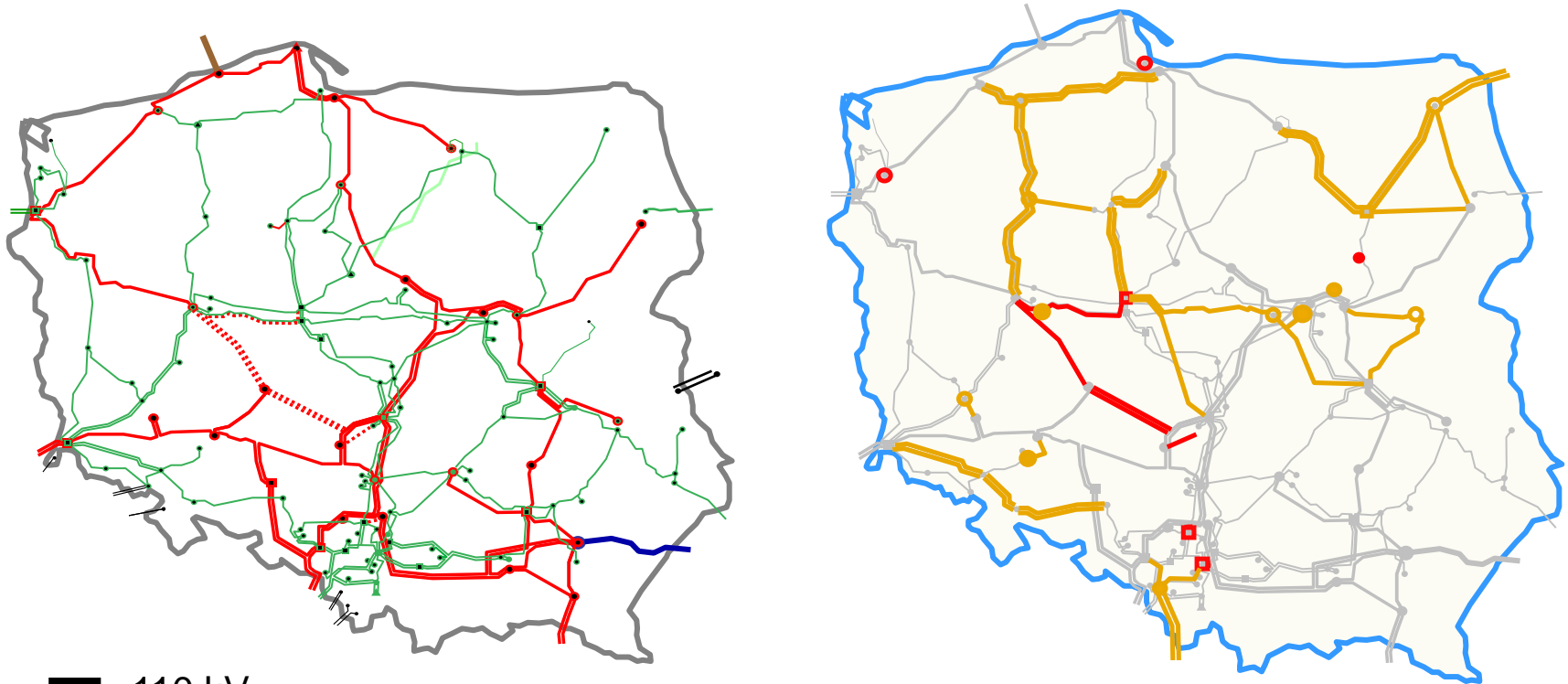
\* Provisional data

## Age structure of electricity generation and transmission infrastructure





# Polish transmission grid – planned investments



- 110 kV
- 220 kV
