

Energy Policy Baseline Country Report: POLAND

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1. INTRODUCTION

This report is part of the baseline analysis of the E-FIX project. The E-FIX project aims at triggering private finance for sustainable energy projects using innovative financing mechanisms. In the target countries of Central and South Eastern Europe as well as the countries of the Caucasus region there is considerable idle potential for sustainable energy products and services. Both potential energy project developers and financiers face diverse financing barriers. An innovative energy financing mix is needed in order to activate new source of finance and facilitate an increased implementation of sustainable energy projects. Accordingly, the objective of the E-FIX project is to facilitate the take up and intensified usage of innovative energy financing mechanisms in the energy sector.

This report provides the first analysis of the regulatory environment in which energy projects are implemented in each of the focus countries. With this part of the baseline study the E-FIX experts conduct an assessment of the energy-related policy framework in order to identify opportunities and challenges for introducing innovative financing instruments for sustainable energy projects. The material will be part of the subsequent Gap Analysis combining financing and energy baseline data.

The present report describes the energy policy framework for Poland.

2. POLICY FRAMEWORK

2.1. OVERVIEW OF LEGAL FRAMEWORK AND POLICY DEVELOPMENT OF THE ENERGY SECTOR IN POLAND

General overview

In Poland the Ministry of Energy is directly responsible for Energy Sector Policy Development being administratively supported by the President of the Energy Regulatory Office. Ministry of Energy is responsible for development of the Polish Energy Policy in cooperation with the Secretary of State responsible for Investment and Development and the Ministry of Environment.

The Polish Energy Policy is a document presenting the government's long-term strategy in the energy sector. The document is prepared every four years in accordance with the principle of sustainable development, and the content of the document, its objectives and shape are regulated by the provisions of the Energy Law.

The aim of the Polish Energy Policy is to ensure the energy security of the country, competitiveness of the economy, energy efficiency as well as proper environmental protection. This document is adopted by the Council of Ministers in the form of a resolution. The Council of Ministers adopted in 2009 is the Energy Policy of Poland until 2030. Currently, the Ministry of Energy is working on the project "Polish Energy Policy to 2050" (PEP), which will determine the long-term vision of the government for the energy sector.

The European Union's energy and climate policy is of major importance for the work on PEP, especially through the regulations envisaged in the "Clean energy for all Europeans" documents' package - the so-called "Winter Package". The document accepted by the European Council for Transport, Telecommunications and Energy on 18 December 2017 pointed the direction in which the energy sector in the European Union should be heading into in the coming years. The final shape of the document depends on additional analyzes and operationalization of the TTE Council's arrangements.

It is worth noting that under the obligation imposed on EU Member States, the National Plan for Energy and Climate is also under preparation – the document is to present Poland's actions undertaken to implement the 5 dimensions of the Energy Union (the plan to create an energy union within EU countries based on five priority areas was published by the European Commission in February 2015):

- I. energy security;
- II. decarbonisation of the economy;
- III. energy efficiency;
- IV. integrated energy market;
- V. innovation.

Due to its scope and content, the document will largely coincide with the scope of Polish Energy Policy.

For the last 7 years the Polish strategy of energy generation, demand and consumption had been developed according to EU energy policy guidelines of sustainable development worked out and agreed for Poland.

The strategic targets to be achieved by Poland by 2021 are:

- Reduction of the emission level of CO₂ by 20%;
- Reduction of the energy demand and consumption by 20%;
- Increase of the share of RES (Renewable Energy Sources) in energy balance up to 15%;
- Increase of the share of the Renewable Fuels in transportation balance up to 10%.

2.2. EXISTING NATIONAL REGIONAL LAWS AND STANDARDS

2.2.1. Standards for Buildings

The energy efficiency of a building is the degree of building ability to ensure the comfort of its use as intended, with the lowest possible energy consumption level. The assessment of energy efficiency is an assessment of the set of building properties affecting the use of energy necessary for its functioning, including assessment of thermal insulation of building partitions and efficiency of installations and devices used in it.

