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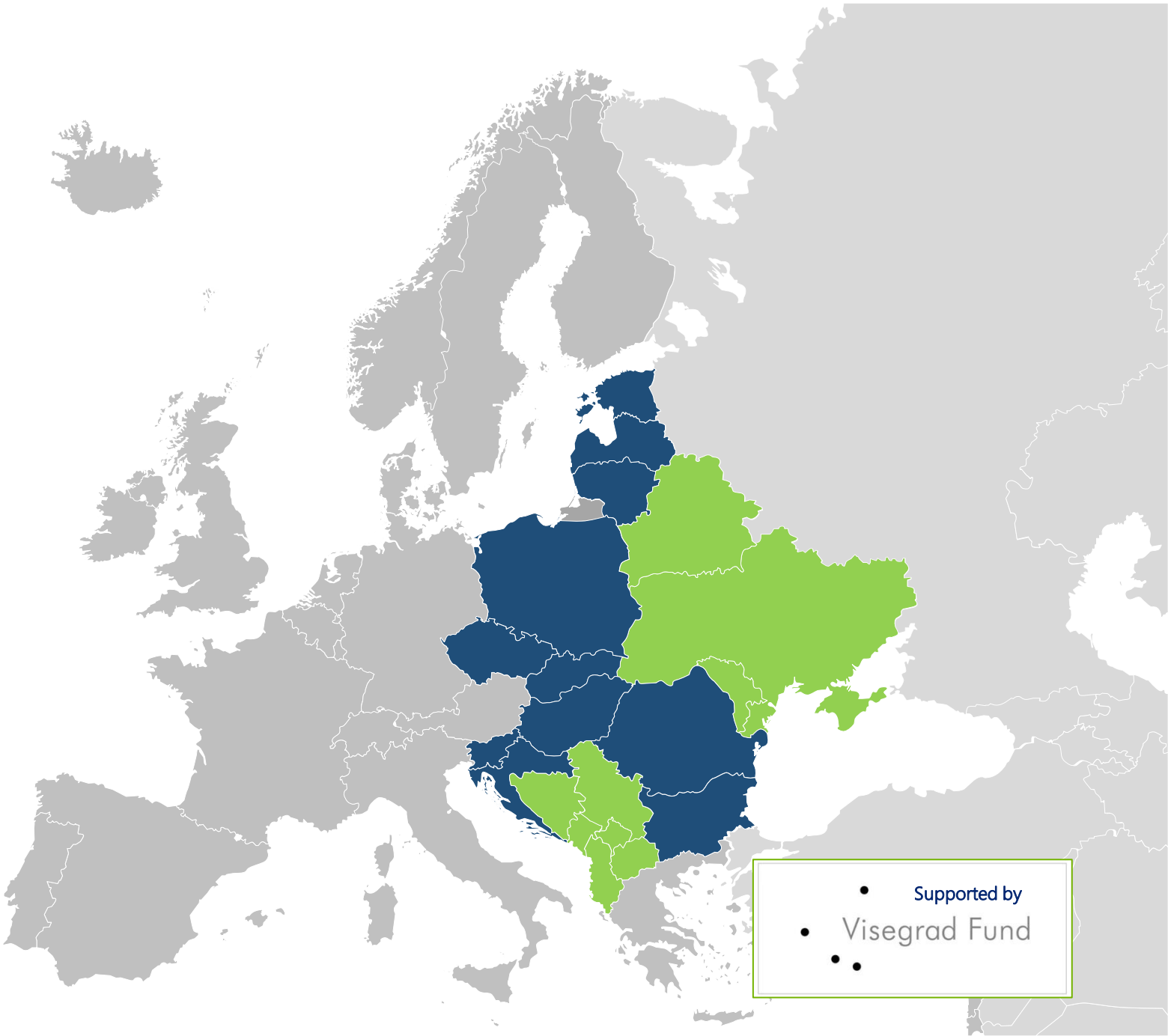
SPECIAL ISSUE

CEDE 9.12.2016 | Central European Day of Energy



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Message from Eryk Kłossowski
Chairman of the Board of Directors, CEEP

As the Chairman of the Board of Directors of Central Europe Energy Partners, I am delighted to welcome you all to the first edition of the Central European Day of Energy event, presented by CEEP, in co-operation with partner associations from the Visegrad countries and Ukraine.

This event is being held under the auspices of the Vice-President of the European Commission in charge of the Energy Union, Maroš Šefčovič, the Slovak Republic's Presidency of the Council of the European Union, and the Republic of Poland's Presidency of the Visegrad Group. Last, but not least, the event is supported by the International Visegrad Fund.

We aim to establish a forum for useful networking, discussing electricity and natural gas infrastructure issues and needs, especially in relation to the North-South interconnections in the Central European region, and linking the EU with its Eastern neighbours, such as Ukraine.

