

# **The Polish Joint Implementation**

**presented by  
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# Introduction

- UNFCCC: signed 1992, ratified 1994,
- SECRETARIAT JI (S-JI) - 1995 (one of the first in Europe), in NFEP&WM
- KYOTO PROTOCOL'97; ratified by Poland in August 2002. Willingness to participate in Flexible Mechanisms

# General Criteria for AIJ / JI Projects

Based on:

- International criteria (KP and COP 7, IPCC)
- Polish National Criteria based on National Environmental Policy implemented by Ministry of Environment (MoE)

# Authorizing bodies

- Cooperation based on mutually accepted Memorandum of Understanding until Kyoto Protocol is not a source of international law.
- Department of Investment and Technological Development in the Ministry of Environment is responsible for implementation of flexible mechanisms

# National Priorities for JI - proposals

- Energy conservation - construction (or retrofiting) of CHP installations
- Fuel switch in energy conversion installations to renewable (hydropower, wind power, biogas, biomass)
- Waste management contributing to avoidance of GHG emissions in particular through energy recovery and use
- GHG absorption through out forestry

# Joint Implementation Projects

- Case study „Skrobotowo Wind Park, located in the North – West of Poland within the Municipality of Karnice”
- Price of 1 ERU – 9 EURO
- Purchase Power Agreement sign with Polish Grid Company (PSE Elektra)
- Option of selling ERU converted into AAU as „early credits” generated before 2008

# Lessons Learned

- **Lack of diversified portfolio (wind farms, coal to gas conversion)**
- **Banking rules for prepayments for ERU's**
- **Balance of interest between Investor Country and Host Country**

# Final Conclusion

- Small scale of present JI projects
- Unsatisfactory outcome of JI projects due to institutional complexity
- Switch from passive approach of involvement in JI projects to active one - searching for international investors through focal points



# Renewable energy driving forces in Poland

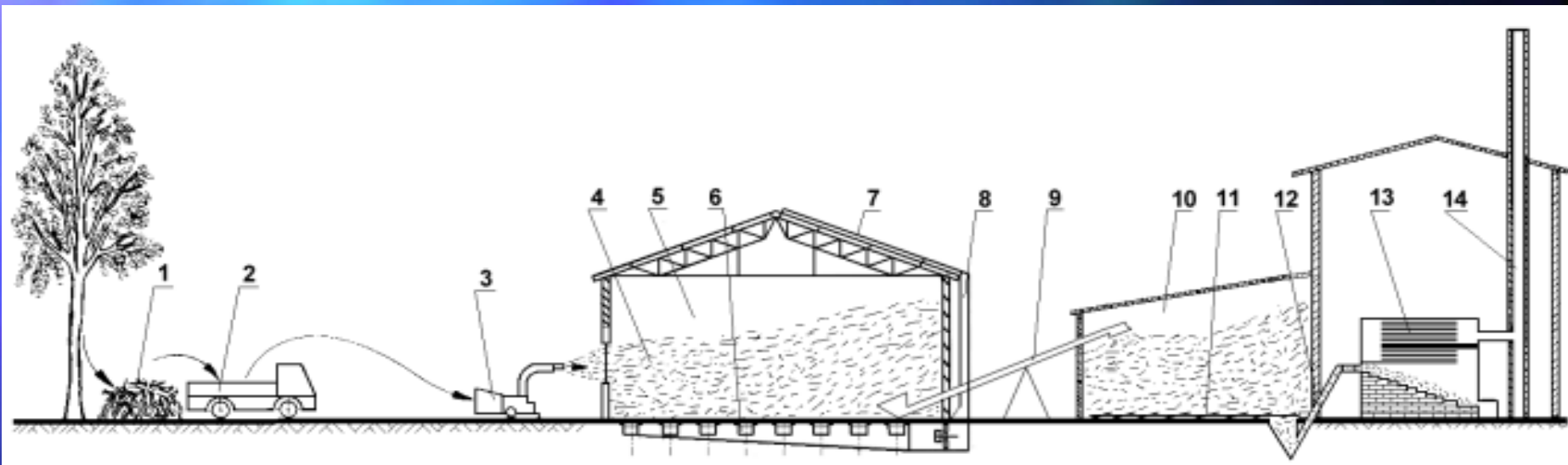
- Poland is well-endowed country with renewable energy sources, especially biomass as well as wind and geothermal
- Poland has adopted already the national renewable energy strategy- 7,5 % in 2010 and is harmonising its environmental and energy policy with those of EU
- Big agricultural sector, considerable forestation, extensive rural areas under restructuring and extensive use of coal fired District Heat and CHP plants create opportunities for the development of bioenergy
- There is considerable demand for clean energy investment and big opportunities for JI and ET schemes in Poland to support in the development of Renewable Energy sector

# Cost of the CO<sub>2</sub> equiv. emission reduction: small and medium scale RET vs. coal , EC BREC '2000

RES technology	Cost of reduction of GHGs emissions [Euro/t]
Landfill gas installation for generation of heat and electric energy – 550 kW <sub>el</sub> , 700 kW <sub>th</sub>	0,3
Straw-fired heating plant – 1MW	2,0
Wood chip-fired heating plant - 500 kW	5,0
Wind power plant - 2 x 600 kW	7,3
Small hydro power station with new dam 90kW	13,3
Wood-fired boiler - 80 kW	15,3
Straw-fired boiler - 65 kW	25,6
Geothermal heating plant – 7.3 MW	<sup>10</sup> 35,3

