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Assessment of climate change policies in the context of the European Semester

Country Report: Poland



Ecologic Institute

Authors team: Eike Dreblow, Matthias Duwe, Tim Wawer, Lena Donat, Elizabeth Zelljadt, Andrew Ayres

eclareon

Author: Anna Poblocka

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Ecologic Institute

eclareon

Ecologic Institute, Berlin:

Pfalzburger Strasse 43/44
10717 Berlin
Germany
www.ecologic.eu

eclareon GmbH

Giesebrechtstraße 20
10629 Berlin
Germany
www.eclareon.eu

Contact:

Eike Dreblow,
Fellow Climate and Energy
Tel. +49 (30) 86880-165
Fax +49 (30) 86880-100
[eike.dreblow\(at\)ecologic.eu](mailto:eike.dreblow(at)ecologic.eu)

Contact:

Anna Poblocka
Project Manager, Policy Department
Tel. +49 (30) 88 66 74 000
Fax +49 (30) 88 66 74 010
[ap\(at\)eclareon.com](mailto:ap(at)eclareon.com)

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The report provides an overview of current emission trends and progress towards targets as well as policy developments that took place over the period May 2012 to January 2013.

The content of the report represents the state of knowledge in February 2013, specific updates were made adding the latest official greenhouse gas emission data by the European Environment Agency (EEA).

Please feel free to provide any comments or suggestions to the authors through the contacts listed above.

Short summary

- **Background:** *Climate change is not a significant issue for Polish decision makers, or in the public eye. At the EU level, Poland opposes more ambitious GHG reduction targets and the further development of climate change policies – it has also not transposed several climate and energy related EU Directives into Polish law.*
- **GHG target:** *Poland has reduced its non-ETS emissions from 2010 to 2011 and was not far off its 2013 ESD allocation in 2011. According to the latest national projections the 2020 target is expected to be overachieved; however, 2011 emissions were higher than outlined in the projections so that further measures might be required.*
- **Policy development:** *In Poland there are currently policy developments in the energy sector, but these do not incorporate climate change mitigation concerns as much as promotion of hydrocarbon extraction. Though a system of “white certificates” supporting energy efficiency entered into force recently, the long-awaited revamp of Poland’s renewable energy law – also required by the EU because of Poland’s failure to transpose the 2009 Renewable Energy Directive – is not forthcoming.*

I Background on climate and energy policies

In Poland, climate change does not play a great role for decision-makers or in the public eye, and, at the EU level, Poland opposes more ambitious GHG reduction targets and the further development of climate change policies. Currently, a Polish right-wing political party “United Poland” (Solidarna Polska) has even started collecting signatures to suspend the European package deal on climate change (as a “European Citizens’ Initiative” (ECI) as instituted by the Lisbon treaty).

Paradoxically, Poland is one of a few countries that refer to sustainable development in their constitutions (Art. 5): “The Republic of Poland [...] shall ensure the protection of the natural environment pursuant to the principles of sustainable development”. Low-carbon development is also mentioned in several of Poland’s forward-looking strategic documents. The Medium-Term National Development Strategy to 2020, which features several integrated strategies for different economic areas, includes an Innovation and Economic Efficiency Strategy that sets out conditions for efficiency and innovation (Szewrański 2012).

Green growth is mentioned in the Long-Term National Development Strategy 2030, which sets out the most important national actions required in terms of economic development and improvement of living standards up to 2030. It recognizes the need for an improvement of environmental conditions and eliminating the risks of climate change. The main goals include an increase in the development of a green economy based on the efficient use of resources, the development of innovative environmental technologies, the preservation of natural and geological resources for future generations, and adaptation to climate change (Szewrański 2012).

Poland's official energy-specific long-term strategy, "Polish Energy Policy until 2030" (Polityka Energetyczna Polski do 2030 r.), was published by the Polish Ministry of Economy in November 2009. Its main goals are: security of energy supply, climate change mitigation and low energy prices – using all available sources including coal, lignite, natural gas, oil, nuclear power and renewables. This document does not set priorities and specifications of the desired energy mix through 2030.

The national strategy on environmental policy most relevant to the near term was published in 2008 by the Polish Ministry of Environment – the "National Environmental Policy for 2009-2012 with an outlook until 2016". names measures for the years 2009-2012 and overall goals for 2016. Thus the country is currently not following a detailed environmental policy plan, as specifics have not been laid out for the years after 2012.