- 400 kV
- ±450 kV
- 750 kV

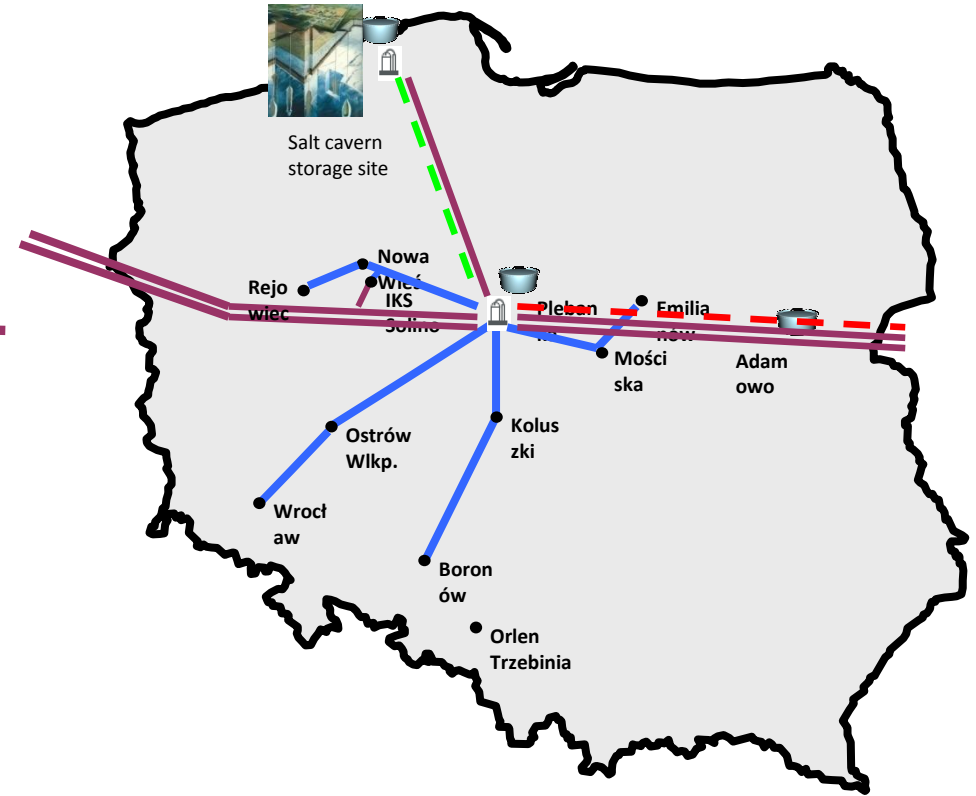
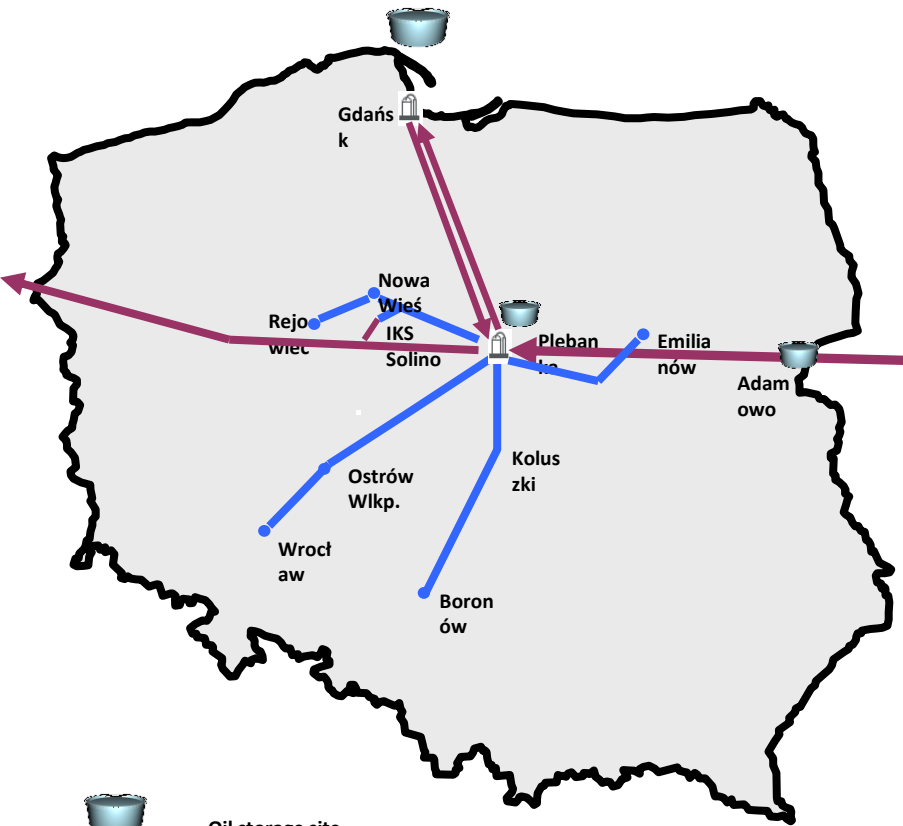
- planned 400 kV lines before 2013
- planned 400 kV lines after 2013

Source:  
PSE-Operator S.A.