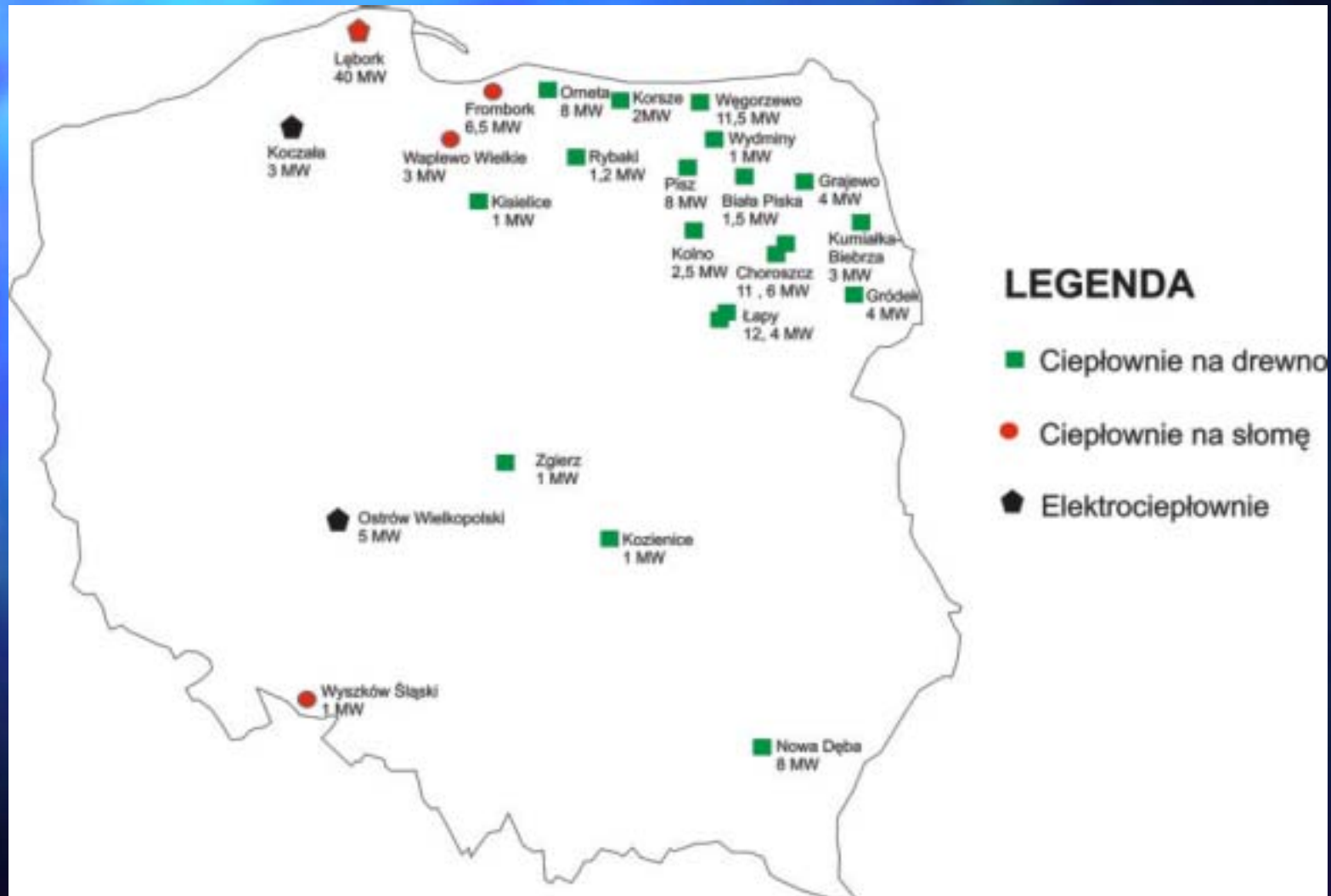
# First JI project in Poland

Wood chips from city greenery for heat production  
350 kW<sub>th</sub> in Jelenia Gora, 1998-2000



1- waste wood from tree maintenance, 2- wood chopper, 3- transport vehicle, 4- wood chips, 5- long term store, 6-floor channel dryer, 7,8- solar air collector, 9-screw conveyor, 10 - short term store, 11- walking floor, 12- screw conveyors, 13- boiler, 14 - chimney

# From small scale to large scale Biomass portfolio



# Promising larger scale bioenergy projects concepts in Poland

- Landfill gas CHP
- Solid biomass (wood chips, waste wood) CHP
- Co-firing (fine coal and biofuels) for district heating and CHP

## Power industry perspective

- own capacity to process JI schemes if legal framework in place
- carbon credits generate investment opportunity through necessary modernisation, technology development and transfer
- fulfilment with regulatory emission restrictions

# Conclusions, problems to solve

- Renewable energy and particularly biomass is ideal for using Kyoto mechanisms for multiple targets in Poland
- JI as an innovative mechanism for RET (biomass) financing is attractive for local authorities, DH investors (1-10 MW) and power industry (10-100 MW)
- JI schemas in Poland might be combine with the additional support from the environmental funds.

## Problems to solve and needs

- clear guideline which might be applied to the baseline calculation and improvement of some bureaucratic inefficiencies, especially for small and medium scale projects
- JI strategy should be develop as a part of the national climate policy action plan with reasonable "emission budged" and a list of technological priority investment

Thank you for your kind  
attention

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