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## Poland's Gas Security

**Abstract:** The subject matter analyzed in the text is Poland's energy security as illustrated with the security of gas supply (gas supply security). The text analyzes a selection of problems concerned with gas security and so the focus is on: (1) a description of gas supply contracts, and (2) an assessment of gas supply security with regard to the technical import capabilities of the transmission infrastructure. In both cases two time-frames were applied: (1) 2006–2010, (2) the period after 2010 with a prospect for 2022. The text goes on to verify the following questions: (1) In what scope was real action undertaken in order to strengthen the security of gas supply to Poland in the years 2006–2010?, (2) How have the technical and real capabilities to diversify the gas supply to Poland changed after 2010?

**Key words:** gas security, energy security, energy policy, Poland's energy security

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### Introduction

The problem addressed in the text is concerned with the energy security of Poland, as exemplified by gas supply security. The gas problem has been the most heavily discussed issue within the discourse on the state's energy security. This issue has also been exploited instrumentally during election campaigns – in elections to the Sejm and Senat as well as in presidential elections (in many terms of office). A threat to gas supply has always been related to the criticism of Poland's dependence on the supplies from the “eastern direction” (i.e. the Russian Federation). The criticism has applied to both the conduct of particular governments responsible for concluding the “Yamal Contract” itself (a Polish-Russian long-term natural gas agreement, PGNiG-GAZPROM), as well as to particular annexes to the main contract. Another issue that came under criticism in the discourse on energy security was the lack of infrastructure that would facilitate a real and technical ability to implement the gas supply diversification called for by politicians and specialists.

Energy security can be considered from various perspectives and in the scheme of diverse disciplines (Cherp, Jewell, 2011, p. 202–212). Still, it is hard to single out autonomous problems with surgical precision, and instead it should be stated that the burden of energy security, the burden of analyses, etc. follows from the provenance of the scholarly discipline represented by a given researcher. The problem of gas supply security can also be examined against the backdrop of various perspectives, ranging from a political one, through a technical one, an environmental one, to an economic one. The activity related to the transmission, distribution and storage of gas requires technical capabilities. Hence, the very discourse on the necessity to reduce the import dependence is of no use whatsoever if we do not possess technical capabilities that would allow a diversification of directions and sources of energy supply. The same problem concerns the creation of

a competitive market. It is impossible to increase competitiveness if transmission infrastructure is lacking, and the nature of the sector entails a gamut of “barriers to entry” (Rosicki, 2012, p. 1–3).

With a view to the analysis of gas security, the text addresses the following questions: (1) In what scope was real action undertaken in order to strengthen the security of gas supply to Poland in the years 2006–2010?, (2) How have the technical and real capabilities to diversify the gas supply to Poland changed after 2010? In order to obtain answers to the questions posed, a comparative analysis of two energy security prospects has been conducted – the “old” one (spanning the years 2006–2010) and the “new” one (after 2010, with a perspective of 2022). The analysis comprised two issues, to wit (1) an outline presentation of the annexes to the “Yamal contract” (a natural gas supply agreement between Poland and Russia), and (2) an assessment of the action aimed at gas supply diversification.

Poland’s problem with gas supply emerged after the demise of the economic-military system bonding the states of the Eastern Bloc. In the early 1990s (when the USSR was formally still in operation) the Economic Committee of the Council of Ministers pointed to the necessity to promptly sign gas contracts with the USSR, as well as to the necessity to find new export partners. Back then the transmission infrastructure on the eastern border enabled the import of 8 bn m<sup>3</sup> of gas annually. The import accounted for only 65% of Poland’s demand for gas. As regards the supply of gas, the transitional period consisted in the transition from intergovernmental arrangements and transfer ruble-based settlements to purchases based on market rules and payments made in convertible currencies. The prices of gas imported from the “eastern direction” increased fourfold and remained steady in 1992–1994. Towards the end of 1992 a *Program of Poland’s Demand for Gas until 2010* was announced; it addressed the courses of action to be taken with a view to increasing the level of energy security as far as diversification of gas supplies was concerned (Zawisza, 2011, p. 13–76; *Program*, 1992). In 1993 under the economic and political circumstances, an arrangement was made between the governments of Poland and Russia, whereby a transit gas pipeline was to run across the territory of Poland to Western Europe; it was supposed to consist of two lines with the target transfer capacity of up to 65 bn m<sup>3</sup> of natural gas per annum. Additionally, by 2010 the gas pipeline was to provide Poland with the supplies of 13 bn m<sup>3</sup> annually (M.P. 2011, No. 46, item 512). The Polish-Belorussian leg was completed in 1999, and the projected transfer capacity was attained in 2005. Among the factors affecting the conclusion of the arrangement one can reckon: (1) a reduction in the gas supplies by Russia at the beginning of 1993, (2) forecasts estimating Poland’s demand for gas at 25–35 bn m<sup>3</sup> in 2010, (3) increased costs of other gas-related projects presented in the *Program* of 1992.