There is a strong need for a better representation of the region in Brussels. When we look at the number of lobbyists registered here, it is easy to see that Central Europe is under-represented. There are 929 organisations with an office in Belgium, and from this group, we only have 40 speaking on behalf of the EU-11. Hence, in the midst of the changing energy landscape, the region needs to have her say, as what is decided now will impact on the coming decades.

In order to find a European solution, steps must also be taken at the regional level, including in Central Europe. Though our national interests may differ in some cases, it is important that we work together to increase our energy security and efficiency, knowing there is no one size which fits all solutions. Therefore, the aim of the CEDE event is to provide a platform for discussion, as well as defining joint initiatives and promoting solutions to our challenges.

I would like to express my gratitude towards all the partners of this event, especially to Mr. Šefčovič, who has encouraged and supported this initiative from day one. We hope that this first edition will be just the beginning, and that CEDE will find a permanent place in your agendas, in the years to come. Finally, please allow me to wish you all a fruitful debate and an enriching experience. ■

Eryk Kłossowski

Message from Maroš Šefčovič
Vice-President of the European Commission, in charge of Energy Union

2016 will be remembered as a highly turbulent year, especially for our political systems. At the same time, the year we are about to conclude was a very exciting one for the energy sector, revealing new transformations, adaptations, and reconfigurations. We saw the Paris Agreement coming into force, European countries better interconnecting their infrastructure, Europe's renewable energy industries breaking their own records, new sources of gas reaching our shores and we paved the way for much more.

We, in the European Commission have strategically identified this year as the one when we would like to deliver the Energy Union, as the turning point between the old and the new energy systems. We therefore accelerated the processes and made sure the necessary legislation was introduced before the end of the year; a process we concluded very recently, on 30 November with the "Clean Energy For All Europeans" Package.

The transition in the global energy market, the disruption of new technologies, and of course the strong political will in Europe and around the world to bring these about, created a period of transition from fragmentation to integration, from energy precarity to energy security, from energy waste to energy efficiency, and from global warming to global responsibility.

The Energy Union can be a driving force, bringing more co-operation on secure supplies, infrastructure development, and renewables between neighbouring countries and regions, as well as profiting effectively from economies of scale and best practices, when it comes to knowledge and trade with third partners. A predictable and stable regulatory environment across the Member States, will boost the much-needed investment in the energy and transport sectors.

A constant dialogue enriches the overall Energy Union project and remains a core part of the entire process. I therefore welcome initiatives such as the first Central European Day of Energy in Brussels. This event represents an excellent opportunity to exchange views and push forward our ambitions across European borders. I hope the Central European Day of Energy will not stop here, but develop even further to other cities and regions. ■

Maroš Šefčovič

CEDE 9.12.2016 | Central European Day of Energy

EVENT

CEDE 9.12.2016 | Central European Day of Energy

CEEP, in association with the European Commission's DG Energy, organises the 1st Central European Day of Energy (CEDE), under the auspices of Mr. Maroš Šefčovič, the Vice-President of the European Commission in charge of Energy Union, the Slovak Republic's Presidency of the Council of the European Union, and the Polish Republic's Presidency of the V4 on the 9th of December, 2016, in Brussels.

This strategic event is being organised with the support of the International Visegrad Fund, and the project partners – distinguished institutions from the V4 countries and the Ukraine, in particular:

- The Center for Social and Economic Research (CASE), Poland
- Research Center of the Slovak Foreign Policy Association (RC SFPA), Slovakia
- The Institute for Foreign Affairs and Trade (IFAT), Hungary
- The Institute for Politics and Society (IPS), the Czech Republic
- Razumkov Centre, Ukraine.

The Central European Day of Energy will become a unique platform for Central Europe's key regional players to have a real and fruitful forum for further discussions on the Energy and Energy-intensive sectors' future. This marks a real stakeholders' opportunity to reach a new annual dimension, starting in 2016.

Moreover, the CEDE event is aiming to run concurrently with the Energy Union and its complementary achievements with the winter package publication.

It will be launched with a special focus on the infrastructural needs in the Central European region, including the V4 countries, from the perspective of improving the security of gas supply, and ensuring a power market supply. The high-level speakers will discuss these major issues in 2 sessions, as follows:

Session 1: 'Disproportionate, infrastructural development between Western and Central Europe. How to ensure better security of gas supply, more interconnections and liquid gas hubs, and better performance of the Visegrad Group's gas markets'.

Session 2: 'Security of electricity supply as a shared EU objective. How should all market actors and stakeholders work together to ensure enough security of supply in Central Europe?'

The essential goals of the CEDE are to provide comprehensive information concerning the Central European energy sector, as well as focusing on those companies requiring joint support. We aim to establish a forum for useful networking, discussing energy infrastructure issues, especially in relation to North-South Interconnections in the Central European region, and linking the EU with Eastern countries, such as Ukraine. Additionally, we intend to facilitate and promote the development of closer co-operation, in the field of energy security, among the key institutions and industrial stakeholders from our region, with the EU's policy decision-makers.