The matter of energy efficiency of buildings that are designed, constructed or reconstructed is regulated by the “Regulation of the Minister of Infrastructure of 12 April 2002 on technical conditions that should be met by buildings and their location”. The amendment to the provisions of the Regulation introduced a gradual increase in the level of requirements, up to 2021. Such step changes are to allow, among other things, for a smooth adjustment of the construction market to the new applicable legal requirements.

The amendment to Regulation of the Minister of Transport, Construction and Maritime Economy of 25 April 2012 on the detailed scope and form of a construction project to the ordinance on the detailed scope and form of a construction project extended the obligation to analyze the possibilities of rational use of highly effective alternative systems for all buildings.

The aim is to promote the use of alternatives (which include decentralized energy supply systems based on energy from renewable sources, cogeneration, heating, local or block cooling, in particular when it is based wholly or partly on energy from renewable sources and heat pumps), where it is justified by economic, technical and environmental issues.

Since January 2017, the values of admissible EP indicators for new buildings and some U-factors for building partitions have changed, in line with the provisions of the Regulation amending the Regulation on technical conditions that should be met by buildings and their location, which came into force on 1 January 2014.

An example of the step wise approach below, concerns requirements regarding heat transfer coefficients for outside walls in modernized as well as newly built buildings:

Poz.	Type of parameter	Heat transfer coefficients $U_{c(max)}$		
		from 01/01/2014	from 01/01/2017	from 01/01/2021
1	Dates of requirements changes	from 01/01/2014	from 01/01/2017	from 01/01/2021
2	t_i at temp. above 16°C	0,25	0,23	0,20

The stepwise approach has been implemented in order not to complicate financial situation of the owners of the buildings and to provide balance between investments in modernization of old existing buildings infrastructure and new buildings built in accordance with the EU standards.

2.2.2. Energy Efficiency Laws and Standards

The first Polish Bill concerning Energy Efficiency and white certificates was introduced on 15 April 2011. It introduced a system of white certificates in relation with improvement of energy efficiency ventures as well as energy auditing procedures allowing to acquire funds from governmental institutions for thermomodernization of buildings and to finance implementation of improvements in industry aiming at energy savings.

An energy efficiency certificate (white certificate) can be obtained for an action that resulted in an average annual primary energy saving of not less than 10 tons of equivalent oil (toe) or for a group of activities that together contributed to a 10 toe savings.

The first Bill introduced the term of the “PSPEE”, which defined the types of the Energy Efficiency Improvement Projects and allowed to combine projects of the same type. Sometimes such aggregation of projects makes it possible to apply for white certificates, as not always a single undertaking entity generates average annual savings exceeding the threshold of 10 toe (in order to obtain property rights resulting from white certificates, energy in the amount of at least 10 toe/year should be saved (1 toe is the equivalent of 11.63 MWh). Thanks to the combination of several projects of the same type, as part of a single application and audit, entities can increase the amount of energy savings (white certificates) for a single application. One example is the thermomodernization of multiple single-family houses or the replacement of a number of energy consuming devices with more energy-efficient ones.

Gained experience allowed for creation of administrative regulations that resulted in development of the second version of Energy Efficiency Law – EEL. The second version of the EE Bill was passed on 20 May 2016 and it came into force on 1 October 2016. It opened the door for a new way of earning and saving money as well as in investing funds.

The aim of the new regulation is to ensure that everyone who meets certain requirements (energy efficiency audit for a given investment), receives a premium in form of property rights resulting from the level of the energy efficiency (commonly known as white certificates).

After granting the certificate and completing the energy efficiency investment, property right is obtained that can later be traded on Polish Power Exchange - the only licensed commodity exchange in Poland, which has been authorized in February 2015 to operate a regulated market. The subject of trade on the PPE is electricity, natural gas, property rights, cogeneration and energy efficiency as well as guarantees of origin and emission allowances for carbon dioxide.

Another benefit resulting from the act is the support for entrepreneurs operating in the so-called ESCO (Energy Saving Company) sector, who offer services leading to reduction of energy consumption in exchange for remuneration from obtained savings. An entrepreneur operating in the ESCO formula may, among others, perform an audit of energy efficiency and implement the investment. In this case, an entrepreneur applies for a white certificate as an entity authorized by whom the investment will be implemented.