## 1. The old prospect of gas security

### 1.1. Gas contracts

For a long time now an issue of Poland’s reliance on the gas supplies from the “eastern direction”, that is from the Russian Federation, has been running throughout the discourse on Poland’s energy security. The analyses have more often than not emphasized

the threat resulting from the development of the transmission infrastructure by Gazprom, which was supposed to cut off such countries as Ukraine, Belarus and Poland from gas supply (Ostant, 2012, p. 154–173; Donaj, Kucenko, 2011, p. 335–350). In this context there was some talk of the so-called “gas loop” that was supposed to be made up of the transmission infrastructure of Nord Stream AG, South Stream Transport AG, OPAL NEL TRANSPORT GmbH and NEL Gastransport GmbH (Kałużna, Rosicki, 2010, p. 177–182). An example of the sense of threat concerned with Gazprom’s agreement with German companies was the statement made in 2006 by R. Sikorski (Minister of Foreign Affairs of the Republic of Poland), who compared this agreement to the Molotov–Ribbentrop Pact. The official commissioning of the first line of Nord Stream in 2011 did not get a good press either; the inauguration of the gas pipeline was attended by German Chancellor Angela Merkel, Russian President Dmitry Medvedev, French Prime Minister Francois Fillon, Dutch Prime Minister Mark Rutte and the European Commissioner for Energy Günther Oettinger (PAP, 2011). Poland and the post-Soviet States (new members states of the EU) were amazed to witness the shortsightedness of the politicians from the “old EU member states”. The amazement was all the greater as there had been a number of gas crises between Ukraine and the Russian Federation, that is in 2006, 2007, 2008 and particularly in 2009 (Szeptycki, 2008, p. 99–135). The doubts voiced by the European Commission in 2010, concerned with the gas agreement between Germany and Russia were regarded as an etiquette formula legitimizing the long-term contract for the supply of gas by Nord Stream (PAP, 2010).

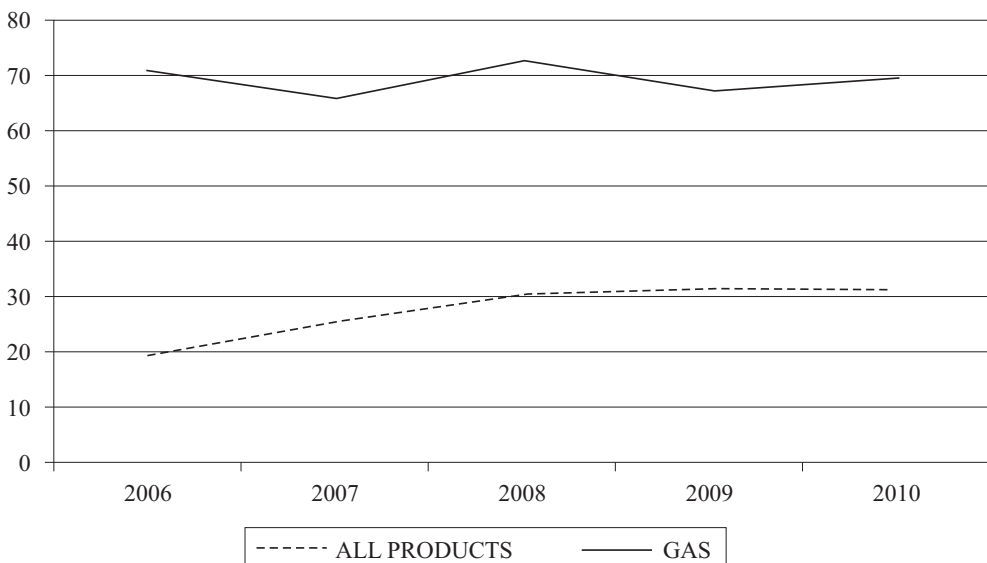
Attention should be drawn to the prospect of gas supply security, which was in force in the aforesaid period. The structure of the gas supply to Poland was dominated by the “eastern direction”; the supplies from GAZPROM accounted for more than 90%. Moreover, Poland was obliged to receive the Russian gas from 1996 to 2022. The year 2019 will also be crucial, for if neither party expresses a wish to terminate the contract, it will be automatically renewed for another 5 years. Political and economic analyses do not find the contract terms too favourable for Poland; the same applies to the effects of individual renegotiations of the so-called “Yamal Contract”. The renegotiation agreement of October 2010 (the negotiations themselves lasted 2009–2010) may serve here as an example. The negotiations took place in the context of another Russian-Ukrainian gas crisis, and during another round of talks on the energy issues between the European Union and Russia. The effect of the contract was an annual increase in the gas supply of almost 2 bn m<sup>3</sup> up to 2022. In 2006 Poland accepted unfavourable pricing terms, whereby the gas price was to increase by 10% (*Wystąpienie*, 2012). These terms could not be changed in 2010. It is estimated that Poland overpays for the gas supplies by 30%. For instance, at the beginning of 2012 for a supply of 1000 m<sup>3</sup> of gas Austria paid GAZPROM 397 USD, France – 394 USD, Germany – 379 USD, Great Britain – 313 USD. It is remarkable that the mean payment for 1000 m<sup>3</sup> of gas among the EU member states was 430 USD, whereas Poland paid 526 USD (that is 147 USD more than Germany, and 96 USD more in relation to the mean price). Given the sum of 10 bn m<sup>3</sup> of gas imported by agency, a simple calculation shows that with the aforesaid cost Poland lost about 4 bn PLN annually. It is to be noted that the cost of the Świnoujście LNG terminal finalized at the turn of 2014 and 2015 was to amount to 2.93 bn PLN, 32% of which was EU-funded (*Finansowanie*, 2014).