To provide added value, we intend to facilitate and promote the development of closer co-operation, in the field of energy security, among the key institutions and industrial stakeholders from our region, with the EU's policy decision-makers. ■

CEEP ANALYSIS

Energy security quest in Central and Eastern Europe – achievements and challenges

The European energy sector is in the process of profound transformation which will shape its profile for decades to come. Changing global environment, the perceptions of energy itself, technologies and innovations, new sources of conventional, but also renewable energy, require an adequate answer from the European energy companies but also states and international institutions. There is a number of issues we should tackle in coming years, and one of the crucial ones is how to secure energy supplies, in order to provide our customers with stable ones and in affordable prices.

These issues are of utmost importance for Central and Eastern Europe where energy security, due to history, but also geopolitical factors, always stands high on the agenda. The disruption in gas supplies witnessed in recent years, the ongoing Russia-Ukraine conflict and Gazprom's announcement to halt transit to Europe through Ukraine after 2019, result in persistent uncertainty over the stability of Russian gas supplies to Europe.

These concerns are amplified by preparations to build new lines of the Nord Stream gas pipeline as well as the European Commission's recent decision to grant to Gazprom increased capacity usage of the OPAL pipeline. There is also an ongoing debate on a proposal for a revised, based on a more regional approach, regulation on the security of gas supply.

Meanwhile, the security of electricity supply draws more and more attention. The adequacy of traditional generation capacities and the stability of power grids in Central and Eastern Europe are under severe pressure due to ageing, low wholesale prices, the expansion of renewables, uncontrolled loop flows and the EU's climate policy. Moreover, the European Commission has just presented a package Clean energy for All Europeans covering new electricity market design and security measures, which could profoundly reshape how power is generated, traded and transported.

In this dynamic context fundamental questions are being raised. Is Central and Eastern Europe prepared for potential gas and power supply disruptions? How real is this threat, and how can we mitigate potential risks? What should be on the agenda in light of the different interests and approaches to energy security within the EU? What is the role of the regional cooperation in this area?

This brief policy paper will not answer all these questions. We would rather draw your attention to the peculiarities of energy markets in the region, as well as would present the main achievements and new challenges for energy security. We particularly focus on the Visegrad Group countries (Poland, the Czech Republic, Slovakia and Hungary) as well as on Ukraine, which is an indispensable part of any debate over energy security in the region. We also concentrate our analysis on gas and electricity, as these two sectors are currently the focal point of energy security debate in Europe.

CEEP ANALYSIS

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Snapshot of energy markets in Central and Eastern Europe

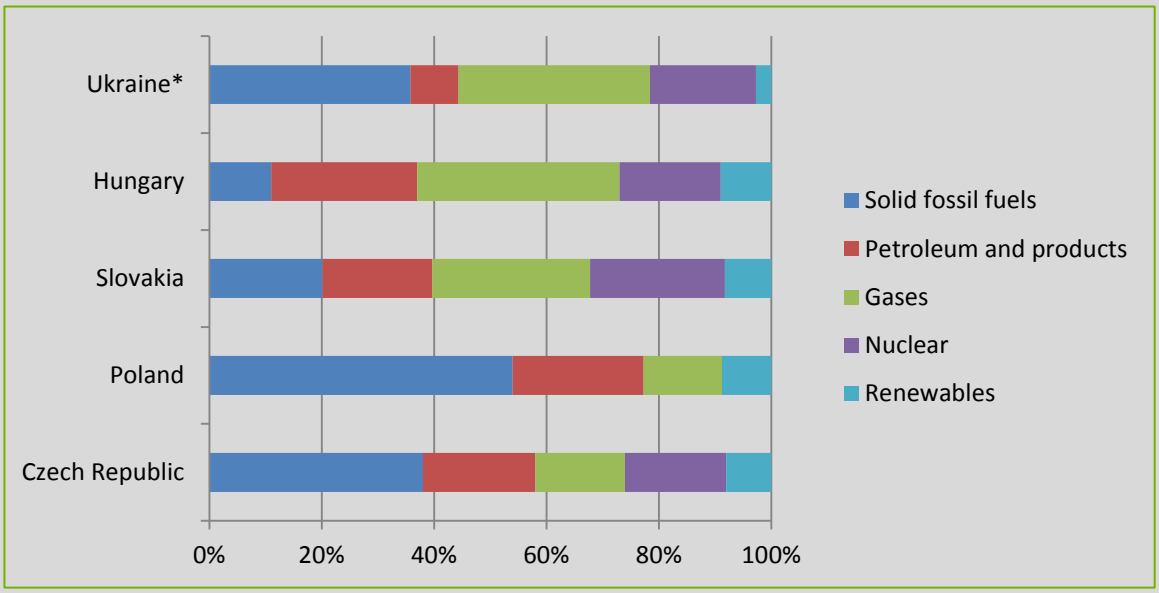
Central and Eastern Europe represents a diverse energy region, with some common traces and challenges ahead. The national markets significantly differ in size, as well as in their energy consumption. For example, Poland or Ukraine alone consume more energy than the Czech Republic, Hungary and Slovakia all together[1]. Slovakia has a well-balanced energy mix, Poland and the Czech Republic rely very much on coal, whilst Hungary depends on nuclear power to a large extent. Ukraine is somewhere in between with high coal and gas shares in primary energy consumption (See Figure 1). Among other CEE countries, Romania possesses larger indigenous sources, mainly natural gas and coal, while Estonia produces energy mainly from oil shale and Latvia has a high level of renewables (37%).

