



SUSPLAN Regional Seminar and Workshop:
**Scenarios for the Development of Energy Infrastructure
in Pomorskie Region**

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Poland's New Energy Policy to 2030 – Development of Energy Infrastructure and Promotion of Renewable Energy Sources

Grzegorz Wiśniewski
Institute for Renewable Energy

*Among other sources, this presentation is based on Poland's New Energy
Policy to 2030"*

*by Zbigniew Kamieński, Director of the Department of Energy, Ministry of
Economy, 6 March 2009*

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Structure of New Energy Policy (ver. 6/0309)

Poland's Energy Policy of Poland

- Enclosure 1. Evaluation of implementation of energy policy to 2005
- **Enclosure 2. Forecast demand for fuels and energy**
- Enclosure 3. Action Programme for 2009 – 2012
- Enclosure 4. Forecast influence of energy policy on the environment

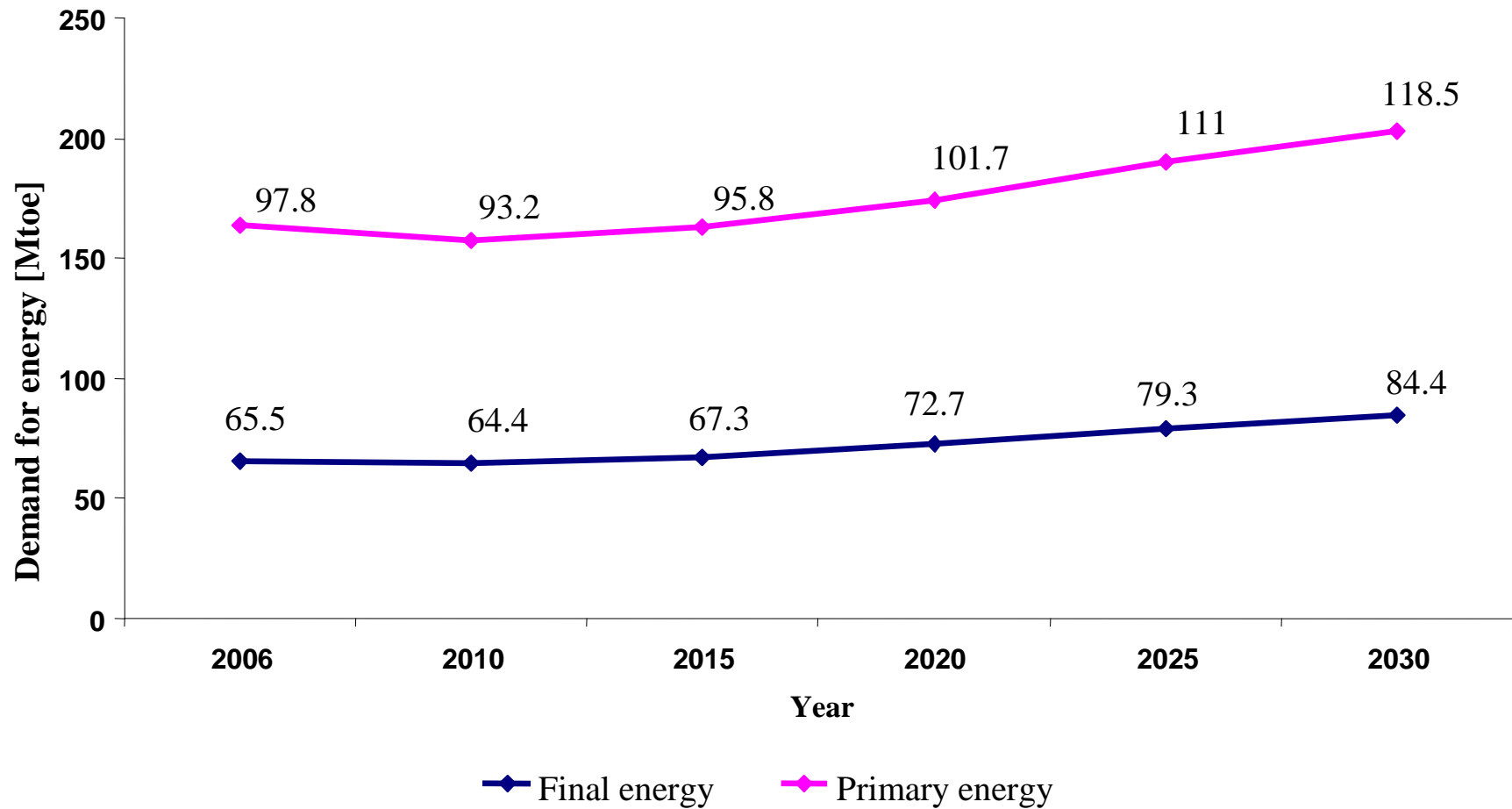
Energy Policy Directions

Poland's energy policy is coherent with EU energy policy.

