Multi-level Governance and Energy Specifics of the V4 Countries within the Context of European Integration

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Abstract: The topic of energy is still one of the most sensitive policy areas. The aim of this article is to examine the multi-level governance and energy specifics of the V4 countries within the context of European integration by analyzing selected the specifics of the energy mix of the V4 group countries. This will be carried out within the context of applying the theory of multilevel governance. The paper shows how energy policy is formed at state, and/or non-state level, as well as how these levels are influenced by the EU. The article also looks at the efforts taken to shape a common energy policy. A closer examination of the individual countries’ levels lies outside the scope of this article. Therefore, the framework was chosen with regard to the particular features within the context of the functioning of the V4 group of countries. Using multi-level governance as a theoretical concept, the authors considered the limits arising from the determination of levels and the subjects of the survey, as well as having distinguished three levels of analysis. The first is the supranational level. This is represented by the EU. The second level is represented by the V4 states. The third level is the state as the actor that formulates energy policy, sets the energy mix and subsequently manifests itself in relation to the EU and the V4 group. Energy policy is significantly influenced by states, especially in the area of energy security of fuel supplies, or that of setting the energy mix. With the gradual communitarization of energy policy, the EU’s influence is growing and it is debatable how the evaluation of existing strategic plans, presented by individual states, will be done. The role of the V4 group is the weakest of the three levels of analysis which were examined. However, its increasing influence can be pre-

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dicted mainly in the case of coal depletion and the perception of nuclear energy as a renewable source.

Keywords: Visegrad group, European Union, EU energy policy, multi-level governance, energy mix

Introduction

Energy policy is one of the oldest policies of the European integration process. The coal and steel co-operation project of the early 1950s; leading to the creation of the European Coal and Steel Community (ECSC); laid the foundations for energy cooperation in the present-day European Union. However, it should be noted that energy policy has long been an area outside the scope of primary Community Law. A real energy policy began to take shape only after the adoption of the Single European Act (1986). This was in connection with the construction of the common internal market, which also, logically, included energy-related commodities.

The energy sector was, and still is, one of the most sensitive areas where, in terms of European integration, the interests of states (government, policies or corporate interests) conflict with the interests and direction of European integration. The indicated contradiction is plainly visible from the turn of the 1980s and 1990s and has continued up until the Treaty of Lisbon was adopted. This is because energy was not considered to be a “classic” Community policy. EU activities and challenges since the publication of the White Paper (1995): Energy Policy for the European Union have referred to the need to build energy policy on a Community policy platform. Such a policy should include “… private and public operators… a framework for consultation on energy action and instruments… a framework for cooperation between Member States in order to identify common interests” (Evropská komise 1995). However, the challenges which the European Commission faced were the lack of interest and unwillingness of member states to find a common ground for the shaping of common rules for the internal market in energy commodities; as well as for the communitarization of this policy. The change did not occur until 2006, with the publication of the Green Paper on a European Strategy for Sustainable, Competitive and Secure Energy (Evropská komise 2006). The European Commission mentions the possibility of developing a common energy strategy based on a single energy policy; not on the separate energy policies of each of the 25 member states. The indicated activity of the European Commission resulted in the adoption of the Lisbon Treaty, which communitarized energy policy.
The aim of this paper is to analyze selected specifics of the energy mix of a group of countries within the context of the application of the theory of multilevel governance. The authors assume that energy policy (setting the energy mix) clearly demonstrates the blending of several spheres of decision-making (local level, state, government organizations and the EU level) into the formation and final form of energy policy; both of the individual state and the EU. At the same time, the authors are aware of the breadth of the topic, and therefore chose a narrow group of states. The selected states are connected by geographical proximity and cooperation on the basis of their membership of the Visegrad Group and the European Union. The aim of the article is to show to what extent energy policy is formed at state and/or non-state level, as well as how these levels are influenced by the EU and its efforts to shape a common energy policy. The breadth of the individual levels also lies outside the scope of this paper. Therefore, the framework was chosen with regard to the partial specifics, especially within the context of the functioning of the group known as the Visegrad Group. The levels of analysis are, therefore, the following three: 1) The four countries Czech Republic, Hungary, Poland and Slovakia, which are: 2) part of the Visegrad Group (V4); which is the second level of analysis. The last level of analysis: 3) is the EU. In terms of time, the analysis will focus on the period after accession to the EU (after 2004), and mainly on the most recent period after 2015.

The following text is divided into two main parts. The first part introduces the theory of multi-level governance as a concept by which the selected issue can be grasped. At the same time, the weaknesses of the approach that can adjust the resulting findings are demonstrated. In the second part of the article the specifics of energy policy in the concept of V4 countries in connection with the EU are analysed. This is specifically a partial energy policy of the group of analysed states within in the context of those activities implemented by the Visegrad Group. Subsequently, the energy mix is analyzed within the context of each state’s specifics. The text seeks an answer to the research question: „to what extent are the specifics of the energy policy of the selected countries determined by state policy?“ To put it another way, to what extent is it possible to monitor the EU’s influence on the energy policy of the Visegrad Group countries? Is it possible to say that the Visegrad Group does or does not shape the energy policies of the Member States within the context of EU action?