All countries in CEE have experienced stagnation and even decline of their energy consumption in recent years. It is worth pointing out that Ukraine has been dramatically slashing its energy demand – its total primary energy supply in 2014 (105.6 mtoe) was more than 30% lower as compared to 2010[2].

This is mostly due to severe economic crisis as well as military conflict in Donbas, where an energy–intensive industrial complex is situated.

As far as the supply side is concerned, there is a clear split over import dependency factor across the region. Estonia and Romania have one of the lowest in the EU (9% and 17% respectively in 2014) due to their oil and gas reserves. Poland and the Czech Republic have abundant and relatively cheap domestic energy resources (mainly coal), so imports usually cover only around third of energy consumption. Slovakia and Hungary depict a reverse picture, with around 60% overall import dependency, which is above the EU average. The worst off is Lithuania with close to 78% import dependency[3]. The common feature is that all of the CEE states has experienced gradual increase in their import dependency in recent years, following a general trend of the EU. Ukraine has moderate overall import dependency and has steadily decreased it (from 38% in 2010 to 32% in 2014[4]) which mirrors the general trend of falling energy consumption in Ukraine. ▸

Figure 1. Energy mixes in the CEE region - gross energy consumption of primary sources in 2013



Source: Eurostat, Energy Community

1. Gross inland consumption of primary products in 2013: Ukraine* - 115.9 mtoe, Poland - 92.8 mtoe, Czech Republic – 42.2 mtoe, Hungary - 22.7 mtoe, Slovakia - 17.3 mtoe. Source: Eurostat, *Energy Community
2. Calculations based on IEA data: www.iea.org/statistics/statisticssearch/report/?country=Ukraine&product=balances
3. Energy import as a share of domestic consumption (overall import dependency) in 2014: Poland – 28.6% , the Czech Republic – 30.4%, Slovakia – 60.9%, Hungary – 61.7% , EU average – 53.5%.
4. Calculations based on IEA data, www.iea.org/statistics/statisticssearch/report/?country=Ukraine&product=balances

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Overview of gas markets

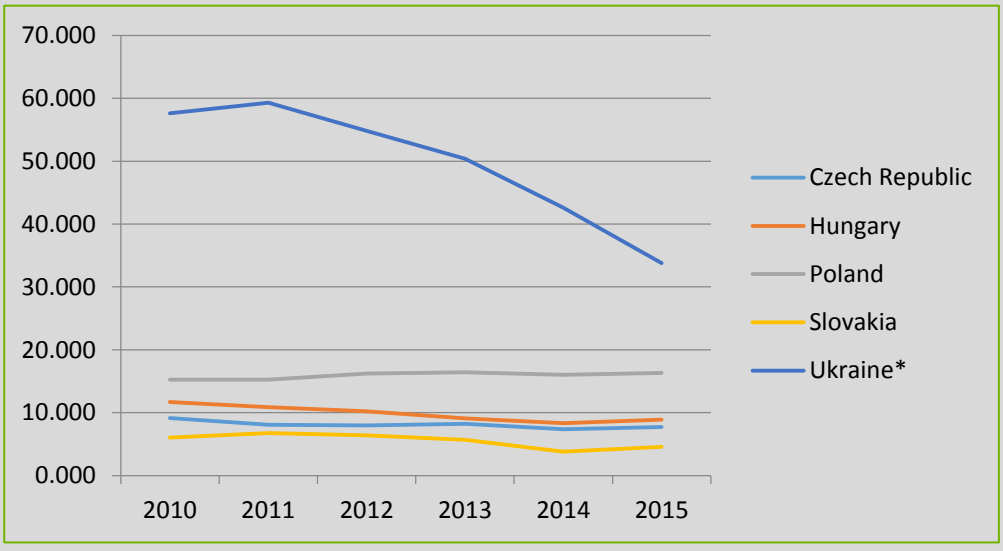
The EU-11 jointly consumed around 62 bcm in 2015, which constituted around 14% of gas consumption in the EU. Adding Ukraine to the group, increases gas consumption in the region to 92 bcm. Ukraine and Poland are the largest markets with consumption in 2015 of around 34 bcm and 17 bcm respectively.

Data shows that gas consumption in all V4 countries except Poland is generally in decline. Only in Poland, there seems to be foundations for gas demand growth in the next decade mainly due to preparations to build gas power plant stations[5]. Meanwhile, gas consumption in Ukraine is in the process of a sharp drop – consumption in 2015 was almost halved compared to 2010 (See Figure 2).