The lack of specific policy strategy is even more evident when it comes to climate change. The last climate policy strategy, "Polish Climate Policy. Strategies to reduce greenhouse gas emissions in Poland until 2020", was published in 2003. It names three timeframes of goals and measures: 2003-2006, 2007-2012, and the long-term timeframe of 2013-2020. Strategies are increasingly vague the more long-term they are, such that the document has little relevance to Poland's current climate policy situation. The applicability of this document is particularly low since it has not been updated since publication and its measures were developed before Poland joined the European Union - new EU directives were developed in the meantime, and Polish strategy has not been adjusted accordingly. "Green jobs" is a broadly defined term and this definition may differ according to the country (OECD 2012). Due to the lack of centralized data on eco-industries and green jobs in Europe, a focus on specific sectors is required. For example, the share of employment in water collection, sewerage, waste collection, and remediation activities in Poland was below 1% in 2011. The share of employment in the RE sector as percentage of total employment in 2010 was below 0.5% (Green Jobs 2012).

Polish energy policy focuses on a secure, affordable, and diversified energy supply, which leads to the exploration of domestic shale gas resources and the construction of the first nuclear power plant. Independence from Russia is an energy policy priority and one of the reasons for the Polish government's strong support for the coal industry and its high hopes for shale gas resources. Although "Poland's Energy Policy up to 2030" lists climate-friendly goals for the energy sector (such as reducing the energy-intensiveness of the economy, construction of highly efficient power plants, promotion of renewables and the reduction of losses during transmission), there is little evidence of those goals being pursued. Renewable energies have played a minor role in recent years, and the planned renewable energy sources law introducing changes in support scheme for renewable energy projects has not yet been decided on. The latest draft of that law features modifications to the existing quota scheme for "green certificates" to promote renewable energy, as well as technology-specific coefficients and a feed-in tariff for small installations (RES Law Draft 2012). The law has been delayed several times and is not on track to be adopted anytime soon, as laws on oil and gas extraction take precedence.

2 GHG projections

Background information

Poland is the 5th-biggest emitter of GHG emissions in the EU. In 2011, the country emitted 399.4 Mt CO₂eq (UNFCCC inventory 2011), with almost half stemming from energy supply. This reflects the outdated physical infrastructure of power plants that are principally fired by coal or lignite. Furthermore, the networks for electricity and heat transmission show high losses. However, emissions in that sector have been reduced by more than 25% since 1990 due to the economic downturn in the 1990s. In contrast, emissions from transport increased by more than 130% since 1990, mainly due to the growing number of private cars. Emissions from industrial processes increased from 1990 to 2011 by over 30%. The agricultural sector showed a decrease in emissions by 30% since 1990 due to reduced livestock population and use of nitrogen fertilizer (UNFCCC inventory 2011, EEA 2012c, UNFCCC 2012).

Progress on GHG target

There are two sets of targets to evaluate: 1) the Kyoto Protocol targets for the period 2008-12 (which has just ended) and 2) the 2020 targets for emissions not covered by the EU ETS.

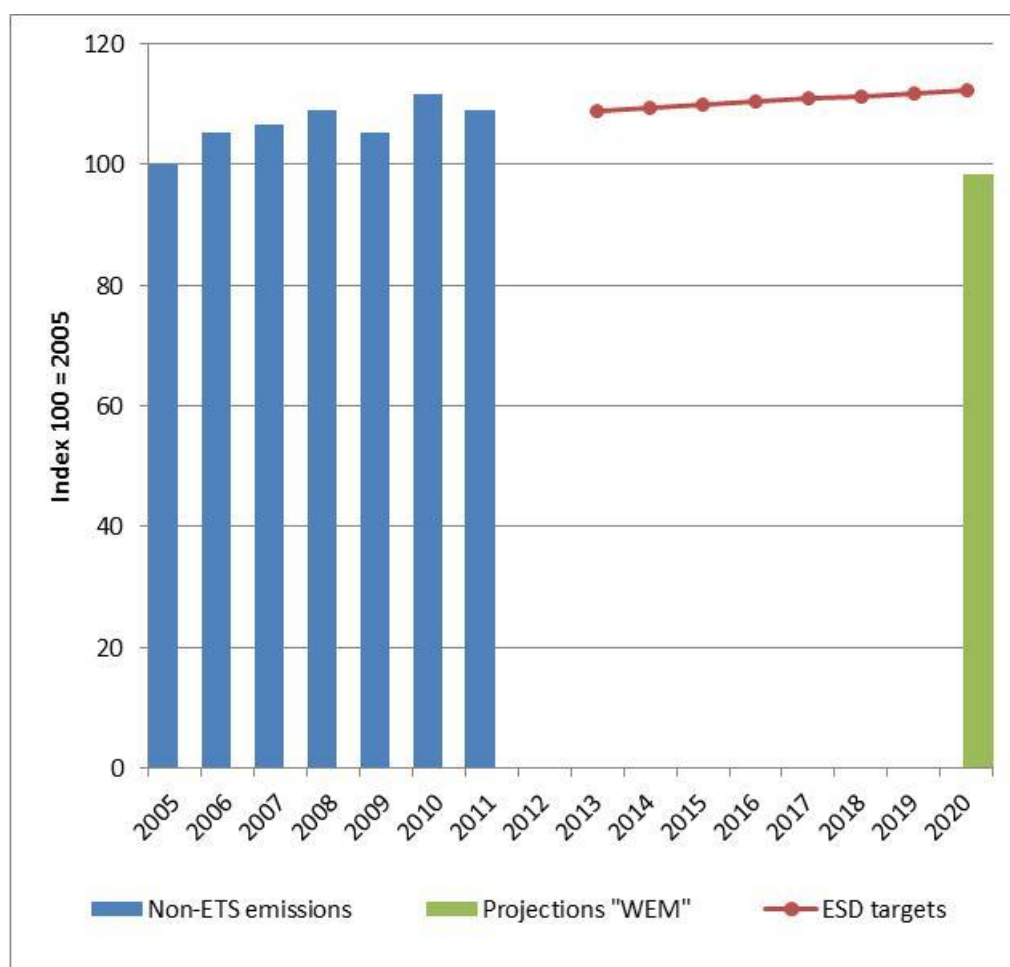
Under the Kyoto-Protocol the emission reduction target for Poland for the period 2008-2012 is minus 6% based on 1988 for CO₂, CH₄ and N₂O and on 1995 for F-gases. An evaluation of the latest complete set of greenhouse gas data (for the year 2011) shows that Poland's emissions have decreased by 29.1% compared the base year (EEA 2013a) indicating the country is on track to meeting its Kyoto target through domestic emissions reductions.