**Multi-level Governance as a Framework for Grasping the Energy Policy of the V4 Countries**

The common denominator of all approaches using multi-level governance (hereinafter to be referred to as MLG) is the system of governance, which takes place at various levels. The basic divisions are: national, local, supranational
or regional level (Daniel – Kay 2017: 4). There are two main types of MLG. The first is associated with the federal organization of the state, where governance goes from the state government to the units. The second type is an expression of broad governance involving both the individual and the state (Hooge – Marks 2003). The division of governance according to levels allows the MLG concept to explain the development and implementation of outputs at different levels; which together achieve the defined objectives (Zürn 2010). One can agree with the statement of Stein and Turkewitsch (2008) that multi-level governance leads to the optimization of political decision-making. This is because it is possible to monitor the vertical and horizontal levels of decision-making. Moreover, they are intertwined and the decision-making process reflects a number of actors that influence the resulting decision (Stephenson 2013). This helps us to analyze, *inter alia*, the functioning of energy policy in this paper.

In the context of European integration, it should be recognized that the MLG concept requires the monitoring of the principle of subsidiarity, as well as the tendency of partial policies to communitarise in the context of European integration. This principle led to the involvement of other actors in the integration process after 1993.

If multi-level governance is used as a theoretical concept, it is necessary to consider certain limits resulting from the determination of levels and actors to be examined. The authors of this paper are aware of these limitations. However, from the beginning of their research activity, they recognise three main levels of analysis. The first is the transnational level, represented by the EU as an actor that creates common rules for the functioning of energy policy within a grouping of 27 member states. The second level is represented by selected countries (the Czech Republic, Hungary, Poland and Slovakia). At state level, the paper is greatly simplified, because its analysis monitors the behavior of states as units; i.e., primarily the energy mix of the state. Therefore, it does not deal with partial problems (e.g. energy security), or specifics at sub-state level (e.g., the influence of pressure or lobby groups). In the following text, the state is perceived as an actor which formulates energy policy, sets the energy mix within the entire territory of the given state. This is then reflected in relation to the EU and the Visegrad Group; which is the third level of analysis. The Visegrad Group is an example of intergovernmental cooperation, which is non-binding upon the parties involved (the V4 states are free to decide whether or not to apply in practice the results of the negotiations and the conclusions). On the other hand, V4 level negotiations provide a common platform that makes it easier for the participating countries to negotiate with each other, as well as in other fora, such as within the EU. The Visegrad platform is, therefore, perceived in the analysis as a specific meeting place where its member states’ energy policy interests may or may not be harmonized, and the negotiations may or may not be reflected at national and/or EU level.
The EU and the V4 Energy Policy

Cooperation between the Visegrad Group countries is based upon an effort to return to Europe by engaging in European integration and joining NATO. The V4 countries’ imminent entry into European structures has enriched the cooperation of the countries of Central Europe in new areas, including dialogue related to energy. V4 cooperation on the basis of energy policy dates back to 2002, when the working group on energy was established. In the beginning, it was only an information platform, which began to develop only within the context of EU accession. The main focus of activity was the discussion on EU-based energy policy (Starý 2006). The group of states thus responded to the EU’s efforts to revise their existing energy policy. It is, therefore, possible to monitor the V4 countries’ increased discussions of energy policy. However, the external influence of the Russian-Ukrainian gas crisis cannot be overlooked. One of the stimuli of increased interest in EU energy policy was, and still is, the fact that the V4 countries are dependent on imports of strategic energy raw materials from abroad, due to the fact that domestic production is not sufficient.

In general, the problem of high dependence on the import of primary energy sources affects the whole EU. At present, the European Union is still heavily dependent on oil and gas consumption. This necessitates future changes to be made in the context of overall consumption development, production possibilities, shortages of raw material reserves, as well as political influence. The response to import dependence can be seen in the EU’s efforts to reduce the share of imported fossil fuels, and to increase the share of renewable energy sources, as a part of total consumption. In particular, the decline in the amount of oil and natural gas consumed was positively reflected in an increase in the use of renewable energy sources. Coal use has always been a difficult area, because some EU countries, and in particular, the Czech Republic and Poland (V4 countries), remain highly dependent on its use. Mention should also be made of the importance of nuclear energy in the EU, which has gradually declined after peaking in 2002. However, it is in the V4 area that it is possible to observe an increased interest in nuclear energy as an alternative energy source (Eurostat 2017).