As a result of the renegotiations completed in 2010 an annexe to the 1996 Contract was signed by PGNiG and Gazprom Export. The effect of the contract was an increase in the annual volume of gas supply that now reached 10.24 bn m<sup>3</sup> (by the Polish standard) and was supposed to be continued until 2022. The annexe provided for a direct purchase of gas in the following years, that is in 2010 up to 9.03 bn m<sup>3</sup>, in 2011 up to 9.77 m<sup>3</sup>, and in the years 2012–2022 up to 10.24 bn m<sup>3</sup>. It should be noted that the annexe includes some provisions allowing for gas re-export and price discounts, however these are trade secrets. It was only estimated that the fixed preferential prices were to yield savings of 200–250 million USD in the years 2010–2014 (*Aneks*, 2010). The Supreme Audit Office has found that PGNiG did not fully use its negotiating position in the arrangement-making process with Gazprom Export in 2009–2010, which concerned the increase in the gas supply to Poland as part of the Yamal Contract (*Wystąpienie*, 2012).

### 1.2. Evaluation of gas security

In the years 2006–2010 the index of energy dependence of Poland regarding all the products rose by nearly 12%. The rising overall index is related to the decreasing coal production (in that period the index of the dependence on imported solid fuels rose from –21.7% to –5.2%), a steady and high level of crude oil import in relation to the domestic production (in that period the dependence index for imported oil was more than 95%) and the dependence index for imported gas, which by and large never went down [see Diagram 1]. Given the plans to put some mines into liquidation on account of their unprofitability, a rise in Poland's import dependence is to be expected in the future. The

**Diagram 1. Index of import dependence for all products and for gas in the years 2006–2010 (in percentage terms)**

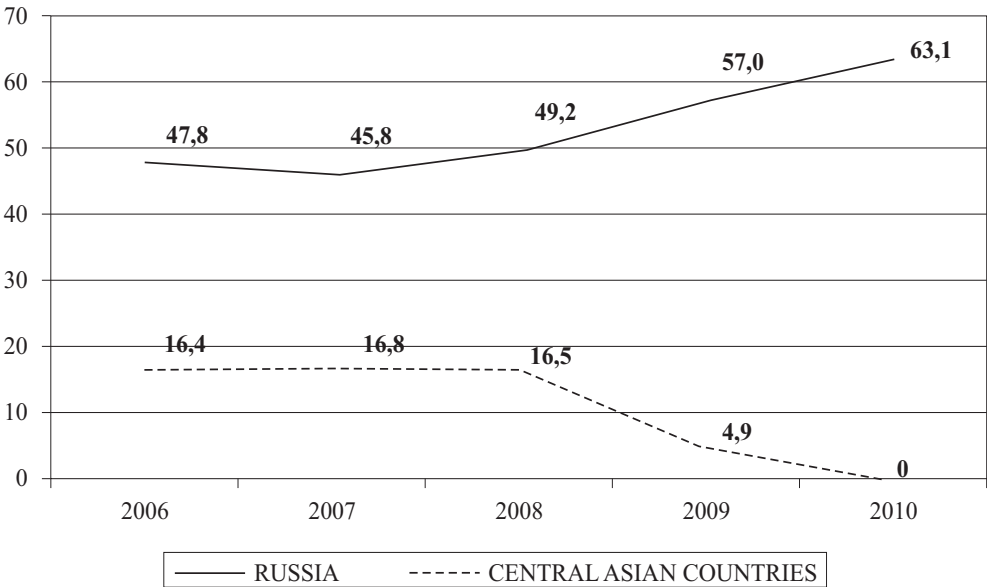


Source: Own study based on Eurostat data.

same problem will apply to the import of gas, which is linked with the predicted rise in the demand for that fuel within 20 years.