By 2020, Poland may increase emissions not covered by the EU ETS by 14% compared to 2005, according to the Effort Sharing Decision (ESD) ⁽¹⁾. The latest data suggest that Poland is on track to meeting this target. According to the 2011 inventory data, emissions in 2011 were at the same level like the Annual Emissions Allocation (COM 2013) for the year 2013. National projections show that Poland is reducing its non-ETS emissions slightly below 2005 levels in scenarios with existing measures and with additional measures ⁽²⁾ (EEA 2013b). However, 2011 emissions were higher than expected in the projections so that further measures might be required (SWD 2013).

Figure 1 shows Poland's non-ETS emissions until 2011, its targets under the ESD for the period 2013-2020 and its projections with existing measures for 2020.

¹ Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020.

² Calculations are based on domestic emissions only, without accounting for possible use of flexibility options. The 2020 targets and 2005 non-ETS emissions are all consistent with 2013-2020 ETS scope, i.e. they take into account the extension of the ETS scope in 2013 and the unilateral inclusion of installation in 2008-2012.

Figure I: Non-ETS emission trends and projections compared to the ESD targets

Source: EEA - Based on 15/04/2013 draft GHG inventory submissions under the UNFCCC and MS projections submitted until 17/04/2013

Table I: GHG emission developments, ESD-targets and projections (in Mt CO₂eq)

| | 1990 | 2005 | 2010 | 2011 | ESD target* | | 2020 Projections** | |
|---|--------------|--------------|--------------|--------------|-------------|-------|--------------------|-------|
| | | | | | 2013 | 2020 | WEM | WAM |
| Total | 457.0 | 390.2 | 401.7 | 399.4 | | | | |
| Non-ETS emissions (% from 2005) | | 181.9 | 203.0 | 198.4 | 198.0 | 195.0 | 170.8 | 170.8 |
| | | | | 9% | 9% | 14% | 0% | 0% |
| Energy supply (% share of total) | 235.8 52% | 178.1 46% | 173.5 43% | 174.8 44% | | | | |
| Energy use (w/o transport) (% share of total) | 98.7 22% | 86.9 22% | 94.1 23% | 86.2 22% | | | | |
| Transport (% share of total) | 20.5 4% | 35.1 9% | 48.1 12% | 48.7 12% | | | | |
| Industrial processes (% share of total) | 22.0 5% | 27.9 7% | 26.0 6% | 28.7 7% | | | | |
| Agriculture (% share of total) | 49.7 11% | 33.8 9% | 34.6 9% | 34.9 9% | | | | |

Source: UNFCCC inventories 2011; EEA (2013b); COM (2013), Calculations provided by the EEA and own calculations.

* The ESD target for 2013 and for 2020 refer to different scopes of the ETS: The 2013 target is compared with 2011 data and is therefore

consistent with the scope of the ETS from 2008-2012; the 2020 target is compared to 2020 projections and is therefore consistent with the scope of the ETS from 2013-2020. Non-ETS emissions in 2005 for the scope of the ETS from 2013-2020 amounted to 171.0 Mt CO₂eq.