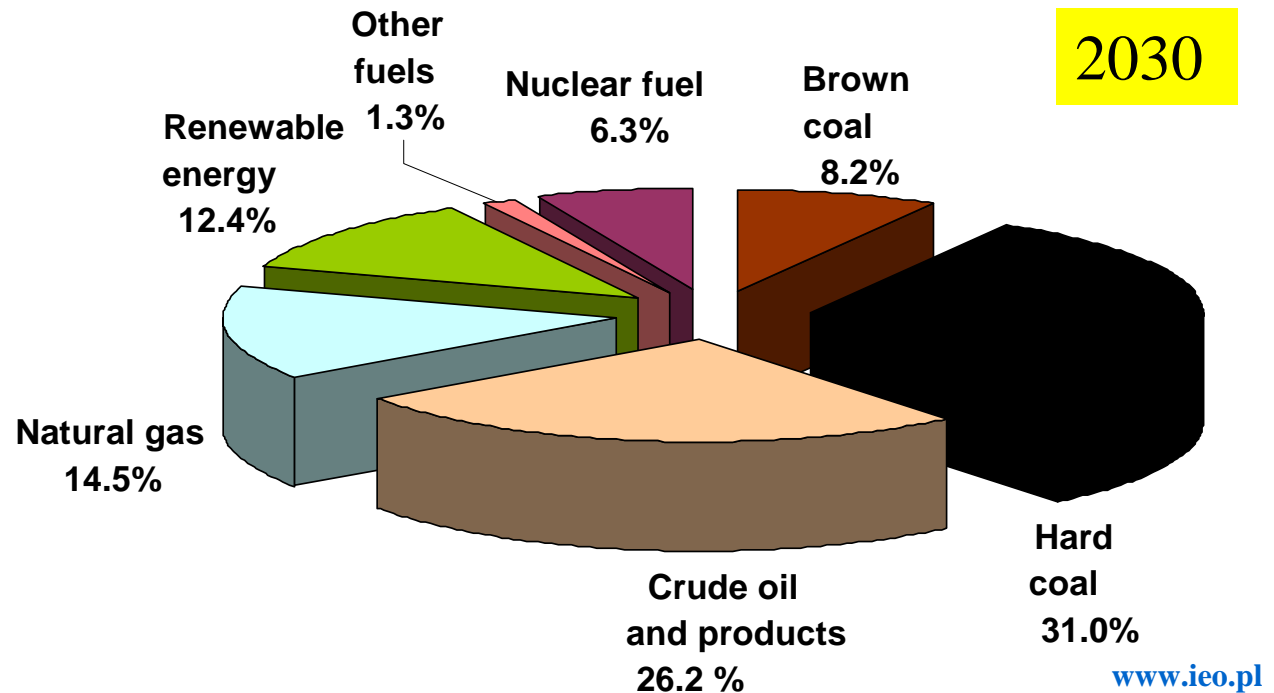
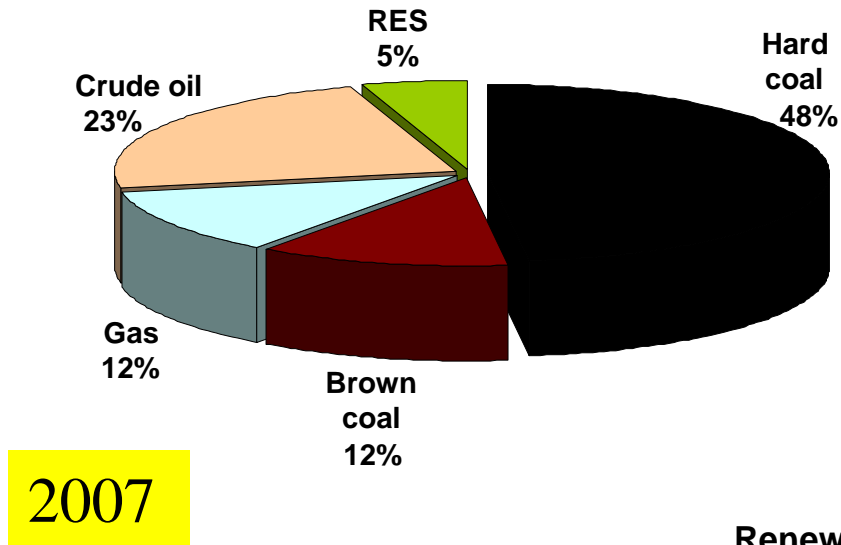
Main directions:

