

REPORT ON THE STRATEGIC IMPACT ASSESSMENT OF THE DRAFT OF POLISH ENERGY POLICY UNTIL 2020

SUMMARY AND CONCLUSIONS

The report is an element of the strategic environmental impact assessment procedure carried out in accordance with the law for the draft of the Energy Policy of Poland until 2040. (hereinafter/hereafter referred to as the EPP 2040). The process of its implementation and the scope of the assessment is determined/governed by the Act of 3 October 2008 on Providing Information on the Environment and Environmental Protection, Public Participation in Environmental Protection and on Environmental Impact Assessment.

The aim of the Strategic Environmental Impact Assessment is a comprehensive analysis of the possible impact of the projects and measures indicated for the implementation within the framework of the EPP2040 on particular elements of the environment.¹ This analysis also includes an assessment of the occurrence of cumulative impacts, an analysis of the possibility of using alternative solutions and the need for compensatory measures.

The Energy Policy of Poland until 2040.

The Energy Policy of Poland until 2040 that is a subject of this assessment, is a response to the most important/significant challenges facing Polish energy sector in the upcoming decades and sets directions for the development of the energy sector, taking into account tasks that are essential for its implementation in the short - term.

The objective of the Energy Policy is to ensure energy security while ensuring the competitiveness of the economy, energy efficiency and reduction of the environmental impact of the energy sector, and with optimum use of Poland's own energy resources.

The following indicators are to be used as the overall measure of the achievement of the EPP2040:

- 56-60% share of coal in the generation of electricity in 2030
- 21-23% RES in gross final energy consumption in 2030.
- Introduction of nuclear energy in 2033.
- Reducing of CO₂ emissions by 30% by 2030 (in relation to 1990)
- Improvement in energy efficiency by 23% by 2030. (in relation to the 2007 forecasts).

The document contains: a description of the energy sector in Poland, objectives of the energy policy, directions of development, implementation and monitoring system, conditions of financing the implementation and documents related to the implementation. It also includes aspect of territorial dimension, as the activities related to the implementation of the Energy Policy are closely related to/local and regional development.

Summary of environmental impacts

Within the framework of analyses, all directions indicated in the policy and their impact on the environment were assessed, among them: biodiversity, integrity of protected areas, population, flora and

¹ Consolidated text: OJ C 316, 30.12.2004, p. 1. 2018, item 2081, as amended.

fauna, water resources, air quality, land surface, landscape, climate, natural resources, monuments² and materials/ tangible goods. The analyses were carried out for each type of the project identified as potentially feasible under the EPP2040, as well as for the specific projects mentioned in the document. Detailed analyses were carried out for the projects that possessed established locations. In the above mentioned cases and for the documents including these projects decisions and reports on the environmental impact were used, as well as forecasts of the environmental impact.

In particular, the main risks concerning potential negative impact on natural resources have been analysed and identified. They are related mainly to the stage of ongoing works and they concern: taking up large areas of land which may lead to fragmentation of habitats and taking up positions and habitats of protected species, scaring birds and animals. The exploitation phase, depending on the project, will be mainly related to the risk of hydrological changes affecting water - dependent species and habitats, the risk of groundwater and surface water pollution, in case of mining activities, as well as collisions of birds and bats with newly created power grids and wind turbines. Potential negative impacts may include pipeline construction, fuel bases, acquisition of new lignite and hard coal extraction areas, oil and natural gas, as well as energy production from traditional and renewable sources. In addition, an offshore investments have the potential to adversely affect birds, marine mammals and fish species.

In general, as a result of the analyses, it was stated that the implementation of the policy will contribute to the reduction of negative impact on the environment and the reduction of greenhouse gas emissions from the energy sector, and thus it will have a positive impact on air quality, human health and generally on the sustainable social and economic development. Nevertheless, a number of activities envisaged in the policy will have a negative impact. These impacts will be diversified and depend on the applied technology and energy carrier. According to the analyses, from the point of view of the environment, the least negative impacts will be related to the development of renewable and nuclear power engineering, and those with the biggest/most impact are related to the use of coal, especially if there is no technological breakthrough in the field of clean coal technologies.

All activities aimed at increasing energy efficiency, modernisation of energy sources, transmission networks, smart grids and renewable energy will be beneficial for the environment, although some of those activities, despite the fact that they will generally have a positive impact on individual cases, may have a negative impact on some elements of the environment.

According to the forecast analyses carried out, as a result of the EPP 2040 implementation by the 2040, the annual greenhouse gas emission will be reduced by 50% in relation to the 1990) and the emission of air pollutants will be also reduced (e.g. with respect to different pollutants by 10 to 20%), which will have an impact on the improvement of the environmental quality, including air quality. This will be significant in the context of human population and the improvement of life and health quality.

It is recommended to conduct a detailed environmental impact assessment for the projects that have a significant impact on the environment, and for which no precise locations have been established and no documentation has been prepared, according to the polish law this is obligatory at the stage of the preparation process.

² This concept also includes archaeological monuments.

Taking into account the types of projects and their possible impact on the environment, the forecast indicates recommendations concerning the elimination, minimisation and possible compensation of negative impacts of particular investments.

Cumulative impacts

Cumulative impacts are defined as changes in the environment caused by the impact of proposed activities combined with other impacts presented in the space and impacts resulting from the implementation of strategic documents to be implemented in the future.

The policy is of a general nature and does not precisely specify all the projects and their locations. In this particular circumstance, it can only be assumed that the accumulation of impacts is likely if they are located within the existing or predicted future accumulation of impacts from existing and planned infrastructure.