All gas markets in Central and Eastern Europe share several common features, which are the main reasons for their similar problems. CEE in general is exceedingly dependent on Russian gas supplies, and have limited domestic production with the exception of Ukraine and Romania (producing around 20 and 10 bcm in 2015 respectively) (See Figure 3). CEE started in recent years to buy gas from the Western direction (EU internal trade) and in this sense decreased region's dependency on Russian gas at least from a contractual point of view (not from the perspective of the physical origin of molecules). It is worth mentioning here that Ukraine is the most striking example of a move away from Russian gas. Gazprom supplied Ukraine with 14.5 bcm of gas, and 5.1 bcm came from the EU in 2014, whereas the proportions were reversed in 2015: the EU supplied 10.3 bcm, while Russia 6.1 bcm. Moreover, Ukraine entirely stopped importing gas from Russia in late 2015 and currently secures its supplies only from domestic production and EU imports.

The majority of CEE's gas markets have a strong transit character due to its geographic location and historical development of the infrastructure. Gas infrastructure is still mainly East-West oriented, which is a legacy from the communist times, whereas connections on the North-South axis are limited and are used mainly as an emergency connections. In fact, three out of four main gas pipeline systems from Russia to Europe are located in the region: Brotherhood (Russia-Ukraine-Slovakia-the Czech Republic with subsections from Ukraine to Hungary), Yamal-Europe (Russia-Belarus-Poland to Germany) and Trans-Balkan pipeline (Russia- Ukraine-Moldova-Romania-Bulgaria). ▸

Figure 2. Gas consumption in V4 and Ukraine 2010-2015, bcm



Source: Eurostat, Naftogaz

5. Calculations based on IEA data, www.iea.org/statistics/statisticssearch/report/?country=Ukraine&product=balances

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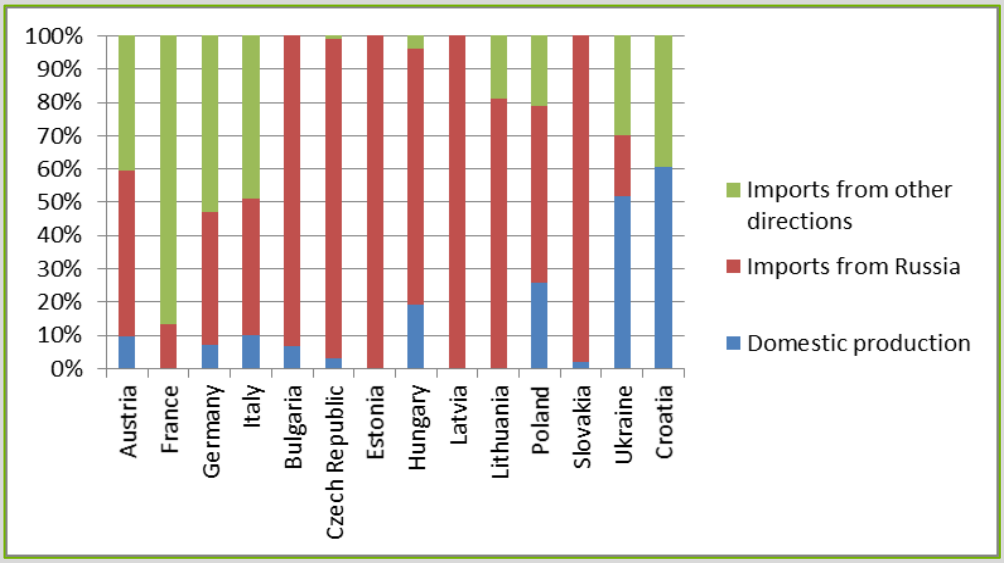
Figure 3. Structure of gas supplies to CEE and other EU gas markets in 2015



Source: ENI World Oil and Gas Outlook 2016

The only one way of Russian supplies which bypass the CEE region is Nord Stream (See Figure 4). In a transit of Russian gas deliveries to the EU, Ukraine plays a crucial, as the transit gas flows amounted for 67.1 bcm or 66% of Gazprom's total deliveries to Europe in 2015. As far as storage infrastructure is concerned, the dispersion of capacities in the CEE region is uneven. There are several underground storages in Ukraine with total capacities of 32 bcm/y, which currently attract the attention of European companies i.e. ENGIE. The EU-11 have a joint storage capacity of almost 23 bcm/year – the most developed systems are in Hungary (6.1 bcm) and the Czech Republic (almost 4 bcm).

Gas markets in CEE are still at a low level of development. Gas trading on exchanges and virtual trading points is gradually developing, but there is no gas hub comparable to the other hubs operating in Northern and Western Europe. There is also a low level of competition. Price regulation for households, as well as small and medium-sized enterprises, is a common standard across the region. In the V4 only the Czech Republic totally liberalised gas prices in all segments of the market. As a result consumers' switching rate in retail markets are negligible, except in the Czech Republic.