- improvement of energy efficiency
- **better security of fuel and energy supplies**
- **diversification of the electricity generation structure by introduction of nuclear energy**
- **development of utilisation of renewable energy sources including biofuels**
- development of competitive markets for fuels and energy
- reduction of the influence of the energy sector on environment

Demand for Primary and Final Energy to 2030



Energy Mix for Primary Energy 2007 vs. 2030





Diversification of Electricity Generation Structure by Introduction of Nuclear Power

Main actions:

- create institutional grounds for the preparation and implementation of a nuclear power programme
- define the necessary legal framework for the programme
- launch an information and education campaign
- build scientific and research facilities and hire staff

Development of Renewable Energy Sources

Main objectives:

- increase of the contribution of RES to final energy consumption to 15% in 2020 and 20% in 2030
- achieve a 10 % contribution of biofuels in the transport fuel market in 2020
- protect woodland against excess exploitation and use farmland for RES in a sustainable way: limit co-combustion, develop energy crop plantations



Development of Renewable Energy Sources Including Biofuels

Main actions:

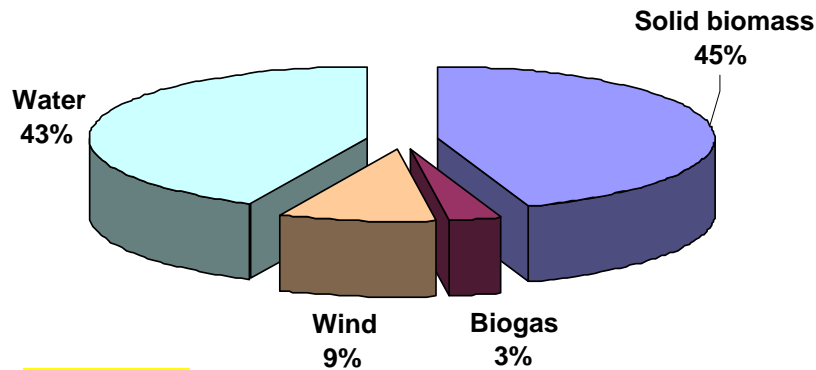
- maintain current RES support mechanisms and introduce new ones
- use biomass effectively (in systems using biomass of agricultural origin; 2nd generation biofuels)
- create conditions for construction of off-shore wind farms
- support projects with the use of EU funding

Renewable Electricity

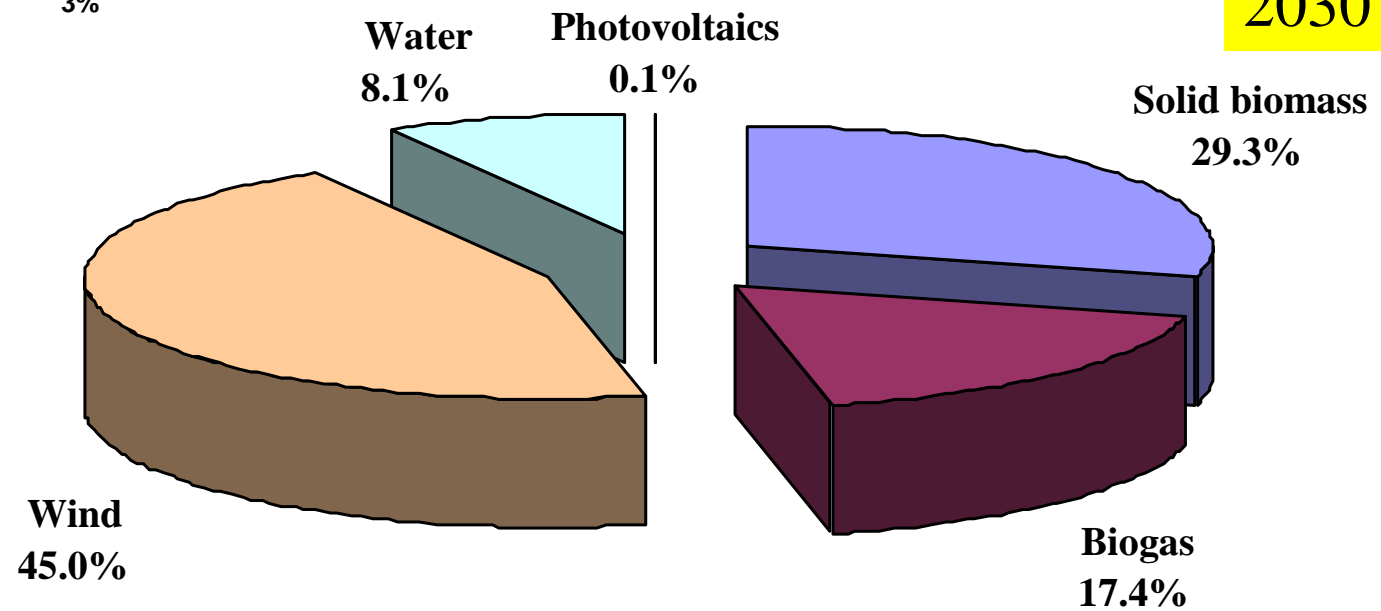
– attitude of PEP 2030 (Poland’s Energy Policy to 2030) to RES

