The Energy Policy of Poland up to 2050 – a Critical Analysis

Abstract: The text presents an analysis of the Polish energy policy, which takes into account its both aspects: the institutional and normative aspect (policy), and the context of political activities involved (politics). As the text analyses the planning documents prepared by the Minister of Economy (the so-called “State’s energy policy”), the starting point for this analysis are the legal issues ensuing from the Energy Law Act. The text outlines the major assumptions of the Energy Policy till 2030 as well as the general provisions of the incomplete, as of the year 2015, Project of the Energy Policy till 2050. The institutional and normative context has been supplemented with an analysis of selected issues significant for the directions in the development of the energy policy and the energy security in Poland.

Moreover, the text addresses the following questions: (1) to what extent does the legal status of the document “the State’s energy policy” contribute to the poor achievement of the strategic goals in the energy sector?, (2) to what extent does the lack of actual responsibility of the political subjects contribute to the lack of the realisation of strategic goals put forward in the “State’s energy policy”? (3) what actions should be undertaken in order to administer a cohesive and effective energy policy in Poland?

Key words: Polish energy policy, Polish Energy Law, Polish energy sector

Introduction

The analysis of the energy policy should account for both its institutional and normative dimension (i.e. policy), and the “political activities” involved (i.e. politics). Frequently, in the public discourse, as well as in works on political sciences or international relations, the concept of energy policy is so broad that it virtually encompasses all the “state – energy industry” relations, even occurrences that have nothing in common with...
these relations. From the point of view of the clarity of analyses, it seems that the above approach is not sufficiently explication, nor does it contribute to the correct research process. However, this approach provides an opportunity for an in-depth insight into some non-formal processes, e.g. through pointing out the activities of lobby groups.

In the case of the institutional and normative approach, what should be highlighted is the range of legal instruments’ application in the implementation of the energy policy (Cf. Elżanowski, 2008). The above mentioned approach is extremely legalistic in its nature and boils down to a specific area of law, i.e. the energy law. To a large extent, the scope of these analyses depends on the legal culture and the shape of the economy of the countries involved and the organisations to which the former belong. In this approach, the great majority of legal issues are closely related to the public and the civil economic law. In the case of the public economic law, of paramount importance here is the Energy Law Act (*Ustawa Prawo Energetyczne*, UPE), as the energy market is regulated by State bodies (i.e. the President of the Energy Regulatory Office (ERO), and the Minister of Economy). In fact, when discussing the regulation of the energy market, it is the competence of the President of the Energy Regulatory Office and the Minister responsible for the economic affairs that should be mentioned in the first place (Domagała, 2008; Rosicki, 2010, p. 113–137; Szafrański, 2014).

In relation to another “planning document” under preparation by the Minister of Economy (i.e. the *Energy Policy of Poland till 2050*), it is worth referring to the government co-ordination activities in the area of the energy policy. The Minister of Economy devises the energy policy as regards its strategic (systemic) aspect, which endows the regulatory body on the market, that is the President of ERO, with full autonomy of action. The scope of the Energy Policy of Poland has been specified in the Energy Law Act – in particular in Articles 12, 13, 14, 15 and 15a of the Act (Polish Journal of Laws 1997, No. 54, item 348, as amended). The authority responsible for the energy policy is the Minister of Economy, who supervises the energy policy as regards its strategic and administrative aspect (Art. 12 UPE). In accordance with the statutory requirements, the document prepared by the Minister of Economy must be submitted every four years – it contains an assessment of the implementation of the previous “policy”; it also lays down a forecast for the period not shorter than 20 years. The document prepared by the minister, upon the motion of the latter, is subsequently approved by the Council of Ministers. “The State’s Energy Policy”, as a special planning document, should: (1) ensure the en-
energy security, (2) foster the competitiveness of the State’s economy, (3) ensure the energy effectiveness, (4) protect the natural environment. Moreover, “the policy” must be devised in compliance with the principle of sustainable development (Czarnecka, Ogłódek, 2007, p. 325–363; Pawelczyk, Pikiewicz, 2012, p. 430–482).

At this point, a number of questions on the implementation of the “energy policy” in Poland should be posed: (1) to what extent is the legal status of the document (Art. 13–15a UPE) to be blamed for the poor achievement of the strategic goals in the energy sector?, (2) to what extent is the lack of actual responsibility of political entities responsible for the lack of realization of strategic goals laid down in the “State’s energy policy”? , (3) what actions should be undertaken in order to help administer a cohesive and effective energy policy in Poland?

