

“BEST PRACTICES” IN POLICIES AND MEASURES IN POLAND

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Poland

Poland being the country in which comprehensive and deep processes of economic and social changes are under way, is not a good example for most of the annex I Parties. However similar processes take place in other Central European Parties and in this sense description of the Polish policy might serve as a case study for these Parties. In fact ongoing changes forced Government as well as individual entities to implement such policies which will lead to the cost-effective production by increasing energy effectiveness and dematerialization of industrial production. In fact many of undertaken measures are also leading to reduction of greenhouse gases reduction in majority of economy sectors. For this reasons they can be considered as “no regret” policies.

Although Government did not adopt official climate policy its elements are included into another official documents like State Environmental Policy and Energy Policy. According to these documents improvement of energy efficiency of economy has one of the highest priorities (e.g. energy consumption per unit of production should be reduced by 25% by year 2010 and by factor 2 by year 2025 in comparison with year 2000). Similar situation is similar in most of the EIT Parties (with good exception of the Czech Republic where state climate strategy has been officially adopted).

The “no regret” climate policy is strongly supported by the Government that creates incentives and legal background for such activity. The Polish system of incentives consists of special subsidies, discounts and low interest loans for those who wants to modernize their production system which leads to reduction or elimination of greenhouse gases emissions. Mainly two financing bodies support such activities: National Fund for Environment Protection and Water Management and Ecofund, which make preferences for the following policies and measures:

- Elimination of low emissions,
- Promotion of renewable sources of energy,
- Reduction of pollution by gaseous emissions,
- Energy conservation,
- Methane drainage from coal-mines and landfills,
- National afforestation program, and
- Sustainable management of forests.
- Energy saving in municipal heating systems,
- Utilization of “waste” energy form industrial processes,
- Fuel conversion,
- Promotion of renewable energy sources.

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Selection of the most effective policies and measures is based on economic, environmental as well as technological criteria and final decision is taken by investors and financing institutions like funds or banks. Methodology of emission reduction effects calculation is based mainly on historical baselines whereas cost effectiveness is calculated as a relation of investment and exploitation costs to the expected emission reduction.

Energy saving in the residential sector is also promoted by buildings thermo insulation is a subject of separate policy implemented under special Buildings Thermomodernization Act adopted by the Polish Parliament in 1998. The GHGs emission reduction policy is included into the national GEF and UNDP programs.

Some examples of CO₂ reduction effects of individual policies implemented in years 1991-1995 are presented in table 1. Total reduction in both sectors exceed 15 000 Gg.

Table. 1 - Measures resulted in emission reduction in energy and residential sectors in 1991-1995

Policy	No of projects	GHG reduction [Gg]
Modernization of heating systems	7	571
Fuel conversion	8	1028
Waste heat utilization	3	1134
Renewable energy sources	6	97
Total	24	2830

Also modernization of industrial production led to significant reduction. Effects are presented in table 2.

Table. 2 - Carbon dioxide reduction in the industrial sector in years 1991-1995

Industry branch	Reduction [Gg]
Fuels	811,2
Iron and steel	1310,7
Chemistry	4857,6
Food	820,7
Total	7800,2

At the same time due to increase of production absolute increase of emission in some sectors (cement, paper, district heating) and as a result of lack of reforms increase of energy intensity in coal sector (mining, processing and transportation) have been observed.

Adopted policies, programs and measures are in line with the Government policy that stimulates increasing energy efficiency by progressive reduction of market limitations and subsidies on energy carriers and production. All above mentioned activities fulfill the main provisions of Art.2 of the Kyoto Protocol and lead to significant reduction or limitation of greenhouse gases emissions, promote sustainable forms of management in many sectors of economy and progressively reduce market imperfections and subsidies.

Estimated emission reduction alone not always is the best measure of effectiveness of given policy or measure as real effects are hidden by increased production, so it must be considered jointly with emission intensity calculated per unit of production. Some examples are presented in table 3.

Table. 3 - Changes in CO₂ emission and emission intensity in some industry sectors in Poland in years 1990-1995

Production	CO ₂		CH ₄	
	Emissions	Emission intensity	Emissions	Emission intensity
Paper	97,2	79,3	97,4	79,0
Food	80,2	86,2	79,6	90,9
Maritime management	87,4	134,8	58,8	121,9
Transport	155,2	128,2	109,7	122,1
Steel & iron	94,5	187,3	95,3	99,4
Chemicals	66,8	96,4	247,7	99,8
Mineral	101,8	86,9	109,6	97,1
Fuels	144,4	96,4	96,6	99,7
Energy	104,3	96,0	113,9	99,0

The table clearly shown that the best results in total reduction of emission and decreasing of emission intensity is observed in those sectors which have been already privatized or are under way of privatization processes like paper, food or chemicals production. However even under this process we may observe significant reduction of emission intensity but increasing of volume of production leads to increasing of total emission (e.g. cement production).

Conclusions

- ✓ Taking into account national circumstances the most crucial area in which energy efficiency shall be improved is energy and coal sector.
- ✓ The most significant total reduction of emission is achieved by the set of policies undertaken simultaneously (technological changes, financial incentives, market reforms etc.).
- ✓ Estimation of effectiveness of emission reduction by specific policy or measure should be based on total amount of reduced emission and in emission intensity (per production unit) changes.
- ✓ The best results in total emission reduction have been achieved in privatized sectors of national economy and in energy sector owing to liberalization of energy prices.
- ✓ Climate changes can only be considered in Poland and most likely in other the EIT Parties in the context of their transformation processes. It is a good example how climate policy and be smoothly adopted without interfering socio-economic development of the country.