Achievements and challenges for gas markets security

After the major gas supply disruptions in 2006 and 2009, the V4 has significantly strengthened their gas grids and increased interconnectivity, both within the region and with other EU countries. Poland completed its flagship LNG terminal project in 2015 (import capacity of 5bcm/y), thus creating the preconditions to bring a completely new source of gas into Central Europe. It also introduced reverse flows on its main transit pipeline, Yamal-Europe, which allows for gas imports from Germany. The Czech Republic and Slovakia did the same on their sections of the Brotherhood pipeline. Hungary has built new interconnections with almost all neighbours: Croatia (2010), Romania (2011) and Slovakia (2014). All of these investments largely improved gas system resilience to potential supply disruption and all V4 countries fulfill infrastructure security standards (N-1). A much more difficult situation remains in South-Eastern Europe – Romania and Bulgaria made first steps in 2016 to open and reverse the main transit pipeline. In Baltic countries there is still no major improvements in connections with other CEE states. However Lithuania in 2014 launched its LNG terminal "Independence" (FSRU) and is planning to build interconnection with Poland - GIPL (Gas interconnector Poland-Lithuania).

As far as Ukraine is concerned, it succeeded with the establishment of reverse deliveries from the EU with a total import capacity of 21 bcm/y (the main channel is Slovakia with capacity of 14.5 bcm/y). Moreover, access to the EU gas markets enabled Ukraine to diversify supplies and to trigger competition. In 2015-2016 wholesale supplies were provided by more and more companies, including key European players such as ENGIE, Statoil and E.On. But the biggest success has been the quick adjustment to the EU gas market model. Ukraine has transposed most of the EU third energy package into its legislation, however, the unbundling of national gas company Naftogaz remains the key unsolved issue, but there is already a well-prepared plan to introduce it in 2017. ▸

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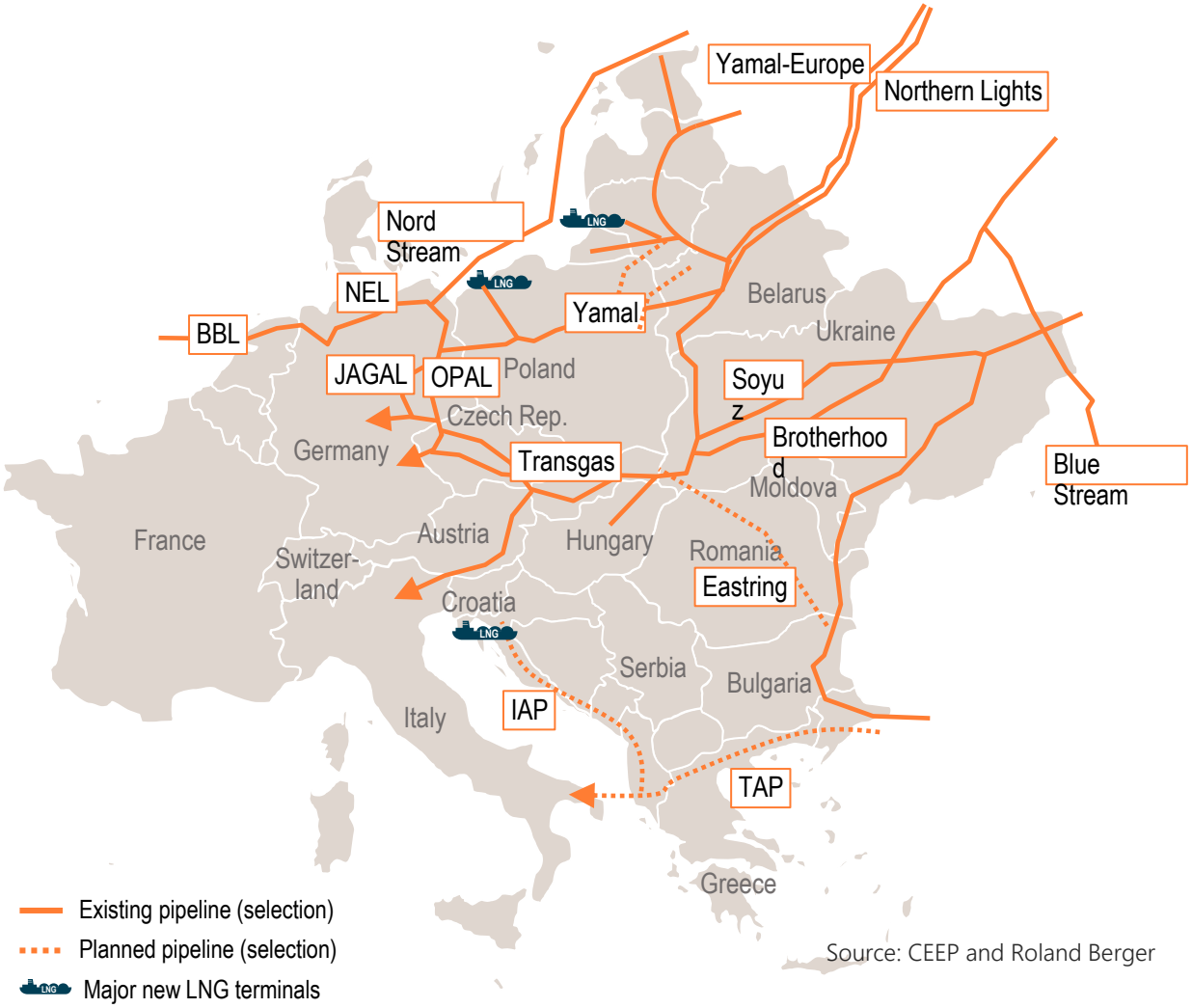
These achievements would not be possible without the establishment of regional and bilateral gas cooperation, which is another success in the region. V4 cooperation proved to be detrimental in the establishment of bidirectional gas flows and the drafting of main gas pipelines plans as a single concept – North-South Gas corridor –supported by the European Commission, which allowed the acquisition of PCI status for main interconnectors, and thus paved the way to get EU financial assistance. The North-South corridor is aiming to change the perception of gas flows in the region from East-West oriented towards North-South. Meanwhile, in South-Eastern Europe in 2015 the CESEC initiative was established, defining the main priority projects in the region, and became the main forum for the improvement of harmonisation of rules and a more transparent network access on cross-border interconnection points.