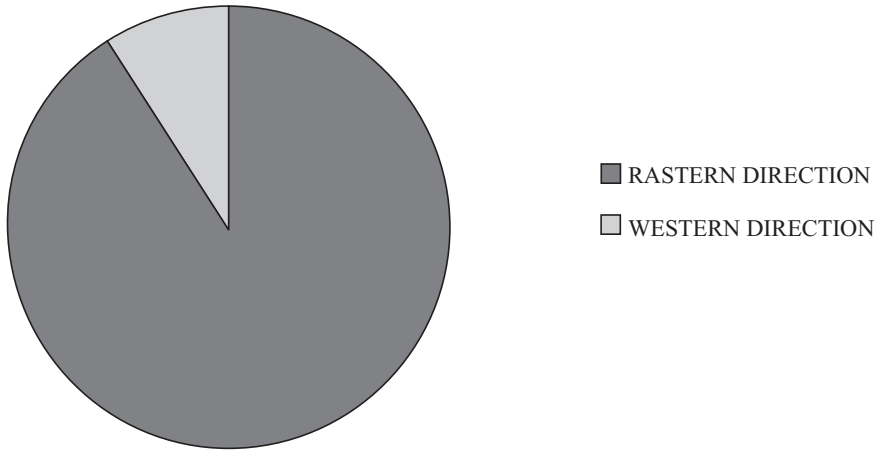
The most widely discussed issue and fact are a high dependence on the gas imported from the “eastern direction” [See Diagram 2]. Due to the series of successive annexes to the “Yamal Contract”, the imported volume of this fuel has increased, while in the years 2006–2010 there were no real possibilities for supply diversification. The reasons for the lack of real diversification in those years are: (1) a lack of proper infrastructure, (2) the long-term contract with GAZPROM binding until 2022.

**Diagram 2. Share of gas imported from Russia and Central Asian countries in gas consumption in Poland in 2006–2010 (in percentage terms)**



**Source:** own study and calculations based on the data obtained from the Ministry of Economy.

The negative assessment of the successive annexes to the “Yamal Contract” seems to have little relevance to reality, that is to Poland’s actual bargaining power. Of crucial importance are here two facts: (1) Polish-Russian relations that are anything but normal (“political factors”), (2) a lack of infrastructure that would in technical and real terms secure gas supply from other directions (“infrastructure factors”). In the latter case, the years 1996–2009 should be assessed negatively as far as the activities of the Polish state are concerned; Poland did not develop conditions favourably influencing the situation. It is worth drawing attention to the technical capabilities to import gas to Poland in 2010 (though they are conditioned by the gas volume provided for in the “Yamal Contract”). In that period the technical capabilities to import gas from the “eastern direction” accounted for 91% (Drozdowicze + Wysokoye: 7.1 bn m<sup>3</sup>, SGT [Transit Gas Pipeline System]/Point of Interconnection: 3.1 bn m<sup>3</sup>), whereas the remainder accounted for the western direction (Lasów) [See Diagram 3].

**Diagram 3. Poland's technical import capabilities in 2010 (in percentage terms)**

Source: Own study based on PGNiG and GAZ-SYSTEM data.

The “eastern direction” of gas supply was determined by the existing infrastructure; even the negotiations conducted with Gazprom in 2010 could not be supported by the possibilities for the import of a substantial volume of gas from other directions. This must be viewed as Poland’s weakness during the gas negotiations with Russia. This state of affairs results from the shortsightedness of the Polish authorities, as well as from a lack of strategic reasoning in the previous years. From the 1990s onwards the problem was not the lack of potential diversification routes, but the actual implementation of the principles laying out their realization (Cf. Kwiatkiewicz, 2006, pp. 265–275). It must be noted that the potential diversification routes were already pointed to in the *Program of Poland’s Demand for Gas until 2010 (Program, 1992)*. The price terms of the contract, in fact imposed by Gazprom, may of course be originally caused by the political sphere, however the situation would be different if in the public interest a transmission infrastructure so much needed on account of the gas supply diversification had been developed from the 1990s. A lack of action in this respect was in fact instrumental in supporting Gazprom’s position of a gas supply monopolist. In the case of a monopoly, conditions set for consumers (in this case Poland) are frequently unfavourable. In the period in question in the political discourse more importance was attached to the unfavourable activities on the part of the Russians rather than to the incompetence of the Polish entities responsible for energy policy and security. Some were of the opinion that diversification is impossible, and that we are doomed to the gas supply from the “eastern direction” (Kwiatkiewicz, 2008). However, such a mode of thinking about diversification appears to have been caused by an erroneous economic analysis that made a fetish of the costs of expensive infrastructure projects, disregarding the perspective of the public interest and long-term strategic planning. The “eastern direction” gas prices that were several dozen percent higher might be converted into potential infrastructure investments made with the saved money if effective diversification and gas market competition were introduced.