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## Oil infrastructure



Oil storage site



Refinery



Crude oil pipeline



Product pipeline

### Projekty:

--- III line of Druzhba pipeline: Adamowo-Plebanka

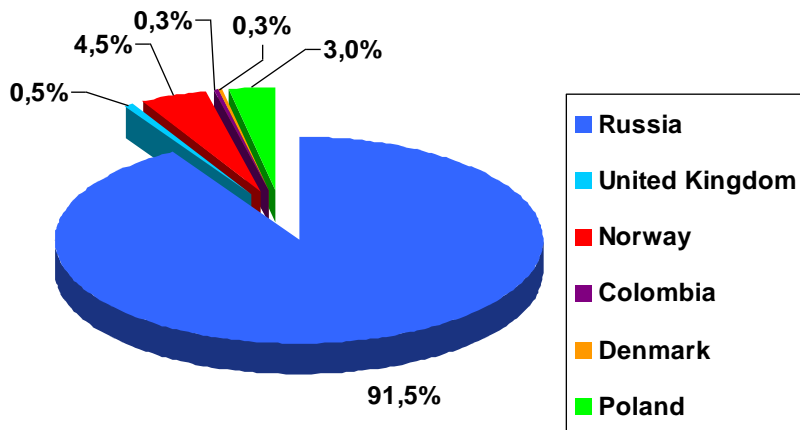
--- Pomeranian Pipeline

Salt cavern storage site.:6 000 tys. m<sup>3</sup>

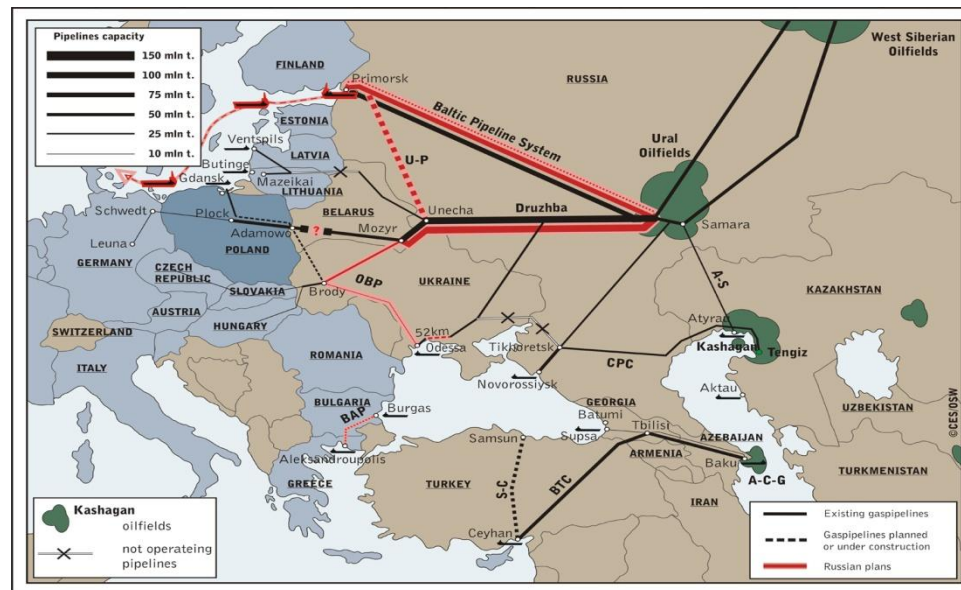


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## Supply directions of oil in 2010



## Odessa-Brody-Płock pipeline





## Natural gas sector

### The main targets:

- diversifying supplies by building a transmission system,
- building a terminal for receiving liquefied natural gas (LNG)
- increase of domestic gas production and developing gas resources outside Poland



