

Effectiveness of climate policies in Poland

Polish Ministry of the Environment





12/03/2015 - Paris

Main challenges for Polish energy sector

High demand for final energy

Insufficient generation and transmission infrastructure



Coal dominating power mix

Significant dependence on external suppliers of natural gas

Nearly full dependence on imported crude oil

Commitments on environment and climate protection





Power mix today





EU MSs power mix



Węgiel

Cohesion

Polish Presidency of the Vi July 2012–June 2013

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And yet... Emissions on way down



 Poland – well below the Kyoto target – 30%



 EU – slightly below the Kyoto target as a result of 2009 crisis

> Visegrad 4 Integration & Cohesion Polish Presidency of the Visegrad Group & Cohesion Polish Presidency of the Visegrad Group





GDP on way up

















1. Energy efficiency

Main targets:

- To achieve development of Polish economy without increase in primary energy demand; "zero-energy growth",
- Reducing the energy intensity of Polish economy to the EU-15 level (in 2005 figures).

How?

- Implementation of a white certificate system,
- Developing efficient co-generation,
- Reducing transmission losses,
- Leading role of public sector.











- Objective energy saving of 2.2Mtoe until 2016
- Electricity, heat and fuel suppliers with obligation to hold white certificates or pay substitution fee >5MW
- Certificates eligible from 3 areas covering min 10toe:
 - EE improvement by end-consumers,
 - EE improvement in installations for electricity of heat generation;
 - Limiting transport losses in electricity, heat or natural gas
- Certificates generated if tender won cost-efficiency
 Slow start learning period –second tender published





Case study: Termomodernisation

- Dedicated fund functioning since 1999
- Total budget 400M euro

Total savings in M PLN



2. Renewable Energy Sources

 Beneficial to the energy security and to the emission reduction.

Main goals

- 15% share in final energy consumption in 2020 (11% today 7% reference)
- 10% share of bio-fuels in fuel market in 2020

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Main measures:

- Green certificate scheme
- Focused support schemes
- Co-firing covered
- Support from European Funds for CAPEX



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Visegrad 4

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Sevolution of RES power mix [GWh]



Case study: solar panels

Beneficiaries: - mainly private users



Results 09.2010 - 06.2013:
- 42 k. of installations
- 280M PLN subsidy
- 281M m² of installed panels
- not calculated as RES !!!
- solar panels manufacturingBudget:
Subsidy - 450M PLN
- Subsidy - 450M PLN
- Loan up to
- Subsidy 45%

OBJECTIVE: CO₂ cuts through installation of solar panels for private users





Case study: biogas

Beneficiaries:

- Electricity producers
- Biogas producers

Effects:

List of projects worth 150 M PLN –

4 agreements signed worth 20 M PLN



Budget Subsidy- 200 M PLN Loans - 300 M PLN

• Loan up to 45%

Subsidy up to 30%

Objective: CO₂ reduction through co-financing of biogas plants







Why performance will stay solid?

 Diversification of energy supply

Energy efficiency

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Renewables support





Technology development



1. Diversification - gas

Electricity

- PL-DE links 2 projects
- Pump and storage station
- PL-LT connection
- PL-SE improvement

Gas

- LNG terminal 2015 5bcm
- Jamal reverse 2.3bcm
- PL-CZ 0.5 bcm
- PL-DE in progres
- PL-SK in progres



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Visegrad

Integration

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Shale gas exploration

66 exploration wells 51 vertical 15 directional

28 fracturing17 vertical11 directional

September 2014





Nuclear energy

- Original plan 2 blocks x3000MW
- First block mid 2020-ties
- Technical advisor chosen, consortium in place
 PGE,KGHM,ENEA, Tauron





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Government tasks:

- Legislation, human resources, infrastructure;
- Gaining public suport;
- Ensuring appropriate conditions for investors.



2. Energy Efficiency

- New legislation replacement of white certificates
- Focused schemes deliver best effect and will continu





3. Renewables

- New legislation reversed auction
- Distributed generation / prosumers with significant support
- 800MW initially with guaranteed prices for 15 years
- 0-10kW up to 25% premium for electricity sold





- Support scheme 800M PLN
- 2014-2022 initially
- 20-40% subsidy
- 470GWh & 40k new installations annually



4. Technology stimulation works

GreenEvo (2009-2014)

- 5-years in place & 62 technologies in portfolio
- Nomination for EPSA award;
- Trade missions in a wide range of countries

Visearad

- Growing brand abroad
- 24% average increase in turnover
- 40% average increase of export value
- 58% increase of R&D expenditure



National vs. EU policies



20% reduction GHG (ref.1990)



20% RES in overall energy mix





20% Improving energy efficiency

Helpful framework but best effects with dedicated and often regional measures

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S Desired power mix in 2030







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Conclusions



- Poland implements policy measures that work;
- RES, EE targets give helpful framework; ETS is federal and topdown

Fossil fueled economies as we are need time for transition;

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- Incentives and nudges work best, even with limited budgets; small is beautiful;
 Climate policy is effective
- when people kept on-side.

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Thank you for your attention