The development of energy policy and security has always been greatly impacted by the planning and programming formula of these two aspects. The planning formula for

the energy policy was laid down in Chapter III of the Energy Law Act of 1997 ("Journal of Laws" 1997, no. 54, item 348, as amended). There still remains the issue of the responsibility of the Minister of Economy for the directions and the actual implementation of the policy. The state's energy policy is adopted by way of resolution by the Council of Ministers every four years for the planning/prediction period of at least 20 years. Regarding its legal status, the planning document is of low standing in comparison to other legal acts. Hence, the capacity of the Minister of Economy with respect to the coordination of the state's energy policy is hindered because of the nature of the energy policy as a source of law, as well as the lack of authoritative instruments influencing both consumers and energy companies (Cf. Czarnecka, Ogłódek, 2007, p. 325–363; Pawełczyk, Pikiewicz, 2012, p. 430–482; Waligórski, 2008, p. 69–74). The development of planning and programming capabilities entails a number of amendments to the *Energy Law Act*, e.g. concerning successive responsibilities imposed upon energy companies.

## 2. A new prospect of gas security

### 2.1. Gas contracts

On 5 November 2012 PGNiG and GAZPROM concluded another annexe to the "Yamal Contract", thereby changing the price terms of the gas supply. The new price formula was to bring about a price reduction of more than 10% with the "retroactive effect." The gas arrangement with GAZPROM provides for the "retroactive clause", which means that in the event of the parties agreeing on the new price formula or the proceedings being concluded in favour of PGNiG, the new price shall be applicable the moment the formal claim was submitted for the price to be changed. The adopted settlement method substantially affected the EBITDA results of PGNiG – it was supposed to amount to about 2.53 bn PLN. This in turn determined the level of the Polish company's capitalization (Aneks, 2012; PAP, 2012). The annexe was to come into force provided that the Polish party withdrew the plaint submitted to the Arbitration Tribunal in Stockholm. PGNiG fulfilled this condition on the next day, 6 November 2012. The company received a confirmation of the plaint withdrawal acknowledgment (*Raport*, 2012).

At the beginning of 2015 a problem concerning the settlements between PGNiG and GAZPROM emerged. The arrangements provided for a price reduction, but in January 2015 the negotiations with GAZPROM were still in progress (it's a general rule that the negotiations may last for as long as 6 months). The Polish party pointed to the possibility of handing the matter over to the Arbitration Tribunal. A probable cause of GAZPROM's delay in the resolution of this issue was an intention to demonstrate revenues, as in 2014 the company's income dropped by around 35% (i.e. from approx. 24 bn USD down to 16 bn USD) in comparison to the previous year (Zysk, 2015).

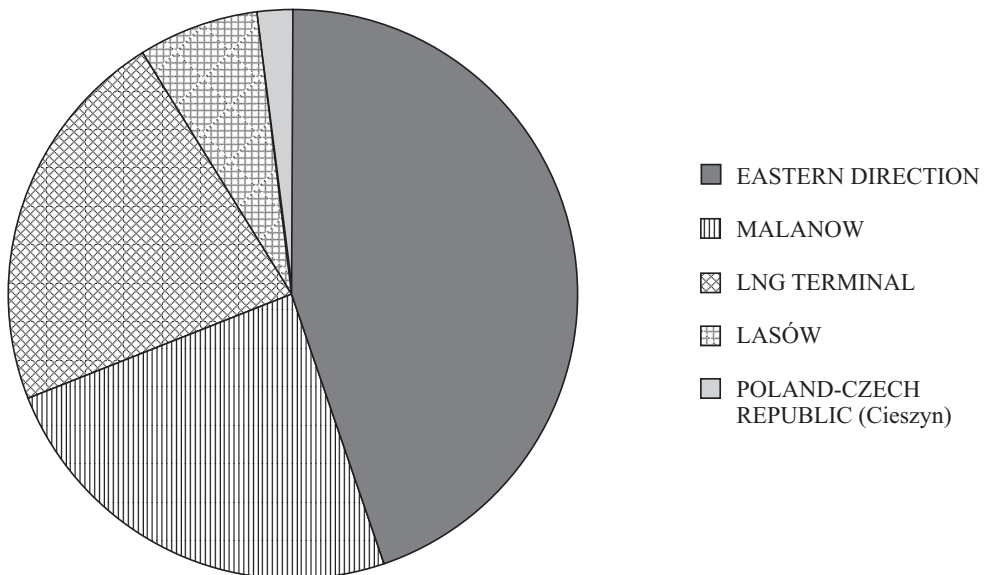
### 2.2. Gas security assessment

The Russian Federation's invasion of Ukraine in fact facilitated the acceptance of the previously ignored Polish arguments concerning a threat to the gas supply security from