In addition, the Act requires public finance sector entities to apply at least one of the energy efficiency improvement actions in their statutory tasks:

- I. the contract whose subject matter is the implementation and financing of the undertaking aimed at improving energy efficiency;
- II. purchase of a new device, installation or vehicle, characterized by low energy consumption and low operating costs;
- III. replacement of the operated equipment, installation or vehicle with the device, installation or vehicle referred to in point 2, or their modernization.

The offices are obliged to perform such activities as, for example, thermal modernization of the building, purchase of office equipment and household appliances as well as vehicles with low energy consumption levels and low operating costs. Thanks to these actions the units have more resources that can be spent on other purposes related to the currently implemented tasks.

The new Bill defined:

- rules for developing national activity plan for country global energy effectiveness;
- tasks for Public Sector of different ranks;
- principles of energy saving methodology; methodology of energy auditing for large private industry, building estates and district heating;
- obligation for large scale industry to achieve a 1,5% annual progress in energy effectiveness perform, which is to be demonstrated through energy auditing processes conducted each 4 years;
- positive results in EE activity apart from lowering costs of energy are granted with white certificates.

2.2.3. Renewable Energy Laws

RES support system

Similarly to other EU countries, the Polish regulatory system envisages a support mechanism for RES in order to enhance the share of this sector in the energy mix.

Originally, the Polish Renewable Energy Law was based on green certificates, which were introduced in October 2005. At the turn of 2015 and 2016 the auction system had been adopted in order to replace the green certificates system.

Auction system

The auction system in Poland was introduced on the basis of the amendment to the Act of 20 February 2015 on renewable energy sources. The system is based on the feed-in tariff mechanism, which aims at minimization of the risk related to energy prices for the investors. According to the system's assumptions, producers of electricity from RES submit an offer specifying the price per unit of energy produced (1 MWh) and the amount of energy they undertake to deliver within the 15 years-period through the auctions organized by the President of URE. The auctions specify the volume of the electricity to be bought through the auction. The price offered by the installations cannot be higher than the reference price set for a given energy source in the ordinance of the Minister of Economy.

Installations offering the lowest price per unit of energy are to be granted the feed-in tariffs (the tariffs are granted to the installations starting from the ones offering the lowest price, up until the sum of the total volume declared by the installations matches the volume set for the given auction). Each RES installation that starts producing electricity after the auction system was adopted, and at the same time, its generation infrastructure is not older than 48 months as of the day of generating energy for the first time (72 months for offshore wind energy), is covered by the auction system and cannot take part in the green certificate system. Owners of installations that started selling energy before this date have the right to remain in the green certificates system or to enter the auction system. Once the installations decide to enter the auction system they are not allowed to turn back to green certificates.

The auctions are divided into a number of auction baskets basing on the type and size of the installation. Latest amendment from June 2018 changed the number of the baskets from 7 to 5, as well as their coverage of the RES types. Current RES baskets are presented below:

- **Basket 1** is dedicated to:
 - installations using solely biogas obtained from landfills,
 - installations using solely biogas obtained from wastewater treatment plants,
 - installations using solely biogas other than those specified in points (1) and (2) above,
 - exclusively dedicated biomass or hybrid systems,
 - installations using solely biomass, bio-liquids, biogas or agricultural biogas incinerated in a dedicated multi-fuel combustion plant,
 - exclusively dedicated biomass or hybrid systems, in high-efficiency cogeneration.
- **Basket 2** is dedicated to:
 - on installations using solely hydropower for generating electricity

- on installations using solely geothermal energy for generating electricity,
- on installations using solely wind energy at sea.
- **Basket 3** is dedicated to installations using solely agricultural biogas.
- **Basket 4** is dedicated to installations using solely wind energy on land and installations using only solar energy will compete for support.
- **Basket 5** is dedicated to hybrid renewable energy installations.

In 2016 and 2017 only a few auctions have been conducted and the results of those conducted in 2017 had to be canceled due to lack of notification of the auction support system. Regulators plan acceleration of the development of the system by conducting RES auctions for up to total of approx. 2,650 MW installed capacity in the 3rd and 4th quarter of 2018.