The analysis of the energy policy in its institutional and normative aspect should consider the political activities of instrumental character. In the case of Poland, this instrumentalism takes on quite a pejorative form, while one of its effects is the low level of the law enacted by the legislature. The poor quality of the enacted law is visible in the lack of its clarity, systemic solutions, and its stability. In consequence, the energy law in Poland has been subject to a series of changes, which, in 2013, resulted in the introduction of a package of amendments to the “old” Energy Law Act, under the euphemistic name of “the Little Energy Three-Pack”. The changes have been introduced despite the ongoing works on the Gas Law Act and the Renewable Energy Sources (RES) Act (The Energy Laws Package..., 2012). Towards the end of 2013, the legislature introduced the amendments under the pressure of the threat of penalties pursuant to the allegations put forward in the complaint lodged by the European Commission. The legislative changes mainly pertained to the allegations submitted by the European Union (The Market..., 2014).

**Review of the “Energy Policy till 2030”**

Undoubtedly, the Polish energy policy gained on dynamics due to the requirements adopted by the European Union – the energy packages and the first Climate and Energy Package. If it was not for the “external” factors, the transformation of the Polish energy sector would not be triggered off at such a fast pace; simultaneously, it does not mean yet that the progress rate with this respect is satisfactory enough. It is true that the require-
ments pertaining to the market separation and the quantitative growth in RES as part of the production of electrical energy are being observed; however, the quality of these changes is far from being satisfactory. In the first place, it is hard to deem the Polish gas market competitive if there is only one strong monopolist, i.e. PGNiG (lit. Polish Petroleum and Gas Mining). The legal changes introducing the so-called power exchange obligation were poorly prepared and thus could enter into force neither in 2013 nor in 2014; nevertheless, the exchange obligation should be considered the only mechanism leading to the liberalisation of the gas market in Poland (TGE..., 2014).

In the case of RES, it can be safely assumed that the level of contribution in the energy production till 2020 will be satisfactory; however, what should be given consideration here is the very structure of RES-generated electrical energy. For instance, according to the Energy Regulatory Office, in 2012, co-incineration contributed to 41% of all RES-E. If the biomass not involved in the process of co-incineration is taken into account, this contribution rises to nearly 50% of all RES-E (The Quantity..., 2014). The new data might reveal a decline in this contribution, which can be a result of not taking into consideration the biomass incineration in the so-called “hybrid systems” and the prices on the market of “green certificates” (e.g. the data from 2013 point to the decrease in co-incineration by approx. 50%). It only proves that Poland has fulfilled the EU “ecological requirements” by “non-ecological methods” – it is far from being compliant with the spirit of the European changes. Simultaneously, it renders the biomass and the “green certificates” market susceptible to abuse. Moreover, the Polish state is not interested in the modernisation processes of the energy sector, which gives the advantage to the conventional energy suppliers.

The Energy Policy of Poland till 2030 has not refrained from the activities aimed at the exploitation of new lignite deposits. Moreover, it has emphasised the necessity to remove legal barriers with respect to the opening of the new bituminous and lignite coal deposits. In addition, it has highlighted the need to secure the access to strategic resources of coal, e.g. through the protection of the areas of its occurrence against further infrastructural land development not related to the energy sector. In order to counteract the above threats, the mining sites should be accounted for in the national spatial development plans and local area development plans (The Policy..., 2009).

There is a visible discrepancy between the political declarations, which obsessively emphasise the need for the development of RES in Poland, and the legislative and financial solutions that are barely effective; if, of
course, Poland still intends to transform this particular sector into a strategic element of the energy security. In the political circles, there can be observed a tendency towards a glorification of the coal mining heritage of Poland, which significantly lowers the level of an overall index of import dependence of the country. Another issue constitutes the project of building a nuclear power plant in Poland, which is occasionally put forward, with greater or lesser success and consideration. In the above context, a whole assortment of options for the diversification of electrical energy supplies (energy mix) are usually brought up, however, it is hard to speak of a significant – from the point of view of the structure of energy production – diversification. The development of a power plant with an installed capacity of 3000 MW seems to be rather cost-ineffective, which results from the costs related to the introduction of a brand new energy technology. The costs of introduction of a new power generating source in Poland will always surpass those incurred by states boasting well-established nuclear energy systems, the reason being technological backwardness as well as the lack of proper ‘know-how’ and qualified staff. Moreover, there are no crucial solutions or strategies which would indicate the synergy of the nuclear sector with the rest of the economy branches. It seems that Poland is not affluent enough to initiate new investment processes without solid strategic planning.