the “eastern direction” in the European Union; even the most devoted EU allies of the Russian Federation lost their arguments. It became apparent that for political reasons Russia is not a stable partner, and as a result viewpoints on necessary and additional investments in Central and Eastern Europe were redefined. It should be stressed that irrespective of the Ukrainian-Russian conflict, in the European Union the year 2014 was marked by the finalization of the market construction. Back then the EU member states were to finalize the construction of the internal energy market, which was to be connected with an electricity and gas transmission infrastructure linking all the member states within one EU system. Towards the end of the year the European Commission determined to earmark 647 m EUR for the crucial infrastructure (PCIs – projects of common interest) within the CEF (Connecting Europe Facility) financial instrument. It should be noted that the CEF has secured 5.85 bn EUR for investments in the infrastructure of trans-European energy networks until 2020 (COM/2011/665; *Projects*, 2015). The development of a transmission infrastructure in Poland will completely change the situation concerned with the gas supply security and diversification in the forthcoming years. In the year of the “Yamal Contract” termination Poland will surely have a different negotiating position against GAZPROM, even if Russia continues to keep high gas prices due to some “political factors”. With regard to the prediction of Poland’s increased demand for gas, the volume of 10.2 bn m<sup>3</sup> will still have to be secured by import. However, in the year in question there will be a different proportion of technical capabilities to import gas – i.e. from the “eastern direction” the volume will still be 10.2 bn m<sup>3</sup>, whereas all the other directions will account for the total volume of 28 bn m<sup>3</sup>.

It is worth comparing the situation of 2016 with the situation of 2022 as far as the technical capabilities to import gas are concerned. Thus, we will get the big picture of the

**Diagram 4. Poland’s technical capabilities to import gas in 2016 (in percentage terms)**

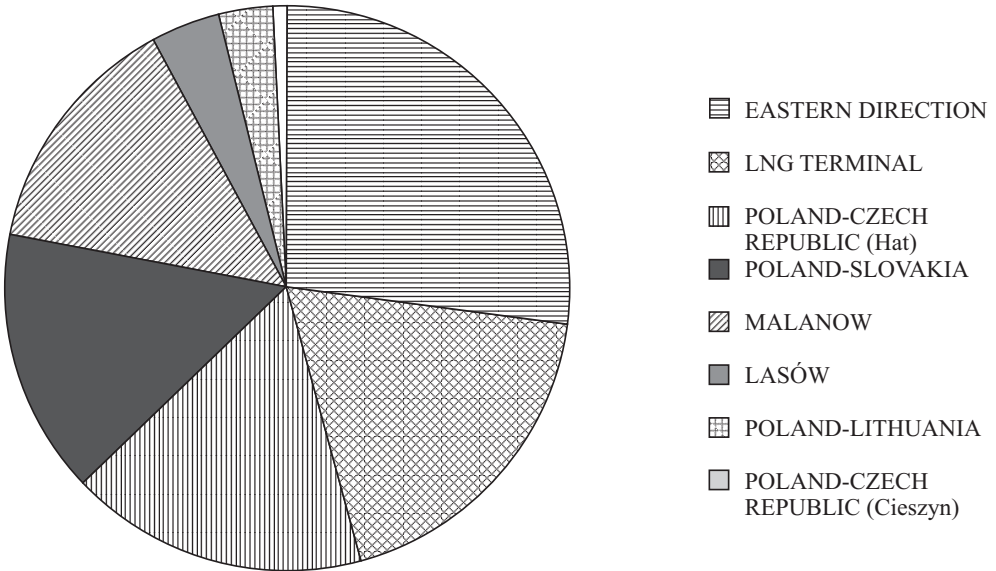


**Source:** Own study based on PGNiG and GAZ-SYSTEM data.



situation and of the scope of changes entailing due to the development of the gas infrastructure in Poland. The choice of these time-frames is not fortuitous; in 2016 the LNG Terminal will already be in operation, whereas 2022 will mark the operation of new interconnections, *inter alia* Poland-Slovakia, Poland-Czech Republic (Hat) and Poland-Lithuania. When compared to 2010, the technical capabilities in 2016 will rise by 11.4 bn m<sup>3</sup>, and in 2022 they will in turn rise by 15.7 bn m<sup>3</sup>, attaining the total of 38.3 bn m<sup>3</sup> [See Diagram 4 and 5] (*Plan*, 2014).