The current structure of the EU energy balance (2017) consists mainly of fossil fuels. Of this, the largest share is oil (36.4%); the second most important fossil fuel source for consumption is natural gas (23.2%); with coal in third position (14.5%). Renewable energy sources outperformed nuclear fuel with a share of 13.6% (12.3%) (Eurostat 2019). There are differences across the EU,

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2 This is reflected in the intensified negotiations that took place in 2006.
3 The crisis also prompted the EU to engage in dialogue and diversification of resources with regard to dependence on imports from third countries, in particular the Russian Federation (Evropský parlament 2006).
4 See more below in the text on the energy mix of the individual countries analyzed.
and the V4 countries are no exception. Poland and the Czech Republic; whose energy industry sectors have been historically based on coal mining; show a lower import dependency of around 30%. Hungary and Slovakia are more dependent on primary fuel source imports. They import between 55 and 60% of their primary energy sources (Eurostat 2019).

Energy is one of the areas where the Visegrad Group is very active. This stems from its geographical location and also its dependence on the import and distribution of energy resources and raw materials. The Visegrad countries have become increasingly aware that pre-negotiated, and subsequently shared positions; which are presented during EU summit plenary sessions; have greater potential for enforcement. Therefore, since 2009, efforts to pre-negotiate sub-themes on the part of the Visegrad Group, and to present them as topics of common interest at EU level (European Council, summits, etc.) could be discerned. Since 2010, the abovementioned schemes have been called mini-summits, in which the Visegrad Group states seek to integrate regional interests and to act as a unit at EU level (Bauerová 2018: 179–180). Energy policy in the context of the above is one of the most important areas of interest, especially in the spirit of common interests. This interest stems from the V4 states’ dependence on energy supplies predominantly from the Russian Federation. The instability in the Middle East region as well as the absence of a single European energy market also have a significant impact (Slobodian 2016). Especially after the Russian-Ukrainian gas crises, increased cooperation at V4 level has become a desirable outcome for all V4 states. This is evidenced by the Ministerial Declaration of the V4 countries issued from the Bratislava meeting (2011). The Declaration envisages: 1) energy cooperation in the context of the EU institutions; 2) the creation of a local energy sector as part of the EU’s single energy market, while strengthening the importance of the V4 countries; 3) reducing territorial dependence on gas imports by creating a pipeline network that will diversify the structure of suppliers; 4) with the construction of the North-South Gas Corridor by 2020; 5) cooperation with other countries (Bulgaria, Romania, Croatia), in particular on the North-South Gas Corridor project; 6) with the support of joint information exchange projects in the field of energy policies, legislation and regulations; 7) ensuring the stability of oil flow through the Druzhba pipeline and seeking alternatives for oil transport (Adria, TAL, TANAP); 8) with support for research in new areas of energy (Visegrad Group 2019).

However, finding common approaches is not easy because, as has already mentioned, V4 countries differ in their national interests and energy mixes, but also in the structure of their suppliers and the structure and capabilities of their transport infrastructures (Visegrad Group 2019).

The activities of the Visegrad Group can be followed by their efforts to solve the problem of energy dependence through intensive dialogue with Ukraine (in V4 + Ukraine format). This culminated in 2014, when the V4 supported the
integration of Ukraine into EU structures. Interest in Ukraine was also demonstrated by the large amounts spent from the Visegrad Fund (Maksak 2018). Currently, however, it should be noted that interest in Ukraine has weakened. Relations with Ukraine have become problematic in the context of the war in eastern Ukraine (since 2014), and in 2015 the migration crisis became the V4 states’ dominant concern. This is illustrated, for example, by the Final Declaration of the Summit of Prime Ministers of the Visegrad Group of Countries in 2015. While the Energy Declaration (2015/2016) of the Czech Presidency is one of the priority topics, the final summary does not mention this issue at all.6

From the point of view of the V4 countries’ energy direction, we can discern partial similarities in the way that the states in the region define themselves towards the EU, as well as towards its expected direction. In general, the countries that joined the EU in 2004 report a total of one fifth of carbon dioxide emissions (Ámon 2018). The solution to the complicated energy mix situation in member states is the EU’s plan to create an energy union that would divert countries away from the use of traditional, environmentally-unfriendly energy sources. A major turnaround in EU energy policy took place in 2006, when the debate on shaping a single EU-based energy policy was opened. The European Union has begun to build a so-called New Energy Policy for Europe, and a Green Paper on a European strategy for sustainable, competitive and secure energy has been published.7 It was and is crucial to the V4 states that the energy mix should remain in the hands of states.