**Review of “the Energy Policy till 2050”**

In August 2014, a Project of the *Energy Policy of Poland till 2050* was submitted for consultation along with the conclusions from forecasting analyses conducted for the purposes of the Project. It should be stressed that at the beginning of 2015 the appropriate document of the Ministry of Economy was not yet available; the only available relevant materials were those contained in the extremely concise Project. In its preface, the authors mentioned the success of the previous “planning document” (*The Project...*, 2014, p. 3) – the appraisal was expressed by the International Energy Agency (IEA). However, the above evaluation pertained to the priorities and not to the process of their realisation – it would be difficult to negatively assess the priority to achieve 20% RES in the energy structure in Poland, the more so as it is Poland’s commitment related to Poland’s membership in the EU. The new “policy” envisages the continuation of the objectives laid down in 2009, which *per se* leaves no illusions as to any possible revolution in the energy sector in Poland. What is more probable
is the minimalistic approach to the observance of the EU requirements in the area of RES. In the era of the “new energy policy”, it is going to be the gas sector that will most probably abound in significant infrastructural projects; however, it will not be the result of the Energy Policy till 2050, but of another document, the Project Pipeline – an auxiliary document, which is required in the process of application for the EU funds in the 2014–2020 Financial Perspective.

Despite what the Minister of Economy had said, the Energy Policy till 2050 failed to be submitted by the end of 2014, hence, it is now hard to discuss its detailed assumptions. However, it does not constitute a serious problem for the analysts, as many assumptions included in the previous documents were also merely outlined; the analysts could hardly extrapolate specific activities of the State’s administration bodies to the future. The following issues are going to be quite foreseeable: (1) energy efficiency, (2) activities related to environmental protection, (3) RES development, (4) directions in the international co-operation development (Art. 14 UPE). The above assumption arises from the obligation imposed on Poland to meet the requirements in the 1st and the 2nd Climate and Energy Packages (i.e. the European objectives till 2020 and 2030 in the area of climate and energy).

The main problems in the energy sector that Poland is yet to be faced with are the following: (1) the development of the capacity installed in the national grid, (2) the development of the transmission infrastructure, (3) the activities in the area of the functioning of the unprofitable coal mining, (4) the transformation of the conventional energy sector, (5) the elaboration and implementation of the effective strategy for RES development, (6) the changes in the functioning of the gas and electricity market. It is impossible to analyse in this text all the relevant issues, hence, the author has selected only the most crucial for the nearest future.

Another vital problem – in spite of the multitude of “policies” and “strategies” – is the lack of any long-term strategic planning in the energy sector. The lack of actual responsibility for the failure to act upon the provisions included e.g. in the Energy Law Act (Art. 13–15a UPE) directly translates into the lack of rational actions in the investment process (Cf. Waligórski, 2008, p. 69–74). Also, of much significance here is the political context, which might be illustrated by the fact that many politicians have been resorting to the shale gas issue during their electoral campaigns. In 2011, Donald Tusk used shale gas as an instrument in his campaign, though the Council of Ministers under his leadership showed certain in-
competence as regards the works on the new solutions regulating the extraction of this raw material. As the process of developing a legal basis for shale gas exploitation was unclear and overly protracted, a number of foreign companies began to withdraw one after another from shale gas exploration (Gadomski, 2014; Rosicki, 2014). In 2014, the Supreme Audit Office (NIK) submitted a highly negative report, appraising the activities of public administration aimed at the exploration, production, and exploitation of shale gas deposits, as well as evaluating the extent to which entrepreneurs fulfilled the conditions set forth in the concessions for shale gas exploration and/or prospection in the years 2007–2012, i.e. in the period when Donald Tusk was the Prime Minister (Exploration..., 2013).

It should be also mentioned that the Energy Policy till 2030 highlighted the need to increase the level of the installed capacity in the 7 GW system and the concurrent withdrawal of the electrical capacity on the 7 GW level by 2020. According to simple estimates, it can be assumed that the Polish electrical energy system should be supplied with the new energy sources at the level of approx. 14 GW (The Policy..., 2009). The lack of energy infrastructure development might significantly lower the level of the energy security; in the case of the public service obligations imposed on the energy companies, it might lead to the inability to meet the collective needs for energy. In addition, it is forecast that there will be an increase in the demand for electrical energy of 60% in the course of the next 20 years. Most certainly, there the high level of the renewable energy sources will be maintained, which is related to the requirements of the two climate-energy packages; however, in order to keep the constant growth of the so-called diversified sources, it is requisite that the development of the peak load energy sources based on natural gas be secured (Kapron, Palocki, 2013, p. 33–52).