Figure 4. Gas pipelines in the CEE region



Source: CEEP and Roland Berger

One of the key challenges in the CEE region is maintaining the effectiveness and profitability of gas transit systems in light of Gazprom's plan to build Nord Stream 2 project and fully stop the transit of its gas to Europe via Ukraine (and thus via Slovakia, partially the Czech Republic and possibly also Poland). From a purely financial perspective, this would mean considerable decrease of income for Ukraine (1.8 bln EUR/year) and Slovakia (i.e. circa 400 mln EUR/year) as today's main gas supplies routes (Brotherhood and Yamal) will remain void. This loss of income could hamper gas infrastructure modernisation, which is especially necessary in Ukraine. More importantly, Nord Stream 2 would limit the number of supply corridors to Europe as in the long run, Russian gas exports to European consumers could be ▸

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Figure 5. Pipelines in danger of being cut off after the construction of Nord Stream 2

Source: CEEP&Roland Berger

transferred to one spot in Germany, circumventing not only Ukraine, but also Central Europe. Consequently, CEE countries will be exposed to even more monopolisation of its markets by Russian gas, which will be the only one which can be bought from the East but also the West direction.

Moreover, the project undermines the solidarity principle and trust within the EU and would harm the EU-Ukraine partnership. The recent decision to allow Gazprom higher capacity of Nord Stream on land leg, the OPAL pipeline, threatens even more the CEE countries (the decision was severely criticized mainly in Poland and Ukraine) as it allows to spread Russian gas, form Nord Stream, to the Central Europe through Germany.

Another challenge is completing the missing links in regional infrastructure. There is no interconnection between Poland and Slovakia and Poland-Lithuania whatsoever. On the many interconnections there is no bidirectional mode (Croatia-Hungary, Romania-Hungary). This limits the chances to diversify supplies further and keeps the regional markets quite fragmented. Plans to build a Poland-Slovakia and new Polish-Czech interconnector (STORK 2) face significant challenges due to a complex regulatory environment and lack of strong market interest. In turn, the Czech Republic invested heavily in gas infrastructure in recent years and shows little appetite for any new investments. Hungary looks mostly towards better utilisation of the existing infrastructure and is also rather skeptical about new grandiose projects.

In this landscape, the Northern Gate project promoted recently by Poland, combined with LNG terminal in Swinoujscie, remains the only one which is truly willing to diversify the sources and routes of supplies to Central Europe, bringing through Denmark, the Norwegian gas to Poland and Central Europe.

In turn, Slovakia promotes Eastring transit pipeline between Slovakia, Hungary, Romania to Bulgaria (with possible de-route via Ukraine) in order to create a link between Western gas hubs and Balkans, but the project is still under the preliminary studies. ▸