The main »problem« with EU energy policy is, paradoxically, the aforementioned strong influence of states on the formation of the state energy mix, which may not meet the requirements coming from the EU. At V4 level, states clearly demonstrate the rather traditional direction of their energy policy. This is evidenced by the setting of the energy mix resulting not only from geographical realities, but also from often political will (see below). The EU is currently moving towards carbon neutrality agreed at the Brussels Summit in 2019. The European Green Agreement envisages that by 2050, the EU will emit as much CO2 as it can absorb.8 Overall, the EU roadmap includes 4 main objectives: in

5 More on the relationship between the EU, the V4 countries and Ukraine in the context of relations with Russia, eg Daborowski, 2015.
addition to reducing CO2 emissions, it seeks to increase the share of renewables, increase energy efficiency and increase the interconnection of energy systems.³

By the end of 2019, all EU states had to submit draft national action plans, which were to be subsequently reviewed by the European Commission in the light of the defined EU energy policy objectives. However, member states want to achieve neutrality differently and perceive EU control as interference with their sovereignty (Zachová – Hosnedlová 2020). For example, in the V4 region, it is possible to observe the effort to replace coal with nuclear energy, or Poland’s efforts to negotiate special conditions for itself.¹⁰ At the same time, it is possible to observe that the Czech Republic, Poland and Hungary preferred to reject the plan to create a carbon-neutral Europe in the context of a functioning economy (Simon 2019). The Slovak position is not so negative, but it does not want to set a specific year for achieving carbon neutrality (Szalaj 2019). Some countries have already adopted certain legislative measures (eg Finland, Austria or Sweden). On the one hand, the EU can be seen as a major engine and stimulant for states to change long-term energy strategies and directions. On the other hand, state sovereignty is a major obstacle to the formation of a single energy market and energy union. The V4 platform is a regional alternative where closer, common, EU-led collaborative factors can be sought. In the long run, the V4 countries have tended to favour traditional sources of energy, especially coal. The V4 countries are currently willing to adjust their energy mix, but the changes should be based on the needs of each state in the context of the functioning of the economy.¹¹ In the field of energy policy, national interests are adapted to local conditions, not always to trends coming from the EU.

The Visegrad Group’s interest in energy policy stems from a number of documents and statements.¹² The first real effort to solve energy problems together on the V4 platform appeared in 2009 in the context of the gas crisis. The crisis has supported efforts to create a common energy market in the region, which would not only lead to lower raw material prices, but also increase energy security (Denková 2016). In this sense, a number of opportunities have arisen for the V4 countries to find a common ground and mutually acceptable solutions with regard to security of energy supply. Cooperation V4 level is evident, for
example, in the response to the agreement between Austria and Germany on the introduction of a congestion management system at the “Germany/Luxembourg – Austria” tender border.

The reaction is evident in the cooperation of the Energy Regulatory Office of the Czech Republic (ERO), the Hungarian Office for Energy and Public Services (HEA), the Energy Regulatory Office of Poland (URE), and the Office for the Regulation of Energy Networks of Slovakia (RONI). According to the V4 countries, the above agreement violates the rules of interconnected transmission networks, because the V4 region was not involved in the project (Energetický regulační úřad 2017). The discussion on the energy market revealed partial problems associated with V4 level negotiations (not only in the field of energy policy). One of the main problems arises from the fact that energy policy has been the responsibility of member states themselves for a long time, and it is clear that purely national interests cannot be overcome by shared V4 interests for the time being. For example, the above positions were clearly shown by the different positions in foreign policy towards the Russian Federation (Osička – Lehotský – Zapletalová – Černoch 2016). It also showed the influence of the EU, which is now a relevant platform for all four countries surveyed. Energy policy and the EU’s interests span the interests of the Visegrad Group. The EU has been liberalizing the energy market since 1996 (Evropský parlament 2019), and the V4 countries have had to adopt existing rules in accession negotiations. The V4 could undoubtedly act as a place that combines the interests presented at EU level. One example is the V4 consultation on roadmaps in the context of Regulation 2018/1999 of the European Parliament and of the Council; which took place in 2019 and will continue to be carried out over the course of 2020. It concerns greenhouse gas emissions, the use of renewable energy sources, energy efficiency and the interconnection of the transmission system. However, it should be borne in mind in this context that partial decisions taken at V4 level are non-binding and there is no legal instrument with which to force states to comply with the rules agreed V4 level. Efforts to create a common energy market from the V4 initiative became evident at the turn of 2015/2016, but this has been delayed due to the migration crisis, as well as other EU sub-projects. Mention should be made, too, of the EU Energy Union project, which was approved at the EU Summit in 2015.13 The EU project correlates with the interests of the V4 as a whole. From the outset, however, it encounters the problems posed by the lack of uniformity among the EU member states. Within the V4, it is possible to detect some criticism from the Czech Republic and Hungary. On the other hand, in 2015 all EU member states signed a declaration supporting the establishment