**Diagram 5. Poland's technical capabilities to import gas in 2022 (in percentage terms)**



**Source:** Own study based on PGNiG and GAZ-SYSTEM data.

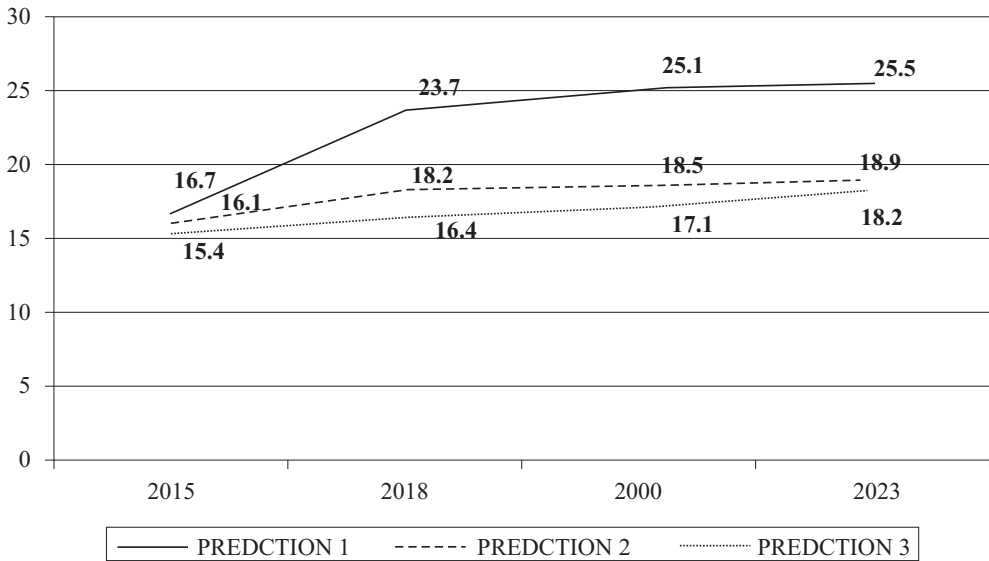
In 2016 the structure of the technical import capabilities will still be dominated by the “eastern direction,” accounting for 45%, whereas the “western direction” (Lasów, Malanów) will amount to 31% share [See Diagram 4]. From the perspective of an actual increase in gas supply security in the event of a gas supply cut-off from the “eastern direction” (due to any factors whatsoever – “infrastructure-related” or “political” ones), of great significance was the attainment of the technical capability of a physical reverse flow, *inter alia* at the Poland-Germany point (SGT Malanów).

In 2022 the “eastern direction”, as part of the structure of technical import capabilities, will account for 27%. The expansion of the transmission infrastructure in the “southern direction” will be crucial; this direction will account for 33% share in the structure of the technical import capabilities. With regard to the “southern direction” the following interconnections should be enumerated: Poland-Czech Republic (Hat) – 17%, Poland-Czech Republic (Cieszyn) – 1%, Poland-Slovakia – 15% [See Diagram 5]. The infrastructural development of this direction is connected with the project of the so-called “the North-South Corridor,” which is intended to improve Poland’s gas supply security, but

also to enable a construction of a more effective and competitive Poland-EU energy market. This means that the Polish infrastructure will be prepared for a potential reception of gas from the directions currently unavailable, i.e. from the LNG terminals located in the Mediterranean Sea. As part of the plan to develop the GAZ-SYSTEM S.A. Transmission System Operator, a construction of 2000-kilometre gas pipelines has been projected to be completed by 2023 (*Plan*, 2014; *Lista*, 2015).

In 2014 Gaz-System S.A. presented predictions concerned with the development of the domestic gas demand; three scenarios were considered. The first one was optimal – it was developed taking into account the possibility and probability of the demand on the part of specific clients/end users actually reaching the declared amount. The second scenario – the moderate one – was delineated on the basis of the nominations for transmission contracts, additionally taking into account the gas volume following from the contracts for a connection to the already-begun investments with a view to the construction of combined cycle units. The third scenario was based on the guidelines included in the planning document *The Energy Policy of Poland until 2030* (*The Energy*, 2009; *Plan*, 2014) [See Diagram 6].

**Diagram 6. Predicted demand for gas transmission services in bn m<sup>3</sup> (following from domestic demand)**



Source: Own study based on GAZ-SYSTEM data.

It is interesting to note that the indicated predictions are concerned with the demand for a transmission service within the context of the domestic gas demand. This means that for the projection of the demand for transmission services provided with the aid of the domestic system one still needs to take into account a transit transmission and the fuel export. There is no doubt that each of the scenarios demonstrates a year-over-year increase in the domestic demand for gas. In the first prediction the demand increases up to

25.5 bn m<sup>3</sup>, the second one – up to 18.9 bn m<sup>3</sup>, while the third one – up to 18.2 bn m<sup>3</sup>. The first scenario shows the greatest increase, which means that it will be necessary to secure the physical supply of gas to Poland [See Diagram 6] (*Plan*, 2014). Should this scenario be fulfilled, new directions of gas supply would be needed, for the LNG Terminal will cover more than 19.5% of the domestic demand and the supplies from the “eastern direction” will account for 40% (allowing for the maintenance of the technical capabilities to import gas from the Russian Federation). As for the development of gas demand, the determination of the Polish authorities regarding the introduction of low emission energy generation (gas-fired power plants should be included) will be of great significance for Poland. The analysis of the investment outlays on new generating capacities in the period of 2014–2028, which were declared by energy companies, shows that nearly 40% of new generating capacities will be related to gas (*The Investment*, 2014, p. 3 and the following pages). Furthermore, the development of the chemical industry in Poland should be taken into account, as it is the single greatest end user of gas.