In this given situation, the forecast was an attempt to collectively list the current and planned infrastructure within the scope which results from already introduced documents and hypothetically defined areas of possible accumulation of impacts on the environment.

In order to limit the negative impact of the accumulation of impacts on the environment, it was recommended to conduct an appropriate spatial planning policy and rational space management.

Alternative options

The general level of defining the activities in the EPP 2040 project does not allow for the wide selection of alternatives for individual projects, and in this situation, it would be difficult to present specific proposals in this respect.

However, it is proposed to consider the possibility of further increase of the share of renewable energy sources in the overall energy mix in 2040, which would have a positive impact on all elements of the environment and on humans' population health.

Assessment of the potential for transboundary impacts

The potential for significant transboundary environmental impacts has been analysed. The analyses have indicated that there are no such impacts, although they cannot be excluded, which might be visible at the stage of designing individual projects.

It should be noted that in the field of nuclear energy such analysis was carried out for the Polish Nuclear Power Programme also the Programme was subjected for the international consultations. The design of the Polish section of the Baltic Pipe was analysed, during this analyse no such impacts were found. The project is still in the process of international consultations.

Monitoring of the effects of the EPP 2040 implementation

During the implementation of the Energy Policy, it will be important to control the course of this process and to assess the effects of its implementation including all elements of the environment. It will allow to react quickly and to restrain negative changes, as well as taking appropriate measures to minimise and possibly compensate for them.

In the report, it was proposed that the monitoring of the effects of the Policy implementation should be based on the system of the State Environmental Monitoring, and within this framework, on the annual

reports including outlook of the environmental conditions in the voivodeships. If any negative changes in any element of the environment were identified, it was recommended to analyse whether the observed changes would result from the implementation of the Policy and in such case to take appropriate measures to eliminate, minimize or compensate for them.

Conclusions

The following conclusions can be drawn from the analyses of the impact of the Energy Policy of Poland until 2040 on the environment:

- Comprehensive implementation of EPP2040 to secure the country's energy needs will generally contribute to reducing the pressure of the energy sector on the environment and thus improving its condition, as well as reducing greenhouse gas emissions, which will be important in the global process of limiting climate change. Nevertheless, it should be noted that a number of projects included in the EPP 2040 will have a negative impact, on certain elements of the environment. Detailed recommendations concerning the reduction of this impact or its compensation are included in the chapter 4.7 of the assessment.
- The report indicates that in the case of implementation of the EPP2040, emission of SO₂ and NO_x in 2030 correspond to the 2030 emission target/levels set for Poland in the NEC³ Directive. If the EPP2040 will not be implemented, levels are not met, the national standards for particulate levels of SO₂ and NO_x in 2030 will not be met. They can be met rather later than the NEC Directive forecasts/predicts, however probably only after 2035.
- The policy implements environmental objectives of national strategic documents, including the Strategy for Responsible Development until 2020 with the perspective until 2030. It is also consistent with the EU strategic documents and with those on global level, including documents on climate change objectives.
- The analyses have indicated that the general character of the document (except for the projects listed below), does not points out any identified impacts on the environment, in the transboundary aspect, but it also cannot be excluded, however this might be proven only at the stage of designing individual investments. It should be noted that consultations for the Polish Nuclear Power Programme, involving interested parties have already been conducted, and for the Baltic Pipe Project consultations are currently in progress.
- In the general aspect, the analysis of the EPP 2040 showed consistency and proved that the activities in particular directions complement each other in order to achieve the assumed objectives.
- Therefore, the Act on Providing Information on the Environment and Environmental Protection, Public Participation in Environmental Protection and on Environmental Impact Assessment provides alternative solutions as a part of strategic assessments, it is proposed to consider an alternative with a greater share of renewable energy sources. Such option would be more beneficial from the point of view of air pollution reduction, including greenhouse gases and environmental impact.

³DIRECTIVE (EU) 2016/2284 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of December 14th 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC

- Including the above, external costs such as health effects, costs of treatment and sickness absence, corrosion of materials, energy security, etc. should be taken into account/consideration when selecting alternative solutions.
- Taking into consideration the general character of the policy and its time horizon, which was related to the adoption of a number of development hypotheses, also in the field of environmental protection requirements, it is advisable to systematically update the policy with regard to the progress of technology, new challenges, etc.
- Consequently, all amendments of the policy and the implementation of the projects ought to include adaptation to climate change.
- In accordance to the Act concerning the maritime areas of the Republic of Poland and the maritime⁴ administration, the construction and use of wind power plants on internal waters and territorial sea is limited. However, if the use of renewable energy resources in the Baltic Sea and the location of other projects is envisaged within the Energy Policy, in accordance with the Act on Providing Information on the Environment and Environmental Protection, Public Participation in Environmental Protection and on Environmental Impact Assessment, Article 57 paragraph 2, the assessment should be consulted with the directors of maritime offices, who are competent bodies in matters of monitoring and reviewing of agreements within the strategic environmental impact assessments.
- Consequently, the fact that future development depends, (to a large extent) on innovative technologies, it seems that this direction should be more underlined in the Policy implementation, as the competitiveness of the economy and the environmental impact depend on it.
- In order to gain the support of the society and increase its awareness, also in the context of the impact of particular energy technologies on the environment and on the health, it is worth to place greater emphasis on social education in implementation of the Policy.

⁴ [Journal of Laws 1991] No. 32 item 131, Art. 23 p.1 a, as amended.