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13 The European Council defined five main objectives of the European Energy Union and these had 3 basic aspects. Provide affordable energy for businesses and consumers; secure energy for all countries by reducing energy dependence; produce more energy from renewable sources and combat climate change (European Council 2014).
of an energy union. This correlates with the European Commission’s interest in promoting regional cooperation in order to achieve greater efficiency. In this sense, a number of opportunities have arisen for the V4 countries to find common ground and mutually acceptable solutions with regard to the security of the energy supply. If we look at the interest taken in the EU Energy Union from the perspective of the V4 as a whole, there is a clear common interest in supporting the concept (see the joint statements of the prime ministers of the V4 countries). If we were to pursue sub-interests at V4 member state level, it is obvious that agreement will be difficult to achieve. For example, the Czech Republic supports the project, while in the case of Hungary it is clear that the Energy Union would undermine state sovereignty (Euractive 2015). The question of state sovereignty is also at the heart of the shared interest in which states determine the energy mix. It is possible to pursue separate cooperation in the area of energy policy in a way which suits the states. An example of such cooperation is the Czech-Hungarian cooperation in the field of nuclear energy and the initiation of the establishment of the Czech-Hungarian Innovation Platform (CIP). A platform for energy research across the V4 should be established within the current Czech Presidency of the V4 (2019/2020).

**Energy Mix as a Basis for Cooperation at V4 Level**

In the following section, the energy mixes of the V4 countries will be analysed. The main goal is to show the energy profile as well as the determinants that affect the energy mix and also comes close to [or not, as the case may be] the other V4 members. There is a particular need to respond to EU requirements. It is currently necessary to monitor the response of states to Regulation 2018/1999 of the European Parliament and of the Council on the governance of the Energy Union and climate action.

In the Czech Republic, despite a relative decline, it still maintains its leading position in the consumption of coal as a primary source of energy (37.2%). The second most important component of the fuel and energy balance is crude oil (22.3%), which is used mainly in transport. Natural gas (16.6%) and nuclear fuel (16.2%) account for approximately the same share (Eurostat 2019). The Czech Republic is one of the least import-dependent countries of the EU (it

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is below the EU average) and the V4, while 32.7% of primary energy used in domestic consumption is imported into the Czech Republic. Coal contributes twice as much to the production mix (as in Poland, for example, see below), due to energy obtained from nuclear power plants (Denková – Zbyetniewska 2018). According to EU regulations, it is no longer possible for the Czech Republic not to consider the cessation of coal use. To put it another way, the old state energy concept assumed the share of coal-fired power plants in the energy mix to be 11–21% by 2040, thus deviating from EU plans. In the future, according to the newly issued National Plan17, we can expect the Czech Republic to be willing to implement changes in the field of energy only if the environment, state of the art and energy security are considered, and if energy transformation is not associated with high costs. In the context of decarbonisation, the Czech Republic is forced to follow EU regulations, and so the so-called Coal Commission should stop producing energy from coal.

At present, the share of coal-fired power plants in electricity generation is 47%. According to the State Energy Policy, nuclear power plants should produce between 46 and 58% of electricity by 2040 (Ministerstvo průmyslu a obchodu, 2014). Currently, the Czech Republic has responded to the European Parliament and Council regulations18 by issuing the National Plan of the Czech Republic in the field of energy and climate (November 2019)19 (Ministerstvo průmyslu a obchodu 2019). However, oil and gas imports are still very important. 97.2% of oil and 96.5% of natural gas are imported. The import balance is improved by the traditional source – coal; which in 2016 showed an import value of −0.9%, i.e. independence from imports (Eurostat 2019). From the perspective of the European Union’s energy policy, the pressure to reduce the consumption of fossil fuels, especially coal, as part of the country’s total consumption is significant. However, the Czech Republic has long focused on its own resources, which are characterized in particular by the stability of supply and, thus, they strengthen the energy security of the state. However, this fact is at odds with current EU energy policy priorities. If we evaluate the degree of diversification of suppliers of two key imported fuels to the Czech Republic – oil and natural gas, Russia plays a crucial role, especially in natural gas supplies. These latter in 2017 accounted for 99.2% of total imports to the Czech Republic. In the context of the planned changes, the Czech Republic makes reference to the strengthening of the solar energy sector. The Czech Republic wants to meet the European

18 This is an EU governance regulation
19 The document was adopted in January 2020.
Commission’s goals not in the field of energy as such, but the National Plan envisages changes in transport and heat production.\textsuperscript{20}

Table 1: Fuel and energy balance of V4 countries in 2017 (in %)

<table>
<thead>
<tr>
<th>State</th>
<th>Coal</th>
<th>Oil</th>
<th>Gas</th>
<th>Nuclear</th>
<th>RES</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>37,2</td>
<td>22,3</td>
<td>16,6</td>
<td>16,2</td>
<td>10,4</td>
<td>0</td>
</tr>
<tr>
<td>Poland</td>
<td>48</td>
<td>28,7</td>
<td>14,7</td>
<td>0</td>
<td>8,5</td>
<td>0,1</td>
</tr>
<tr>
<td>Hungary</td>
<td>9</td>
<td>28,5</td>
<td>32</td>
<td>15,3</td>
<td>11,1</td>
<td>4,1</td>
</tr>
<tr>
<td>Slovakia</td>
<td>20,8</td>
<td>21,4</td>
<td>24</td>
<td>23,1</td>
<td>9,2</td>
<td>1,5</td>
</tr>
<tr>
<td>V4</td>
<td>28,8</td>
<td>25,2</td>
<td>21,8</td>
<td>13,7</td>
<td>9,8</td>
<td>1,4</td>
</tr>
<tr>
<td>EU28</td>
<td>14,5</td>
<td>36,4</td>
<td>23,2</td>
<td>12,3</td>
<td>13,6</td>
<td>0</td>
</tr>
</tbody>
</table>