Green certificates

The system of green certificates was introduced in Poland on October 1, 2005. It assumes that for each unit of electricity (1 kWh) produced by a renewable energy source, the President of the Energy Regulatory Office issues a certificate of origin which, at the time of its registration in the Certificate of Origin Register, is converted into a green certificate. In this way, property rights arise which are then traded on the Polish Power Exchange (TGE SA).

As stated above, the system is currently unavailable for the installations that were not operational before the beginning of 2017. The maximum duration time, in which each installation has the right to obtain green certificates is 15 years.

Entities obliged to demonstrate the possession of a certain number of certificates of origin of energy from renewable sources (including industrial customers, energy companies, end users, and commodity brokerage houses) may acquire green certificates on the stock exchange and submit them for redemption to the President of the Energy Regulatory Office. In the absence of the required number of green certificates, the entity is obliged to pay the so-called substitute fee. The price of these property rights in the stock market is dependent on the size of their supply, demand and the amount of the substitution fee.

The state does not buy certificates, the system does not provide a minimum price for them, and the amount of substitution fees is annually announced by the president of URE. Substitution fees reinforce the National Fund for Environmental Protection and Water Management, which then finances various activities and projects.

The price obtained by the power plant owner from the sale of electricity produced in renewable energy sources in the green certificates system is the sum of two components:

1. Energy prices on the competitive market;
2. Property right price - green certificate.

As the green certificates are traded on the stock exchange their market price is determined by their current supply and demand.

Location restrictions and tax regulations regarding onshore wind farms

In 2016 modification of construction and operation standards for wind turbines was introduced – the major changes were related to wind farms' location against living areas (the distance between the wind turbine and the closest occupied building cannot be lower than 10-times the length of the turbine) and the taxation regulation (property tax was imposed on the wind turbine – earlier it was not treated as a property).

These modifications had a significant negative influence on the level of new investments in the onshore wind energy sector resulting in suspension of many wind projects in the development stage. As the onshore wind is the major type of RES used in (according to URE, onshore wind generated 72% of total electricity from RES in Poland in 2017) 2016 was the first year in history when the share of RES in the Polish energy mix decreased.

In June 2018 new changes were adopted in the RES Law in order to animate the onshore wind market. These changes include cancelation of imposing of property tax on wind turbines and granting a 3-year period for wind farms with building permit in locations failing to meet the location criteria to start the operations.

2.2.4. Related laws or standards impacting energy sector development

BAT regulation

The IED Directive aims to control and reduce the impact of industrial emissions on the environment. The principle underlying the Directive is the "polluter pays" principle, according to which industry should bear the costs of adapting to the best available technologies, and external costs related to the deterioration of the quality of the environment and health should be minimized. The provisions of the directive point to emission standards for air pollutants such as sulfur dioxide, nitrogen oxides or suspended particulates from combustion plants. Importantly, emission limits apply not only to new energy facilities, but also to existing ones.

BREF documents are developed in cooperation with the Member States, the European Commission and representatives of industry and non-governmental organizations. It describes techniques commonly used in a given industry, current emission levels, as well as those technologies that are considered currently the best in a given sector.

The BAT conclusions for large combustion plants from 28 April 2017 introduce much stricter requirements for emissions than the previously applicable regulations. Pre-existing standards (contained in the IED Directive itself) regulated only the permissible levels of three pollutants: sulfur dioxide, nitrogen oxides and dust. The BAT LPC conclusions published in April this year not only significantly reduced the permitted emission limits for these substances by coal-fired power plants (and other large combustion plants with a capacity of 50 MW or more), but also for the first time introduced control requirements and maximum emission levels for substances such as mercury, hydrogen chloride, ammonia or hydrogen fluoride.

RES support mechanism

As already mentioned, in 2016 and 2017 only a few auctions have been conducted and the results of those conducted in 2017 had to be canceled due to lack of notification of the auction support system. Due to a high degree of uncertainty among RES investors regarding the way the system will be working, many projects have been halted.

"The distance law"

Wind farm projects in Poland were weakened by changes in law adopted in the first half of 2016 – so called "distance law" because of the new, restrictive criterion on the minimum distance of new wind turbines from residential buildings and protected areas. Approx. 99% of Polish territory does not meet the distance criterion leaving very limited areas for new onshore investments. Projects already in the development stage with building permits were given the 3-years deadline to become operational.