The estimates by the Energy Regulatory Office of 2014 demonstrated that in the period 2014–2028 the infrastructural enterprises (energy companies) planned to deliver 18 GW in total of the new generating capacity. Simultaneously, the number of planned reductions in the generating capacity for the same period will amount to over 5 GW of installed capacity. The biggest generating capacities will be installed in the national electricity system in: 2017 (2.7 GW), 2018 (3.5 GW), 2019 (3.8 GW), and in 2020 (3 GW). In the above mentioned period, the reduction in the capacity will chiefly pertain to the bituminous coal (50.1%) and the lignite (24.7%) sectors. The main causes of these reductions will be the exploitation as well as the failure to fulfil the commitments for GHG emissions (Plans..., 2014, p. 3 and the next pages).
In the long run, the national electricity system will still be based on coal mining. It is estimated that coal will constitute the basic energy source for the next 30 years; however, what should be stressed here is the difference between the estimated and the operational deposits – the latter, without the necessary investments, might lose their economic and service value much sooner. The underfunding of the mining sector might lead to the need for bituminous coal import. In the case of lignite, maintaining the level of the installed capacity in the electricity grids will call for the exploitations of new deposits. Currently, the lignite exploitation in Legnica is being considered as well as the deposits in Gubin–Mosty–Brody, Dęb Słachcickie, Radomierzyce and Złoczew (Kasztelewicz, Kozioł, 2007, p. 141–158; Taduś, Czaja, Kasztelewicz, 2010, p. 137–167).

It seems that in the period of the three “energy policies”, i.e. in the years 2005–2015, many chances for the implementation of effective modernisation and the restructuring of the Polish mining sector were lost. In 2015, the government plenipotentiary for the hard coal mining restructuring is going to present the programme for the discussed sector. It is worth mentioning that the plenipotentiary was appointed as late as towards the end of 2014. The above activities seem to be somewhat belated, the more so, if we consider the fact that the poor condition of the Polish coal mining sector had been known long before the year 2014. The issues related to the coal production and its profitability constituted the subject of analyses in nearly each document on the energy policy in Poland. In 2014, as compared to 2013, there could be observed a drop in coal output by 4 million tonnes. The data of the Ministry of Economy point out that in 2014 1 tonne of bituminous coal required an average of EUR 9 or 10 of subsidy. In 2014, the losses of mining companies for coal sales amounted to PLN 1.5 billion (PAP, 2014). At the beginning of 2015, Prime Minister Ewa Kopacz emphasised the urgent need for relevant reforms. The problem seems to be quite serious, especially if the financial state of certain coal mining companies is to be considered. It should be stressed that the yield from each tonne of produced coal is assigned to the budget, as 1 tonne of coal is charged approx. EUR 25 for the State’s benefit. Hence, the drop in the production and the decline in the budget revenues are interdependent (Dudała, 2015). Moreover, the restructuring of unprofitable companies will most certainly lead to redundancies, which is why there can be observed no effective changes, in particular, during the periods leading up to elections. The Polish authorities preferred to focus on the “special kind of control” in the companies which imported cheap coal from, *int. al.*, the
Russian Federation (it was one of the topics in the “Vistulagate”, i.e. the illegal recordings of private conversations held between the Minister of Internal Affairs, Bartłomiej Sienkiewicz, and the Governor of the Polish Central Bank, Marek Belka, in June 2014).

On 15 January 2015, the Sejm by the majority of votes of the Civic Platform (Platforma Obywatelska, PO) and the Polish People’s Party (Polskie Stronnictwo Ludowe, PSL) passed an amendment to the Mining Act. The Act stipulates for the spin-off of non-profitable companies from the Kompania Węglowa S.A. and their subsequent liquidation. The date fixed for the above-delineated changes cannot but be deemed quite pragmatic, as it has been closely related to the Civic Platform’s involvement in the European and the local elections – only after the elections were the amendments finally introduced. It should be emphasised that back in 2014 Donald Tusk firmly opposed any plans of the liquidation in the coal mining sector. It only reveals that the energy security issues are used instrumentally by the politicians.