Poland, as another V4 country, shows the lowest degree of import dependence of the entire V4 group and is well below the EU average of 30.3%. It has the least diversified energy mix (Denková – Zbyetniewská 2018). Its energy sector is very strongly focused on coal consumption, where it uses its own resources and thus has the strongest position among the V4 countries in the field of energy policy. Coal is the main item in the fuel and energy balance with a share of 48%, followed by oil, which provides 28.7% of consumption, and the third most important source is natural gas, which covers 14.7% of consumption. Poland has long failed to find the political will to create a new energy concept. The energy mix was therefore backward and unsatisfactory according to European Union standards. The new document was not adopted until the end of 2019 (\textit{Energy Policy of Poland to 2040}).\textsuperscript{21} An important point of the concept is the construction of a nuclear power plant, which is a fundamental change from the current energy mix, as nuclear energy has not been used in Poland yet. The first nuclear power plant should be commissioned in 2033 (Eurostat 2019). Onshore wind farms (Ministerstvo Aktywów Państwowych 2019) will also be used more. Poland is a net exporter of coal, so it is completely independent of imports and shows an import dependence value of \textasciitilde 12%. However, since the 1990s, this level has fallen sharply, reaching \textasciitilde 30.2% in 1995. The situation is different for other fossil fuels. Import dependence on natural gas is 78.4% and in the case of oil imports the situation is even more serious, its value is 92.8% (European Commission 2018). As in the case of the Czech Republic, Russia is


\textsuperscript{21} This is an updated version from 2018.
also the main supplier of natural gas and oil to Poland. Russia accounted for 68.5% of oil supplies in 2017, and the share of natural gas going to Poland from Russia was similar (65.6%) (Eurostat 2017).

In recent decades it has not been possible to observe a significant change in the structure of Hungary’s energy balance. Hungary is characterized by a rather conservative approach to the diversification of energy sources. The shift from a cautious approach to the energy mix was brought about by the Russian-Ukrainian gas crises (2006 and 2009), when the volume of natural gas in the energy mix was slowly declining. The changes also need to be linked to the new political climate associated with the arrival of Prime Minister Orban in 2010. This prime minister has had a significant and long-term impact on Hungary’s energy policy, especially in the context of its relationship with Russia. The Russian Federation is a major supplier of natural gas and the above-standard relations between the two countries are reflected in supplies as well as in pricing policy (Euractive 2015).22

Hungary has recently responded to EU energy policy regulations and two documents were adopted in January 2020 – the National Energy Strategy and the National Energy and Climate Plan.23 The new strategy envisages carbon neutrality by 2050.24 One of the main conclusions is that changes in the energy sector are not expected to hamper economic growth. At the same time, Hungary wants to reduce its import dependence, especially in the area of natural gas.25 Unlike the Czech Republic and Poland, Hungary does not have comparable coal reserves and the main item in its energy balance currently remains natural gas, which accounts for 32% of the balance. Oil takes second place with 28.5 percent. Nuclear energy (15.3%) accounts for a relatively large share of primary energy consumption. Nuclear energy is to be the main alternative to green energy in the future, along with the development of solar energy.26 Hungary has been paying more attention to nuclear energy since 2014, in the context of the plan to expand its existing Paks nuclear power plant.27 The project is a response to

22 The current Hungarian-Russian agreement will expire in 2020 and it is therefore necessary to monitor the current negotiations, which are being held at the highest level.
23 Previous versions adopted after 2010 always refer to diversification and resources and less ties to the Russian Federation. Cooperation from countries in the region was also crucial in the strategies.
27 Before the start of construction, the EC carried out a deep checking that the project complies with EU competition rules (European Commission 2015).
efforts to minimize CO2. On the other hand, it points to Hungary’s strong energy ties with Russia, as the project is being implemented by the Russian nuclear energy company Rosatom and is financed by a Russian loan. The nuclear fuel will also come from Russia (Euractive 2018).

Coal is being used less in Hungary than the growing volume of renewable energy sources (11.1%) and it provides only 9% of the fuel energy balance (Eurostat 2019). Coal, which is rarely used in Hungary, shows an import dependency of 34.6% and, interestingly, the supply structure is relatively diversified and geographically different; coming as it does from the US (38.6%), the Czech Republic (23.2%) and Australia (12.1%). In the long term, coal mining should be halted by the end of 2030, while solar energy should increase (Patricolo 2019). The most important fact is that both of the most used resources – natural gas and oil – are largely imported and even the composition of suppliers is alarming, because here too there is a strong link to Russia. However, this should be minimized under the new strategy. Dependence on crude oil imports in 2017 was 78.9% and on natural gas imports 89.3%. In the case of oil, 42.7% of imports come from Russia (European Commission 2018). Russia is also a key supplier of natural gas. In this case, it is dominated by a 95% share of imports.

