Energy Policy of Poland until 2030
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.
Main challenges for energy policy

- High demand for final energy
- Inadequate generation and transmission infrastructure
- Commitments on environment and climate protection compel us to take decisive actions
- Almost full dependence on external supplies of crude oil
- Significant dependence on external supplies of natural gas
Priorities of Polish energy policy

- Improving energy efficiency
- Enhanced security of fuel and energy supplies
- Diversification of the electricity generation structure by introducing nuclear energy
- Development of the use of renewable energy sources (RES), incl. bio-fuels
- Development of competitive fuel and energy markets
- Reducing environmental impact of the energy sector

PEP 2030

MINISTRY OF ECONOMY
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 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

Main measures:

• Setting the national energy efficiency action plan
• Introducing a mechanism to support for investment in energy saving (white certificates)
• Stimulating development of cogeneration through support mechanisms (yellow and red certificates)
• Introducing energy performance certificates for buildings and apartments
• Model role of public sector in energy saving activities
• Supporting investments and research in new solutions and technologies
• Informational and educational campaigns
The demand for primary and final energy until 2030 [Mtoe]

Source: Projection of demand for fuels and energy until 2030
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

Main measures:

• Retaining sufficient level of mining capacity
• Extending the natural gas and crude oil transmission system and storage capacities
• Reconstruction and reinforcement of the existing power grids
• Construction of new power grids
• Supporting research and development of technologies providing to use coal for liquid and gas fuels production
• Support from European Funds
The demand for primary energy by carriers (%)

Source: Projection of demand for fuels and energy until 2030, ARE
Age structure of electricity generation appliances

MINISTRY OF ECONOMY

- Boilers:
  - Under 5 years: 4.95%
  - 5-10 years: 7.02%
  - 10-15 years: 6.71%
  - 15-20 years: 17.33%
  - 20-25 years: 17.96%
  - 25-30 years: 14.04%
  - Over 30 years: 17.96%

- Turbosets:
  - Under 5 years: 4.66%
  - 5-10 years: 7.91%
  - 10-15 years: 4.15%
  - 15-20 years: 4.15%
  - 20-25 years: 6.81%
  - 25-30 years: 14.04%
  - Over 30 years: 17.96%
Electricity generation by sources (TWh)
### Expected capital expenditure

- Necessary capital expenditure for modernisation and construction of new electricity sources [bln Euro].

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<tbody>
<tr>
<td><strong>Generation subsector</strong>*</td>
<td>6.2</td>
<td>11.0</td>
<td>17.3</td>
<td>13.9</td>
<td>14.5</td>
<td>62.9</td>
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<tr>
<td><strong>Transmission and distribution subsector</strong></td>
<td>2.9</td>
<td>5.4</td>
<td>5.7</td>
<td>4.1</td>
<td>3.8</td>
<td>21.9</td>
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<tr>
<td><strong>Total</strong></td>
<td>9.1</td>
<td>16.4</td>
<td>23.0</td>
<td>18.0</td>
<td>18.3</td>
<td>84.8</td>
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* Generation subsector contains the system power plants as well as the combined heat and power plants and local power sources, including renewables.

1 Euro ~ 4 PLN

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

Main objectives:

- preparing infrastructure for nuclear energy,
- ensuring appropriate conditions for investors interested in building and launching nuclear power plants,
- gaining public support for nuclear energy.
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
Development of competitive fuel and energy markets

- Better regulations
- Removing obstacles for the competition mechanisms
- Corporate social responsibility
- Limiting dependence on the one supplier (oil and natural gas)

Competitive market
Reducing the environmental impact of power industry

The main targets:

• Reducing emission of CO$_2$, SO$_2$, NO$_X$ 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
  – Use all reasonable efforts to locate in Poland two CCS demonstrative power plants
  – Using the CCS technology to support crude oil and natural gas extraction
  – Intensifying research and development of the CCS technology
• Utilization of methane from mining sector for energy generation
Thank you!!!