** 2011 projections with existing measures (WEM) and with additional measures (WAM).

Legend for colour coding: green = target is being (over)achieved; orange = not on track to meet the target

Total greenhouse gas emissions (GHG) and shares of GHG do not include emissions and removals from LULUCF (carbon sinks) and emissions from international aviation and international maritime transport.

National projections of GHG emissions up to 2020, summarised by the EEA, need to be prepared by the Member States in accordance with the EU Monitoring Mechanism ⁽³⁾ every two years, and the latest submission was in 2013. The projections reflect a scenario accounting for emissions reductions of policies and measures that have already been implemented (with existing measures, WEM), and an additional scenario that reflects developments with measures and policies that are in the planning phase (with additional measures, WAM).

In the following two tables, these measures - as outlined by Poland as basis for projections as of April 2011 ⁽⁴⁾ - have been summarised with a focus on national measures and those EU instruments expected to reduce emissions the most ⁽⁵⁾. An update on the status of the policies and measures is included in order to assess the validity of the scenarios.

Table 2: Existing and additional measures as stated in the 2011 GHG projections

| Existing Measures (only important national measures; w/o EU legislation) | | Status of policy in January 2013 |
|--|---|--|
| Energy | Strategy for Renewable Energy Development | In place since September 2000, when Polish Ministry of Environment published the <i>Strategia Rozwoju Energetyki Odnawialnej</i>) This document is over a decade old, was created before Poland was part of the EU, and has not been updated. |
| | Exemptions from the excise tax on the sales of electricity from RES. | Implemented since 2008 through excise law (<i>Ustawa z dnia 6 grudnia 2008 r. o podatku akcyzowym</i>). |
| | “green certificates” programme to promote renewable energy | In place through a 2005 amendment to § 9a of Energy Law of 1997, expected to be changed with implementation of new RES-law). |
| | “red certificates”, i.e., the certificates of origin of electric energy produced in co-generation process | Implemented, § 9l of Energy Law. |

³ Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

⁴ The respective policies and measures were not available at the time of the preparation of this country report. Thus, policies and measures as outlined in April 2011 are given here.

⁵ The implementation of the EU-ETS has not been included. Other EU Directives have only been considered if they have been outlined in the projections as one of the main instruments to reduce GHG emissions.

| | | |
|-----------------------|---|--|
| | Preferential credits for retrofitting energy production sources and for thermal modification activities (Funds for Environmental Protection and Water Management) | Ongoing: The Fond subsidizing energy efficiency and RES was founded in 1989, regulations specifying work and status of the Fond are: Environmental Law from 2001 (<i>Prawo Ochrony Środowiska</i>) and Order of Minister of Environment on the Statute of the National Fund for Environmental Protection and Water Management, 7 December, 2010. |
| Energy Efficiency | Energy efficiency requirements for e.g. household appliances and new water heating boilers fired by liquid and gaseous fuels | In place: A regulation on 2 April 2003 by the Minister of Economy, Labour and Social Policy defines requirements for energy efficiency. It was amended through a regulation of the Minister of Economy and Labour on 20 May 2005 with requirements for technical documentation, application of labels, technical characteristics, and label designs for devices. |
| | Mandatory statement of energy characteristics in buildings and dwellings | Not implemented. Draft legislation being prepared. |
| | Bonuses (subsidies) for thermal modernisation of buildings | Ongoing since passage of act to promote modernization and repairs of March.2009. Bonuses are granted by the National Economy Bank (<i>Bank Gospodarstwa Krajowego – BGK</i>) through its thermo-modernization fund |
| Transport | Differentiate fuel taxes in a way that promotes alternative fuels | Implemented. In 2013 the fuel fees (<i>Opłata paliwowa</i>) charged to producers or importers of motor fuel were differentiated as follows: PLN 103.16 per 1000 litre petrol; PLN 259.92 per 1000 litre diesel; 133.10 per 1000 kg gas. |
| | Differentiate vehicle fees to favour vehicles with lower pollutant emissions or lesser fuel consumption. | Not implemented. The tax on vehicles goes by size/weight rather than CO ₂ emissions. Higher vehicle tax category is > 3.5 tonnes. |
| | Incentives to use rail transport, including the introduction of integrated rail, tramway and bus tickets for selected route. | Implemented regionally: Regions and cities (Warsaw, Gdansk-Sopot-Gdynia) have introduced integrated ticketing systems. |
| | Obligations to increase the share of biofuels in transport fuels. | In place: A biofuel quota was implemented through the 25 August 2006 Act on Biocomponents and Liquid Biofuels (<i>Ustawa z dnia 25 sierpnia 2006 r. o biokomponentach i biopaliwach ciekłych</i>). |
| Other non-ETS sectors | Limit natural fertiliser dose to 170 kg N/ha/year | In place since July 2000 Act on Fertilizers and Fertilization |
| LULUCF | Afforestation measures within the framework of the Rural Development Programme (RDP) | Implemented: Rural Development Programme 2007-2013 includes Regulation of the Minister of Agriculture and Rural Development of March 2009 on conditions and procedures for granting financial aid under the measure "Afforestation of agricultural land and afforestation of non-agricultural land." |