In terms of energy security, Hungary can be assessed as a very endangered country with very little of its own resources, unsuitable structure of the energy balance and also minimal diversification of supply flows, especially of the two most used fuels – natural gas and oil. The total import dependency thus exceeds the V4 average as well as the European Union average, reaching 55.6% in 2016 (European Commission 2018). In the case of Hungary and Poland, the use of shale gas as an alternative to conventional sources should also be considered. This would make both countries less dependent on conventional gas.

However, the highest value of import dependence from the V4 countries is still achieved by Slovakia. It has fallen to 59% since 1995, when it exceeded 68 percent, but is still well above the European Union average. The structure of Slovakia’s fuel balance is interesting, where no one source has a dominant position; as in the other V4 countries; but the four main sources (natural gas, nuclear fuel, oil and coal) are equally distributed in consumption and contribute to the primary energy consumption of the state in about equal shares. Nevertheless, the main primary source in Slovakia remains natural gas with a 24% share in consumption. In 2017, the second most used resource was nuclear energy with a 23.1% share. The other two primary sources consist of roughly one fifth of the fuel balance of Slovakia; crude oil supplies 21.4% and coal 20.8% (data as of 2017) (Eurostat 2019). Of all the V4 countries, Slovakia has the best distributed energy and energy balance and approx. 80% of energy comes from renewable sources (Ministerstvo zahraničnich věcí 2019). Slovakia is dependent on imports and the structure of its suppliers is clearly oriented towards Russia for all fossil fuels. Slovakia’s dependence on natural gas imports
was very high in 2016, reaching 92.9%. A slightly more favorable value was reported by another fossil resource – coal (83.3%). However, in the case of oil, it was also above 90 percent (91.8%); (European Commission 2018). Slovakia, through whose territory fossil fuel transport routes run from Russia, used this geographic exposure to shape its supply structure for fossil fuels and focused on Russia. In 2017, imports from Russia accounted for 84% of Slovak natural gas imports and 74% of its oil imports. The importance of geographical exposure and historical links can also be cited in the case of coal imports. The three main countries are the supplier mix: Russia (27.2%), the Czech Republic (24.9%) and Poland (23%) (Eurostat 2019).

Table 2: Import Dependence of V4 Countries in 2016 (in %)

<table>
<thead>
<tr>
<th>State</th>
<th>Total</th>
<th>Oil</th>
<th>Gas</th>
<th>Coal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>32.7</td>
<td>97.2</td>
<td>96.5</td>
<td>-0.9</td>
</tr>
<tr>
<td>Poland</td>
<td>30.3</td>
<td>92.8</td>
<td>78.4</td>
<td>-12</td>
</tr>
<tr>
<td>Hungary</td>
<td>55.6</td>
<td>89.3</td>
<td>78.9</td>
<td>34.5</td>
</tr>
<tr>
<td>Slovakia</td>
<td>59</td>
<td>91.8</td>
<td>92.9</td>
<td>83.3</td>
</tr>
<tr>
<td>V4</td>
<td>44.4</td>
<td>92.8</td>
<td>86.7</td>
<td>26.2</td>
</tr>
<tr>
<td>EU28</td>
<td>53.6</td>
<td>86.7</td>
<td>70.4</td>
<td>40.2</td>
</tr>
</tbody>
</table>


Like other V4 countries, Slovakia adopted the Integrated National Energy and Climate Plan\(^{28}\) for 2021–2030 in response to EU regulations. Here, it is possible to observe similar interests in the field of nuclear energy; i.e., they share the interest with the Czech Republic, for example, that energy produced from nuclear fuel should be counted among low-carbon sources. On the other hand, it must be stated that Slovakia is already a low-emissions country. New projects aimed at the development of renewable sources will further strengthen this fact.

**Conclusion**

Energy policy is one of the most sensitive areas of European integration. It often impinges on state sovereignty as well as the efforts of states to implement their own energy policy which satisfies local interests, not EU interests as a whole. In the context of a long historical development, national energy policies are adapted to local specificities. These often result from the country’s geographical

location. These factors are then difficult to overcome. Especially in view of the EU’s current efforts to make changes to the energy sector that will be in line with the bloc’s plans for a low-carbon Europe. The EU is currently interested in reducing CO2 emissions to a level consistent with a carbon neutral Europe in 2050. Alongside this goal is a plan to increase the use of renewable energy sources as well as increasing energy efficiency. By the end of 2019, EU member states (including the V4 countries) had to submit a concrete plan corresponding to European Commission requirements. At present, it cannot be unequivocally said that states have not complied with the EU Regulation. While partial plans are available, the European Commission is still evaluating the submitted documents (at the time of writing). As yet there is no empirical data that can be compared with the assumed direction of national energy policies. At the EU level of analysis we have clearly demonstrated the increasing influence of the bloc. Since the adoption of the Lisbon Treaty, the EU’s influence in the field of energy has been greatest. However, in the area of the energy mix, states have a choice and this complicates the harmonization of the EU’s energy policy. The EU is an actor that sets the rules, but it has to expect a partial response from the member states, and it is in the group of selected countries that every effort is being made by their governments to prioritize state sovereignty over the fact that the state is part of supranational bloc [the EU].