- Wind power – expected very large increase of installed power including off-shore
- Biomass – cogeneration systems („biomethane plants”), utilisation of farm and municipal waste, greater use of energy crops
- Hydro-power – primarily the growth of small hydroelectric power plants
- Photovoltaics – limited development because of costs
- Geothermal energy – development as engineering solutions improve

Renewable Electricity Generation 2007 vs. 2030



2007



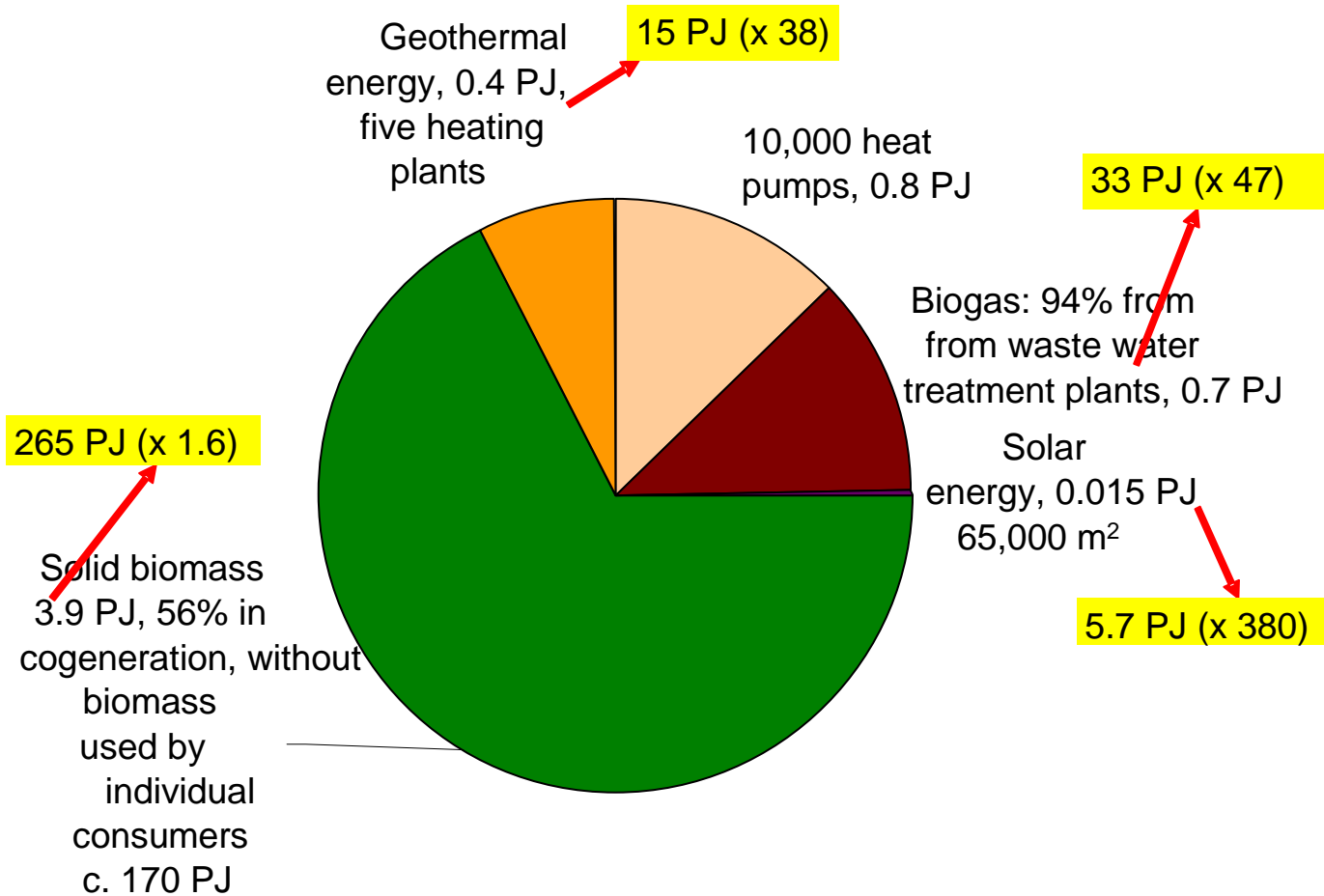
2030

Renewable Heat – analysis to 2030

- **Biomass** – primarily cogeneration systems
- **Geothermal energy**, including heat pumps – rapid development expected
- **Solar collectors** – very rapid development expected

Renewable Heat Generation

'2007 - 180 PJ vs 2030 - 319 PJ



- Objective for 2010 – 5.75%
- Actual for 2007 – 0.68%
- Objective for 2020 – 10%
- Up to 5% of biocomponents in liquid fuels
- Liquid biofuels approved for general trade:
 - B20, B100 (now)
 - E85
- Selected fleets introduce higher contribution of biofuels (100%)
- Farmers may produce biofuels for their own use
- Use of biocomponents is compulsory
- Biohydrogen from 2025
- 2nd generation biodiesel and bioethanol from 2020

Implementation Programme to Poland's Energy Policy to 2030 Regarding Renewable Energy Sources

Action 4.1 Develop a path to achieve a 15 % contribution of RES to final energy consumption divided into energy types: electricity, heat and cold, renewable energy in transport and divided into technologies

Action 4.2 Maintain support mechanisms for renewable electricity producers by way of certificates of origin (green certificates). That instrument will be adjusted to the current and expected growth of the price of electricity generated from fossil fuels

Action 4.3 Maintain the obligation to gradually increase the biocomponent content in transport fuels to accomplish the stated objectives

Action 4.4 Introduce additional support mechanisms promoting renewable heat and cold generation at a larger scale