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2011

| Additional Measures: Still to be implemented (only important national measures; w/o EU legislation) | | Status of policy in January 2013 |
|---|---|----------------------------------|
| Energy | Additional support instruments encouraging heating and cooling via renewable energy sources | Not implemented |
| | Implementation directions for the construction of agricultural biogas plants | Not implemented |
| | Stimulate the development potential of industry who produce equipment for the renewable energy sector (via European funds) | Not implemented |
| | Creation of conditions for easier investment decisions related to building off-shore wind farms | Not implemented |
| Energy Efficiency | Act on Energy Efficiency to introduce system of "white certificates" (energy efficiency certificates) | Implemented January 2013 |
| | Introduction of demand side management techniques, stimulated by the daily differentiation of electricity as a result of the introduction of the intraday market and the provision of price signals to users through two-way telecommunication with electronic meters | Under development |
| Other non-ETS sectors | Act on certain fluorinated greenhouse gases | Implementation expected Q1, 2013 |

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2011

3 Evaluation of National Reform Programme 2012 (NRP)

In April of each year, Member States are required to prepare their National Reform Programmes (NRPs), which outline the country's progress regarding the targets of the EU 2020 Strategy. The NRPs describe the country's national targets under the Strategy and contain a description of how the country intends to meet these targets. For climate change and energy, three headline targets exist: 1) the reduction of GHG emissions, 2) the increase of renewable energy generation, and 3) an increase in energy efficiency.

In the following table, the main policies and measures as outlined in the NRP of April 2012 ⁽⁶⁾ have been summarised, and their current status (implemented, amended, abolished, or expired) is given, with specifics on latest developments.

⁶ All NRPs are available at: http://ec.europa.eu/europe2020/documents/related-document-type/index_en.htm

Table 3: Main policies and measures as outlined in the NRP, April 2012

| Elaboration of the Strategic Plan for Climate Change Adaptation | |
|---|--|
| Status as stated in the NRP | To be done in 2012/2013 |
| Status as per Jan 2013 | Finalised, to be evaluated and published by the Ministry of Economy. By the end of February a subcontractor shall finalise an Environmental Assessment |
| Description of policy or measure | A strategic plan for the adaptation of sectors and areas vulnerable to climate change will be implemented at the national level and with sectors and areas of public administration. The strategic plan for adaptation has been finalised by the end of 2012. Its implementation will start in 2013. |
| Protection of environmental assets of areas used for agriculture by implementing agri-environmental measures | |
| Status as stated in the NRP | To be developed in 2012/2013 |
| Status as per Jan 2013 | The ordinance regulating agri-environmental measures was amended on 12 March 2012 |
| Description of policy or measure | The objective of agri-environmental measures is the improvement of the natural environment and rural development, in particular: 1) restoration of valuable habitats and conservation of biodiversity in rural areas; 2) promoting sustainable management; 3) soil and water conservation; 4) protection of endangered local breeds of livestock and local crop varieties. Financial support is paid to compensate income lost when farmers engage in conservation measures. |
| Adoption of the draft Act on transmission corridors by the Council of Ministers | |
| Status as stated in the NRP | To be done in 2012/2013 |
| Status as per Jan 2013 | Under discussion. The draft law on transmission corridors is expected to be adopted by the Parliament by the end of 2013 |
| Description of policy or measure | An act on linear investments for transmission of electricity, natural gas, liquids, vapour, and information, ordering legal status in this field, simplifying procedures and regulating the legacy. |
| Ordinance of the Council of Ministers on tenders and concessions for hydrocarbon prospecting, exploration and extraction of hydrocarbons | |
| Status as stated in the NRP | To be done in 2012/2013 |
| Status as per Jan 2013 | Adopted on 3 December 2012 |
| Description of policy or measure | The ordinance specifies rules for tendering, which precedes the granting of concessions for prospecting, exploration and extraction of hydrocarbons. |

Adopt assumptions for an act on energy performance of buildings (incl. the launch of registries for energy performance certificates and protocols for the inspections of heating and air conditioning systems)

Status as stated in the NRP To be done in 2012/2013

Status as per Jan 2013 In December 2012, it was decided to defer consideration of draft guidelines on the energy performance of buildings. These guidelines would have launched registries for energy performance certificates and laid out protocols for inspections of heating and air conditioning systems. The Council of Ministers shall further consider how the European Union Directive on energy performance of buildings can be transposed into the Polish legal system.