The second level of analysis was the Visegrad Group as a specific platform where it is possible to form partly regionally conditioned interests. In the case of energy policy, it cannot be unequivocally said that energy is an area of sharing interests, which are then always transferred to EU level. Here it is necessary to contextualize the cooperation according to the state’s energy source. An important liaison for cooperation is nuclear energy, where the common interests of the Czech Republic, Slovakia and Hungary are clearly shown. On the other hand, Poland is outside the scope of this cooperation due to the absence of any nuclear power plant from its territory. 29 Another common feature of a narrower group of countries is the traditional coal mining associated with Poland and the Czech Republic. However, it should be noted here that Poland makes more use of alternative energy sources and pays more attention to EU-based requirements. Conversely, the Czech Republic wants to phase out coal production more gradually. A big incentive for cooperation in the energy field is the countries’ strong import dependency. Energy imports proved to be problematic during the Russian-Ukrainian gas crises. Efforts to diversify the import network is in the interests of the entire V4 Group. The Russian Federation is perceived to be an unreliable partner. The exception is Hungary, where the political elite initiated negotiations leading to a separate agreement affecting the import and price of

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29 On the other hand, in the future, closer cooperation can be considered if the Polish plan for the construction of a nuclear power plant, which is to be built by the end of 2033 (Moravec 2019), is implemented.
natural gas. Hungary is thus excluded from the V4 Group. The conclusions from Bratislava (2011) also show interest in cooperation in the field of energy. At the same time, these have pointed to particularities which make it difficult to establish the Energy Union. This brings us back to state sovereignty and the fact that decisions made at V4 level are not legally binding on states. This complicates the whole cooperation process. We could say that in the field of energy cooperation there is particular emphasis on the development of new technologies, carrying out research projects, or cooperation in times of crisis in efforts to build gas pipelines that will not lead from the Russian Federation and Ukraine.

The third level of analysis; at member state level; was carried out in the context of setting energy mixes and their changes in the implementation of the European plan for a carbon neutral EU. Despite different characteristics, such as the range of energy mixes, the V4 countries share a number of common features. For example, the Czech Republic and Poland, which are focused on coal consumption and are generally less dependent on fuel imports. EU pressure on the Czech Republic and Poland regarding decarbonisation can make them increasingly dependent on imports. Also, the direction taken by the EU towards greater use of renewable energy sources and compliance with the limits set down by the EU energy policy is very demanding on the composition of energy mixes for the Czech Republic and Poland. We must not forget the missing infrastructure for renewable energy sources. Hungary and Slovakia use the most natural gas and, as has already been mentioned, their dependence on the import of this source is very high. The V4 countries are more dependent on natural gas imports than the rest of the EU, and their territorial orientation towards Russia is particularly risky. That is why the key joint projects are focused on solving the problem of a secure and reliable gas supply, which is the key task for the V4 countries. At the same time, it is possible to observe partial specifics resulting from local specifics, whether it is geopolitical; e.g. the fact that Poland can use its position as a coastal state, or the coal deposits in the Czech Republic and Poland. The influence of the political elites on the formulation of energy policy must also be taken into account. Hungary and its inclination to the Russian Federation is a clear example of this. Currently, EU energy policy is being shaped by EU Regulation 2018/1999 (see above). Here, the differences in the perception of the existing and the new settings of energy mixes were clearly shown. The V4 is linked by efforts to interpret nuclear energy as a renewable resource; they want to set a year for carbon neutrality and defer to state sovereignty in the new formulation of the energy mix. It can therefore be expected that energy policy will be a cementing area in which the V4 countries will share their interests and exploit their potential to negotiate a shared V4 based position to be presented in the EU in the future.

Looking at the answers to the research questions raised in the introduction, it is clear that energy policy is significantly influenced by states. This is especially
true when it comes to energy security of supply or energy mix settings. With the gradual communitisation of energy policy, the EU’s influence is growing and it is questionable how the evaluation of the already existing strategic plans presented by the states will be carried out. The role of the Visegrad Group is the weakest of the three analyzed levels. In the future, however, its increasing influence can be predicted, especially in the case of phasing out coal mining, or perceiving nuclear energy as a renewable source.

References


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