Action 4.5 Implement an agricultural biogas plant construction programme assuming that one biogas plant will be built in each commune by 2020

- the Council of Ministers to endorse the programme titled "Innovative Power Engineering Sector – Energy Agriculture – 2009"
- Remove barriers to the development of agricultural biogas plants as identified in the Programme – from 2009
- Prepare a guidebook for foreign investors interested in the construction of agricultural biogas plants, the guidebook to include typical designs for biogas plants – 2010
- In conjunction with the local government, launch an information campaign giving full and precise information on the advantages of biogas plants – 2009 – 2010
- Monitor programme implementation on a continuous basis – from 2010.



Poland's Energy Policy to 2030 on the Role of Local Governments

As part of support for the implementation of the energy policy, it is important that the **local authorities actively participate** in the accomplishment of the policy objectives.

- A crucial point: energy must not be omitted from investment priorities set out by local governments. Moreover, **investment plans of communes and power companies should be coordinated.**
- The above is related to **the need to improve the condition of energy infrastructure** to ensure a high quality of services for the local community, attract investors and **make a region more competitive and attractive.**
- **Good energy planning** is one of basic conditions for the success of the state energy policy.

Action proposal: Introduce changes in energy law regarding determination of the responsibility of local authorities for preparation of local assumptions to and plans for the supply of heat, electricity and gas fuels.



Thank you for your attention

Contact: gwisniewski@ieo.pl

Further details of the new Energy Policy:

Zbigniew Kamieński
Director of Department of Energy

Ministry of Economy
Pl. Trzech Krzyży 3/5
00-507 Warszawa

E-mail: zbigniew.kamienski@mg.gov.pl