The structure of the electricity production remains quite stable – in 2013, there could be observed a prevalence of electrical energy generated by bituminous coal (52%) and lignite (35%) power plants. In total, the conventional power plants supplied 141.4 TWh. In this period, the wind generated energy, along with other renewable energy sources made up 4% of the electricity supply (5.8 TWh). The above data are based on the measurements taken by transmission system operators during a regular work of the national transmission grids (Report..., 2014). The prevalence of coal in the structure of electricity production on the one hand provides Poland with a considerable dose of energy independence, but on the other hand, this stability might be endangered by the already mentioned unprofitability of certain coal companies and the EU requirements as regards the GHG emissions (Gawlikowska-Fyk, 2014).

Another disputable issue is the structure of the electrical energy generated by the renewable sources, where over a couple of years it was the co-incineration that visibly predominated, whereas the data presented by the Energy Regulatory Office in 2013 showed something different – the contribution of co-incineration was 22.2% (The quantity..., 2014). While analysing the above data, one should pay attention to the fact that they pertain to the volumes of electrical energy generated by RES, which have been proved by the certificates of origin issued by the President of the Energy Regulatory Office. In addition, it is difficult to estimate the contribution of incineration in hybrid boilers solely on the grounds of the
data based on the co-incineration. Other factors influencing the level of co-incineration’s contribution in RES might be the following: (1) the unstable legislative process of RES financial subsidising, (2) the relatively low prices of electrical energy and “green certificates” (Flakowicz, 2014).

Conclusions

The following are the major problems related to the energy sector in Poland, which in a long term will affect the energy policy: (1) poor energy source diversification, although it does generates the low level of the energy dependence index, (2) prevalence of coal in the production of electrical energy, (3) prevalence of biomass in RES (authorisation for the biomass co-incineration in the professional power sector), (4) poor state of electricity grids (it can influence the development of the diversified energy source sector and the nuclear energy sector), (5) dependence on the supplies of crude oil from Russia, (6) dependence on the supplies of gas from Russia, (7) protracted investment process of the LNG Terminal, (8) inability to make use of the investors’ interest in shale gas deposits, (9) projected growth in the demand for electrical energy, (10) lack of legal security in the energy sector (the stability and quality of law).

Moreover, it should be stressed that the status of the “energy policy” document requires serious rethinking of a new formula used for the elaboration of the energy policy. The energy sector has its specificity manifested by many documents, either planning or strategic, which renders it difficult to achieve cohesion in political and economic activities in this particular area. In the first place, there should be established an institution whose main objective would be to outline strategic plans in the energy sector (the presentation of the energy strategy and the actual responsibility for its implementation). In view of the mounting problems in the energy sector, worth considering is the establishment of “the ministry of energy and sustainable development” (as the Ministry of Economy in its present shape clearly fails to stand up to the expectations). Another issue worth rethinking and improving is the level of legal security as far as the certainty and clarity of law is concerned – the quality of the law enacted in Poland is poor. The State’s energy policy should be revised in the context of the development of the whole economy, and not only in the light of the particular interests of various “energy groups”.
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**Polityka energetyczna Polski do 2050 r. – analiza krytyczna**

**Streszczenie**

Tekst przedstawia analizę polityki energetycznej Polski zarówno w wymiarze instytucjonalno-normatywnym (*policy*), jak i w wymiarze szerszych działań politycznych (*politics*). W związku z próbą analizy dokumentów o charakterze planistycznym przygotowywanych przez Ministra Gospodarki (tzw. “polityka energetyczna państwa”) punktem wyjścia są kwestie prawne wynikające z Ustawy prawo energetyczne. W tekście przedstawione zostały w ogólnym zarysie główne założenia *Polityki energetycznej do 2030 r.* i niekompletne jeszcze w 2015 r. Projektu *Polityki energetycznej do 2050 r.* Ujęcie instytucjonalno-normatywne zostało wzbogacone analizą wybranych problemów mających znaczenie dla kierunków polityki energetycznej i bezpieczeństwa energetycznego Polski.

Ponadto w tekście podjęto się odpowiedzi na następujące pytania: (1) W jakim zakresie status prawny dokumentu “polityka energetyczna państwa” wpływa na niski poziom realizacji założeń celów strategicznych w energetyce?, (2) W jakim zakresie brak faktycznej odpowiedzialności podmiotów politycznych wpływa na brak realizacji celów strategicznych “polityki energetycznej państwa”?, (3) Jakie działania należy podjąć w celu prowadzenia spójnej i efektywnej polityki energetycznej w Polsce?

**Słowa kluczowe:** polska polityka energetyczna, polskie prawo energetyczne, polski sektor energetyczny