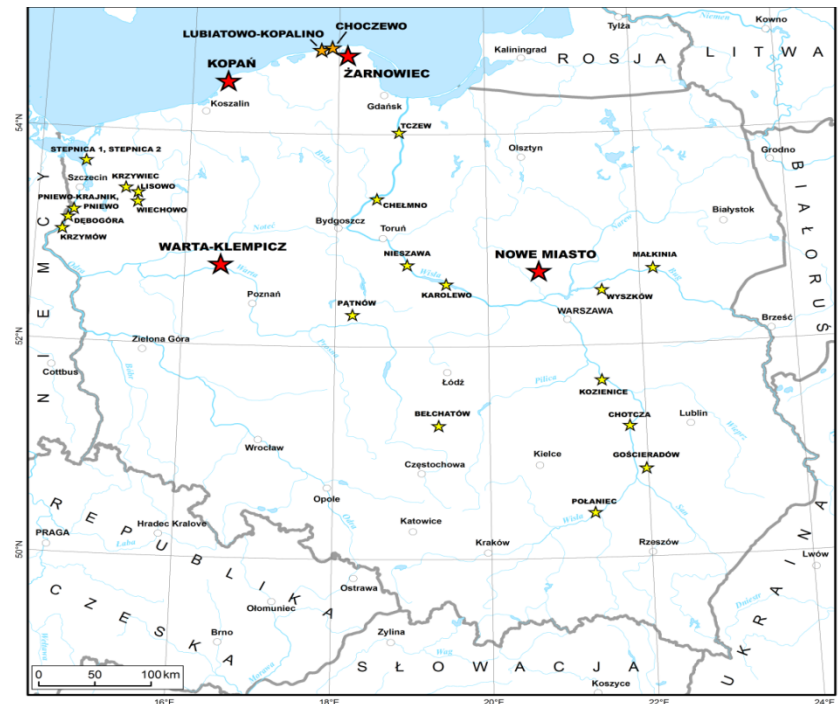


# Nuclear energy

Energy Policy of Poland until 2030 assumes diversification of the electricity generation structure by introducing nuclear energy.

## The main targets:

- Preparing infrastructure for nuclear energy
- Ensuring appropriate conditions for investors interested in building and launching nuclear power plants
- Gaining public support for nuclear energy



Selected in 2009 locations for nuclear plants



# Renewable Energy Sources

## Main goals:

- 15% share in final energy consumption in 2020
- 10% share of bio fuels in fuel market in 2020

## Main measures:

- Additional support mechanism for RES
- Effective use of biomass (agricultural biogas installations, second generation of biofuels)
- Support from European Funds