Description of policy or measure The draft Law on the Energy Performance of Buildings includes:

- auditing of building energy performance certificates by an independent authority;
- protocols for inspections of heating and air conditioning systems;
- obligation to provide energy certification for any building or unit being sold, as well as in commercial advertisements;
- reduction of market barriers to energy-efficient construction techniques;
- energy performance certification obligation for existing buildings occupied by public authorities, frequently visited by the public, with an area of greater than 500 m²

Support for energy efficiency investments by the National Fund for Environmental Protection and Water Management

Status as stated in the NRP To be done in 2012/2013

Status as per Jan 2013 Ongoing. Next call opens in the first quarter of 2013

Description of policy or measure Financial support for projects involving retrofitting of buildings, replacing ventilation systems, using of RES, replacing indoor lighting

Adopt Act on Renewable Energy Sources

Status as stated in the NRP To be done in 2012/2013

Status as per Jan 2013 The draft Act exists but has not been adopted

Description of policy or measure The new act is intended to combine all regulations concerning RES. The draft version includes among other things new support schemes for renewable energy sources and changes to existing ones.

Adopt Act on Biocomponents and Liquid Biofuels

Status as stated in the NRP To be done in 2012/2013

Status as per Jan 2013 Not adopted

Description of policy or measure The law would introduce new regulations on biocomponents and liquid biofuels in Poland.

Adopt Nuclear Power Programme for Poland (NPPP)

| | |
|----------------------------------|--|
| Status as stated in the NRP | To be done in 2012/2013 |
| Status as per Jan 2013 | Programme is under public consultation |
| Description of policy or measure | The programme shall specify the scope and structure of nuclear power industry actions, including safe and efficient operation of nuclear facilities, their elimination at the end of their lifespans, and the safe storage of used fuel and radioactive waste. |

Implementation of project 'Improving the competitiveness of regions by Corporate Social Responsibility (CSR)'

| | |
|----------------------------------|--|
| Status as stated in the NRP | To be done in 2012/2013 |
| Status as per Jan 2013 | The project has been implemented and continues today |
| Description of policy or measure | The project is financed by Switzerland under a Swiss cooperation programme with the new EU Member States. The main objective of the project is to raise awareness and knowledge of corporate social responsibility among the representatives of small and medium-sized enterprises, Marshal Offices, and Service Centres for Investors and Exporters. The project is also intended to promote socially responsible business in the activities aimed at the development of local entrepreneurship and investment. |

Promotion of the use of renewable energy sources

| | |
|----------------------------------|--|
| Status as stated in the NRP | Implemented in 2011 |
| Status as per Jan 2013 | Ongoing |
| Description of policy or measure | In the Republic of Poland, electricity from renewable sources is promoted mainly through a quota system. Electricity suppliers are obliged to acquire a certain number of so-called "certificates of origin", which are issued to the producers of electricity from renewable sources. The scheme is governed by the Energy Law and the Order of the Polish Minister of Economy of 14 August 2008 establishing detailed provisions on the obligation to acquire certificates of origin and submit them for collection, the obligation to pay a compensation fee, the obligation to purchase electric energy and heat generated from renewable energy sources, and the obligation to prove that the amount of energy generated and the source of energy used have been accurately reported. |

Support energy efficiency investments via preferential loans & subsidies from national and European funds, also under the Act on supporting thermal modernization and renovation

| | |
|----------------------------------|---|
| Status as stated in the NRP | Implemented in 2011 |
| Status as per Jan 2013 | Ongoing |
| Description of policy or measure | Support is provided in the form of loans for renovation investment from the Thermo-modernisation and Renovation Fund, which is maintained by the Bank of National Economy. The money comes from the state budget. |

4 Policy development

This section covers significant developments made in key policy areas between May 2012 and January 2013. It does not attempt to describe every instrument in the given thematic area. The time-frame was chosen based upon the release of the National Reform Programmes (in the section above) in April 2012, which contain the status quo for policy on most topics.

Environmental Taxation

In 2010, the energy intensity (⁷) of the Polish economy was far above the MS average. Drawing upon this high intensity, revenues from energy taxes in terms of GDP were 2.1%, the 8th-highest value among MS. In the same year, revenues from all environmental taxes were equivalent to 2.6% of GDP, which also reflects the EU average (Eurostat 2012). The implicit tax rate on energy in 2009 was € 91.9 per tonne of oil equivalent (toe). This is the 9th-lowest value among EU MS (Eurostat 2013).