Power market

The introduction of power mechanisms in Poland results from the need to ensure the correct operation of the National Power System (NPS) in the long-term perspective. Electricity prices on the wholesale market subject to, among others pressure from RES sources, are currently so low that they do not provide the means to modernize existing or build new generation sources. In view of the real risk of power shortages in the system already after 2020, it has become necessary to develop a solution that stimulates investments aimed at increasing the security of energy supply.

In connection with the above, in December 2017, Power Market Act was adopted, which entered into force on 18 January 2018. A day later, Polish Power Grid (PSE) published draft Power Market Regulations, which should be approved after the social consultation process by the President of URE by 30 March 2018. The introduction of power as another commodity means a revolution in the current approach to the energy market and creates the possibility of obtaining additional remuneration for the provision of a power obligation to PSE. Energy producers or demand reduction units (DSR) will be able to receive remuneration for their readiness to supply power to the system, while also requiring delivery in the event of power shortages.

As a result many conventional energy sources may receive additional contribution, which should increase their profitability and longer exploitation. It may slower the pace of growth of RES share in the polish energy mix.

2.3. LATEST NATIONAL AND REGIONAL ACTIVITIES AND EFFORTS FOR THE REFORM OF STANDARDS

As far as standards requirements are concerned, application of the abovementioned stepwise method regarding energy efficiency and as for now it seems that reaching in time the EU EE standards for countries with the same climate conditions is possible.

2.4. STATE, REGIONAL, MUNICIPAL AUTHORITIES RESPONSIBLE FOR ENERGY/EE/RE POLICY DEVELOPMENT.

State

At the State level a group of Ministries is responsible for setting rules for EPC development:

- Ministry of Investment and Development;
- Ministry of Environment;
- Ministry of Infrastructure;
- Ministry of Energy
- Ministry of Entrepreneurship and Technology;
- Ministry of Finances.

Apart from statutory obligations, their set of tasks include arranging financing of research and development of new technological solutions and formalization of new effective standards as well as support in implementation of good practices and finally development of infrastructure for effective and stable EE, RES project financing, country wide programs such as POIS and PROW.

Regional

The role of regional governments in EE and RES programs is mainly to arrange, administrate and control the Regional Operational Programme – ROP (supported by the EU) in execution of EE and RES projects in public infrastructure.

At the regional level the responsibility is shared hierarchically between:

- Regional governments;
- Local counties governments.

Their role is to identify needs for EE and RES projects implementation, and later on maintaining control over projects execution.

Municipal

At municipal level there are local communal councils acting as the responsible administrative units to identify needs and to perform local supervision over project execution.

3. CONCLUSIONS

Regarding EE issues, realization of the EEL regulations is underway and it seems that the adaptation of the construction market to the gradually increasing energy efficiency limits proceeds according to expectations of the regulators.

Regarding RES, events that took place between 2015 and 2017 (replacing green certificates system with the auction system, changes in location and tax regulations regarding on-shore wind, termination of the long-term PPA agreements from the on-shore wind farms by the Polish energy utilities) had a negative impact on the growth trend of the RES share (especially on-shore wind farms, which, according to URE, generated 72% of total electricity from RES in Poland in 2017) in the Polish energy mix. As a result many experts believe that it may be difficult for Poland to reach the target of 15% share of RES in the energy mix by 2020.

At the moment the RES investors are rather scarcely interested in RES auctions mainly due to high level of uncertainty related to the functioning of the system. The small progress is fueled by investments in micro, small and medium size solar installations – photovoltaics and solar heat panels, financed from EU and governmental funds in auctions for EE and REN modernization of public buildings.

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ABBREVIATIONS

BAT – Best available technology

EE – Energy Efficiency

EEL – Energy Efficiency Law

ERO – Energy Regulatory Office

ESCO – Energy Saving Company

ME – Ministry of Energy

PPE, TGE – Polish Power Exchange

REL – Renewable Energy Law

REN – Renewable Energy

RES – Renewable Energy Sources

Regulation on technical conditions that should be met by buildings and their location - decree of the Minister of Infrastructure and Development of 17 July 2015 on the publication of a uniform text of the Regulation of the Minister of Infrastructure on the technical conditions to be met by buildings and their location