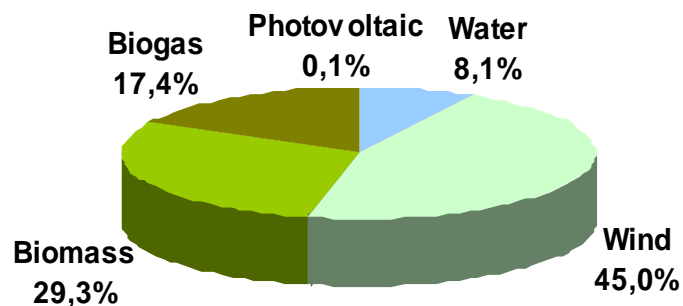


# Electricity generation in RES

## Share of RES in net electricity generation



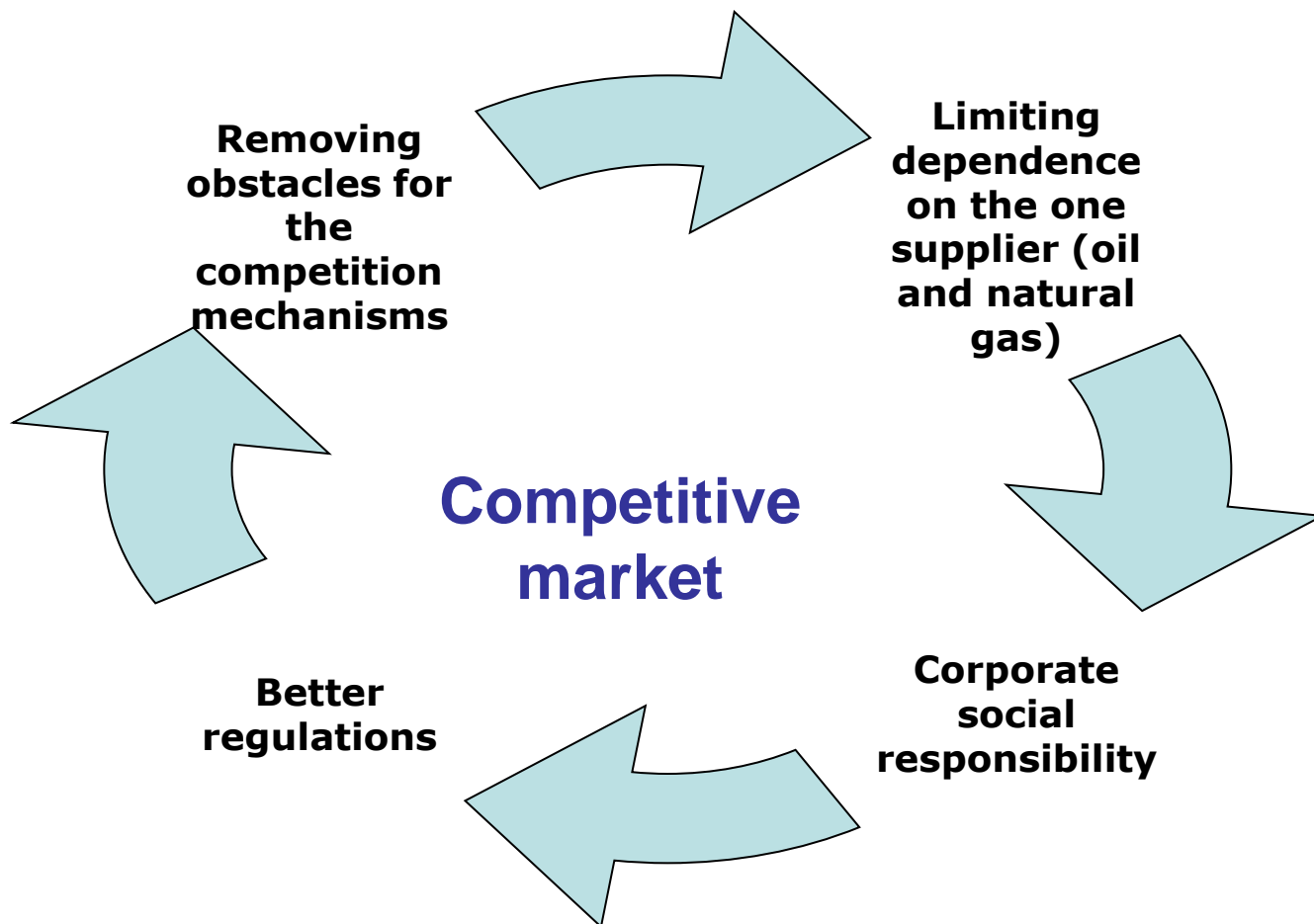
## Electricity generation in RES (%) in 2030





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# **Development of competitive fuel and energy markets**

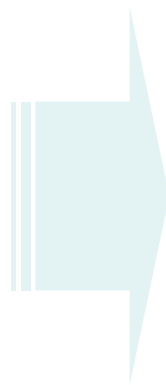




## Reducing the environmental impact of the power industry

### The main targets:

- Reducing emission of CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub> and dust
- Development of low-emission technologies



### The main actions:

- Development of technologies which reduce the emission of pollutants, ex.: RES, high efficiency cogeneration, nuclear energy
- Development of clean coal technologies, including CCS installations and gasification of coal
- Utilization of methane from mining sector for energy generation



# Polish Presidency of the EU Council

**From 1st of July 2011 Poland will hold the  
Presidency in the Council of the European Union**

## **Main energy priorities:**

- to strengthen external EU energy policy,
- to develop energy infrastructure (strictly connected with energy security),
- to improve energy efficiency.





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**Thank you for your attention**

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