In the past months there have been no relevant developments in Poland regarding the shifting of taxation. In addition, the last NRP and the measures listed as part of the GHG projections up to 2020 (see National projections of GHG emissions up to 2020, summarised by the EEA, need to be prepared by the Member States in accordance with the EU Monitoring Mechanism () every two years, and the latest submission was in 2013. The projections reflect a scenario accounting for emissions reductions of policies and measures that have already been implemented (with existing measures, WEM), and an additional scenario that reflects developments with measures and policies that are in the planning phase (with additional measures, WAM).

In the following two tables, these measures - as outlined by Poland as basis for projections as of April 2011 () - have been summarised with a focus on national measures and those EU instruments expected to reduce emissions the most (). An update on the status of the policies and measures is included in order to assess the validity of the scenarios.

Table 2) do not include any measures regarding a shifting of taxation or the increase of taxation on energy, fuels, or vehicles to come in the next years.

Energy Efficiency

At approximately 330 kg of oil equivalent per 1,000 Euro of GDP, Poland's energy intensity is more than double the EU average but exhibits a downward trend. However, overall energy consumption is increasing quickly: by 2010 it had increased 17.4% compared to the 2001-2005 average. This is despite a reduction in industrial energy consumption. This drop has been more than offset by increases in the transport sector, among others (Eurostat 2013).

The energy efficiency potential is still high in Poland, and its realisation could support green growth in Poland. Large reductions could be realised in the building sector, where energy for heating could be reduced by more than 80% (3CSEP 2012). The study in which this number appears highlights the socio-economic benefits of a national building

⁷ Energy intensity is defined by Eurostat as Gross inland consumption of energy divided by GDP.

renovation programme that could create up to 250,000 jobs by 2020, generate substantial improvements in air quality, reduce energy poverty, and reduce energy dependency. The study states that “a large scale, deep renovation programme in Poland can create over 250 thousand net additional jobs per year by 2020, as opposed to 40 thousand in the suboptimal scenario” (3CSEP, 2012: 38). More details on employment implications are mentioned in other parts of the study, including sections 7 (“estimation of employment effects”, pages 105-117) and 8 (“additional aspects: wider effects of retrofits, co-benefits and financing”, pages 119-125) (⁸).

In order to increase energy efficiency, the Polish government has introduced a “white certificates” system. The certificates are granted for investments to reduce energy usage (energy efficiency measures) and the companies selling electricity, natural gas, and heat to final consumers will be obliged to obtain a certain number of white certificates depending on the amount of energy sold.

More stringent rules for energy efficiency in buildings were deferred in December 2012 when it was decided to postpone consideration of draft guidelines to set up a law on energy performance standards for buildings. The scope of the implementation of the provisions of the European Union to the Polish legal system shall be put under further consideration by the Council of Ministers (see NRP). The Law on the Energy Performance of Buildings was supposed to deal with issues such as ensuring auditing of building energy performance certificates by an independent authority, requiring the provision of energy performance data in commercial advertisements, and the requirements to provide an energy performance certificate upon the sale of a property, among other things.

Financial support for energy efficiency measures is most notably provided by the National Fund for Environmental Protection and Water Management (NFOSiGW) which grants subsidies and low interest loans for investments in energy efficiency next to renewable energy projects (see NRP).

Renewable Energy

Poland’s electricity sector is still based largely on carbon-intensive fossil fuels. In addition to exploring shale gas and considering an investment in nuclear power, renewable energy sources are being considered as an additional part of the mix. The share of renewable energy in total energy consumption has increased steadily in the recent past to reach 9.4% in 2010. This represents good progress toward the 15% goal for 2020. Meanwhile, the share of renewable generation in electricity consumption is not particularly high but has been growing very quickly. The percentage of renewable sources grew from 2.6% in 2005 to 8.3% in 2011 (Eurostat 2013)..

Regarding support for a faster deployment of renewable energies, the previously introduced quota system is not delivering enough support. The main reason is an oversupply of certificates, which lowers the price of these certificates and thus revenues for renewable energy producers. The oversupply is caused by CHP plants using co-firing of biomass together with coal, which is also supported through the scheme. This type of “renewable” electricity production shall continue to be supported through a quota scheme

⁸ Further reading on energy efficiency strategies in Poland: Institute for Sustainable Development (2009).

until 2017. This may severely endanger further deployment of renewable energy sources in Poland. The newly announced feed-in tariffs will only be available for small renewable energy installations, thus complementing the quota system. However, the date the feed-in tariff law would enter into force has been postponed several times. The new RES Law is expected to enter into force in the first quarter of 2013, but the beginning of 2014 has also been mentioned as a possible date.

An increased interest in investing in renewable energy projects and the additional stimulation of industries producing equipment for the renewable energy sector as planned (see National projections of GHG emissions up to 2020, summarised by the EEA, need to be prepared by the Member States in accordance with the EU Monitoring Mechanism () every two years, and the latest submission was in 2013. The projections reflect a scenario accounting for emissions reductions of policies and measures that have already been implemented (with existing measures, WEM), and an additional scenario that reflects developments with measures and policies that are in the planning phase (with additional measures, WAM).