### Conclusion

It should be emphasized that the decade from 2010 will witness a process of strengthening Poland's energy security concerned with the minimization of the risk of the gas supply being discontinued. The main indicator here is the development of the transmission infrastructure in the domestic system as well as the construction of the internal energy market in the European Union. The text analyzes only a selection of problems concerned with gas security, that is a study of gas contracts and an assessment of gas supply security with regard to the technical import capabilities of the transmission infrastructure. With a view to the analysis of the indicated issues, the text undertakes to verify the following questions: (1) In what scope was real action undertaken in order to strengthen the security of gas supply to Poland in the years 2006–2010?, (2) How have the technical and real capabilities to diversify the gas supply to Poland changed after 2010?

- 1) It is hard to point to real action aimed at the diversification of gas supply to Poland in the years 2006–2009, which resulted in a weak negotiating position of Poland against GAZPROM in 2010. A negative assessment of the annexes to the “Yamal Contract”, presented by politicians and some energy policy analysts, seems to have no relevance to the actual negotiating possibilities of Poland. This state of affairs was greatly shaped by factors of political and infrastructural nature. It must also be stressed that if technical capabilities to diversify the supply had been in place, little would have changed in the negotiations with GAZPROM over lower prices of the supplied volume of gas. Still, the technical import capabilities would have enabled the negotiation of the choice of extra volume of 2 bn m<sup>3</sup> from another direction in 2010. It is worth stressing that in the years 2009–2014 investments were made with a view to the expansion of the gas pipelines by more than 800 kilometres, and the construction of the LNG Terminal continued.
- 2) According to the *Development Plan for the Current and Future Supply of Gaseous Fuels in 2014–2023* the technical import capabilities will be rising. It is estimated that in 2022 the domestic transmission system will attain the transfer

capacity (throughput) of 38.3 bn m<sup>3</sup>, the “eastern direction” accounting for 27%, the “southern direction” – 33%, and the “western direction” – 18%. This means that without the technical capabilities of the “eastern direction”, the domestic system will still have the transfer capacity of 28.1 bn m<sup>3</sup>. Juxtaposing such a diminished transfer capacity with the optimal prediction outlined in the text [See Diagram 6], it follows that Poland will eliminate the threat concerned with the “energy blackmail” from the “eastern direction”. Also, the negotiating position of Poland against Russia will change at the turn of 2022–2023. This will however not eliminate the threat of an “energy blackmail” from the “eastern direction” targeted at the whole of the European Union. Nevertheless, it must be noted that physical reverse flows in the “western direction” have a substantially consolidating effect on Poland’s gas security. Moreover, a number of other investments are worth pointing out; among the ones that were not mentioned in the analysis are the Baltic Pipe Project and a third storage tank of the LNG Terminal, which both are relevant for the increase in the transfer capacity of the domestic gas system.

Poland’s energy security should also be considered within the context of the internal energy market of the European Union. The context of the EU policy will significantly influence the gas security and individual member states in Central and Eastern Europe. The termination of the “Yamal Contract” (2022) marks a new prospect for the climate and energy policy of the EU (2<sup>nd</sup> Climate and Energy Package), new goals as for the reduction in GHG emissions, an increase in the share of RES in energy generation, increased energy efficiency as well as a number of infrastructure-related investments (trans-European energy connections and crucial infrastructure). Infrastructure investments are particularly bound to increase the possibilities for supply diversification, while they will introduce greater competition in the EU gas market. Apparently, greater energy independence requires the development of RES, not because RES are “green energy”, but because they do not entail import dependence.

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## Bezpieczeństwo gazowe Polski

### Summary

Przedmiotem analizy w tekście jest bezpieczeństwo energetyczne Polski na przykładzie bezpieczeństwa dostaw gazu (bezpieczeństwo gazowe). W pracy podjęta została analiza jedynie wybranych problemów bezpieczeństwa gazowego, uwaga skupiona została na: 1) charakterystyce kontraktów gazowych i 2) ocenie bezpieczeństwa dostaw gazu ze względu na techniczne możliwości importowe infrastruktury przesyłowej. W obu przypadkach przyjęto dwie perspektywy czasowe: 1) 2006–2010, 2) okres po 2010 z prognozą na rok 2022. W tekście podjęto się zweryfikowania następujących pytań: 1) W jakim zakresie mieliśmy do czynienia z realnymi działaniami wzmacniającymi bezpieczeństwo dostaw gazu do Polski w okresie 2006–2010? 2) Jak zmieniają się techniczne i faktyczne możliwości dywersyfikacji dostaw gazu do Polski po roku 2010?

**Słowa kluczowe:** bezpieczeństwo gazowe, bezpieczeństwo energetyczne, polityka energetyczna, bezpieczeństwo energetyczne Polski