In the following two tables, these measures - as outlined by Poland as basis for projections as of April 2011 () - have been summarised with a focus on national measures and those EU instruments expected to reduce emissions the most (). An update on the status of the policies and measures is included in order to assess the validity of the scenarios.

Table 2) could lead to economic development and job creation in the renewable energy markets. About 30,000 and 45,000 people (in 2020 and 2030, respectively) could be employed in the wind energy sector, while energy production from biomass could lead to new jobs of about 60,000 by 2020 and 90,000 by 2030 (EREC 2009). According to a report published by Polish Greenpeace "Working for CLIMATE" (Greenpeace 2011), as many as 350,000 new jobs could be created in Poland in the renewable energy sector by 2020. For this to happen, it would be necessary to create a stable and effective support system for the development of renewable energy sources.

Energy Networks

Poland has a problem with insufficient cross-border electricity transmission capacity, and there is a conflict between Germany and Poland due to the transmission of renewable electricity from Northern Germany via Poland to Southern Germany. In order to increase transmission in Poland, the Polish government prepared an act on transmission corridors regulating linear investments in transmission of electricity, natural gas, liquids, vapour, and information. The act aims to further simplify procedures and help settle the existing conflicts. The act is announced to be implemented in the first quarter of 2013.

A new subject on the political agenda is the deployment of smart grids. The National Fund for Environmental Protection and Water Management (NFOSiGW) started a programme to support pilot projects.

Transport

As seen in **Fehler! Verweisquelle konnte nicht gefunden werden.** above, GHG emissions from Poland's transport sector increased significantly from 2005 (35.7 Mt CO₂eq.) to 2010 (48.8 Mt CO₂eq.) and are projected to further increase up to 2020. Transportation taxation, excluding fuel taxes, is fairly low in Poland, ranking 21st among

EU MS (Eurostat 2012). At the same time, in 2011 newly registered vehicles in Poland were certainly not the most carbon-efficient; they emit on average 146.0 g CO₂/km driven, which is 5% above the EU average and puts Poland on the fifth-last position in the EU (EEA 2012e).

Fuel taxes are differentiated in a way which promotes alternative fuels, but overall taxation of fuels is very low, creating only a minor incentive to use fuel-efficient cars. The main measures related to the reduction of GHG emissions in transport include support for biofuels and lower-carbon fuels, such as natural gas. This includes tax relief for LPG and biocomponents and promotional prices of gaseous fuels as well as the obligation to increase the share of biocomponents in transport fuels. The draft amendment to the Act on biocomponents and liquid biofuels, which will introduce new regulations for the functioning of the market for biocomponents and liquid biofuels in Poland, has already been prepared by the Council of Ministers. The date of the adaptation of the law, however, has yet not been made public.

Agriculture

Agriculture is still an important sector in Poland. GHG emissions have been stable since 1995, and national GHG projections assume a stable emissions level until 2020. Existing measures include a limitation on natural fertilizer use and the ordinance regulating agri-environmental measures which was amended on 12 March 2012. It is a financial support mechanism that pays for compensation of lost income, additional incurred costs, and transaction costs. Agri-environment payments are granted to farmers who voluntarily commit to environmental objectives including ecosystem preservation, promotion of sustainable management systems, water conservation and protection of endangered local breeds of livestock and local crop varieties (see also NRP).

5 Policy progress on past CSRs

As part of the European Semester, Country Specific Recommendations (CSRs) for each MS are provided by the EU Commission in June of each year for consideration and endorsement by the European Council). The recommendations are designed to address the major challenges facing each country in relation to the targets outlined in the EU 2020 Strategy. In the following table, those CSRs that are relevant for climate change and energy that were adopted in 2012 are listed, and their progress towards their implementation is assessed.

| Existing Country Specific Recommendations | Progress |
|--|--|
| Step up efforts to improve incentives for investment in energy generation capacity | New renewable energy law introducing a feed-in tariff for small-scale renewable energy projects is under discussion and is expected to come into force in 2014. |
| Improve incentives for investment in energy efficiency in the whole energy chain | A “white certificates system” has been introduced to increase investments in energy efficiency. Further measures are planned, such as the introduction of Demand Side Management techniques. The adoption of the Act on energy performance of buildings has been |

postponed.

Speed up the development of the electricity grid, including cross-border interconnections; eliminate obstacles to cross-border electricity exchange

An act on transmission corridors that should regulate linear investments in transmission of electricity has been announced. No further measures are planned to increase cross-border interconnections.

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