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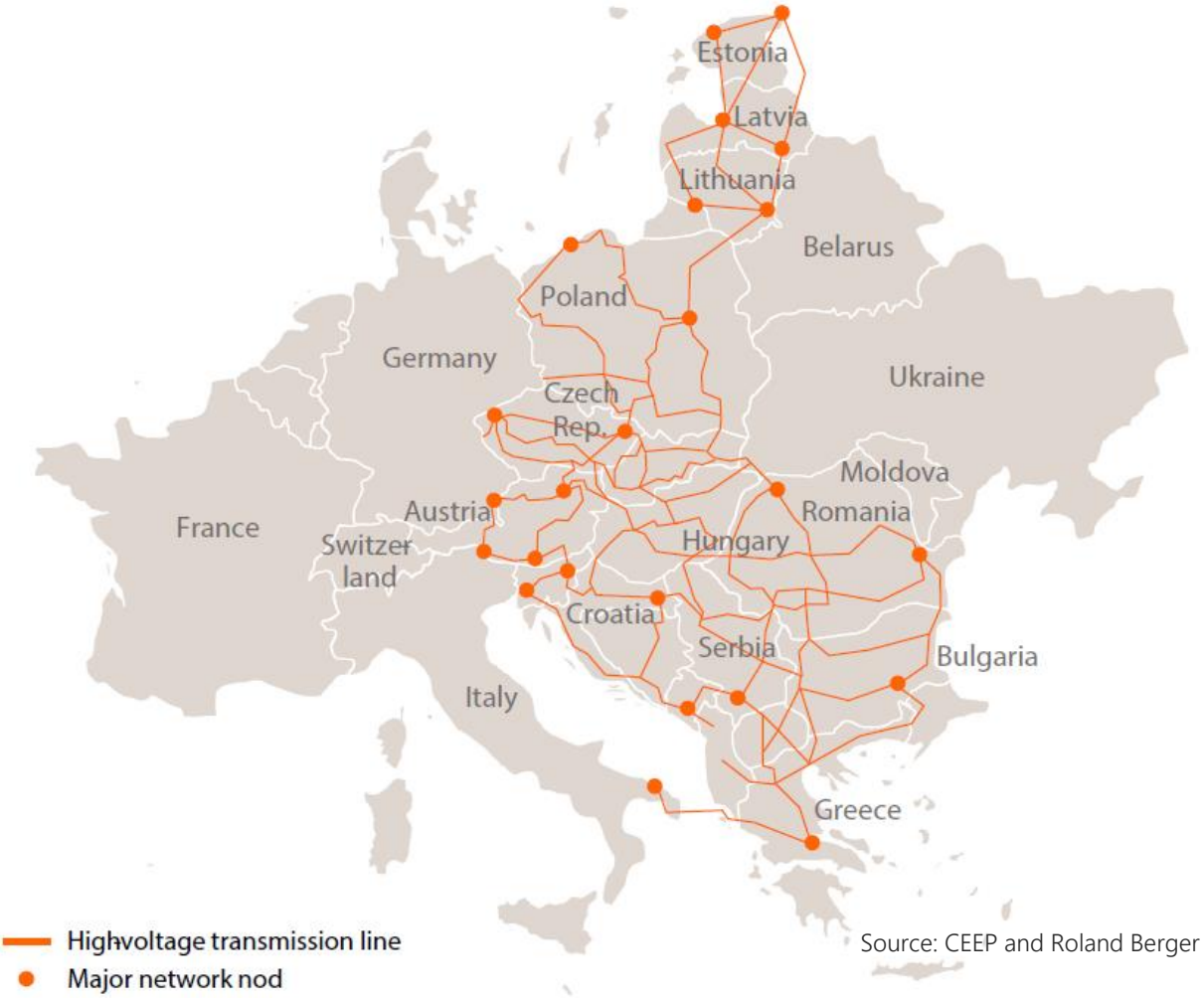
Figure 6. Electricity transmission network in CEE



Source: CEEP and Roland Berger

Finally, the key challenge is how to maintain market reforms and stimulate competition. There is widespread consensus that even with "hardware", i.e. gas infrastructure, markets will not be functional and thriving unless there is "appropriate software" - transparent, stable and harmonised regulations across the region.

The Visegrad Group started to move in this direction by adopting the Roadmap towards a regional gas market in 2013, which envisioned – despite infrastructure development - the preparation of joint risk assessments and emergency plans, harmonised implementation of network codes and discussions over possible implementation of the EU gas target model.

Nevertheless, there has been so far very little progress in these areas.

Overview of electricity markets in Central and Eastern Europe

Gross electricity generation in EU-11 was almost 448 TWh in 2014. The largest electricity producers in the CEE region are Poland (159 TWh in 2014), Ukraine (157 TWh), the Czech Republic (86 TWh) and Romania (66 TWh). In 2010-2014 there was a general EU pattern of falling electricity generation, but few CEE countries actually increased net electricity generation, namely Romania, Poland, the Czech Republic, Slovenia and Bulgaria. As far as Ukraine is concerned, due to economic crisis and large territorial losses to Russia, its role in CEE production is decreasing.

There are strong differences in the national electricity production mixes across the region. Poland has traditionally the highest share of solid fossil fuels (mainly hard coal) in electricity production (83.7% in 2014). Nuclear power is the main source of electricity production in Hungary (54.5%) and Slovakia (50.8%). In the Czech Republic nuclear energy plays an important role as well (35.3%), but solid fuels remain the key source for power generation (47.9%). In Ukraine 56% of electricity was produced by nuclear power plants, 39% by thermal power plants as well as combined heat and power plants, while 4% from hydroelectric power plants in 2015. ▸

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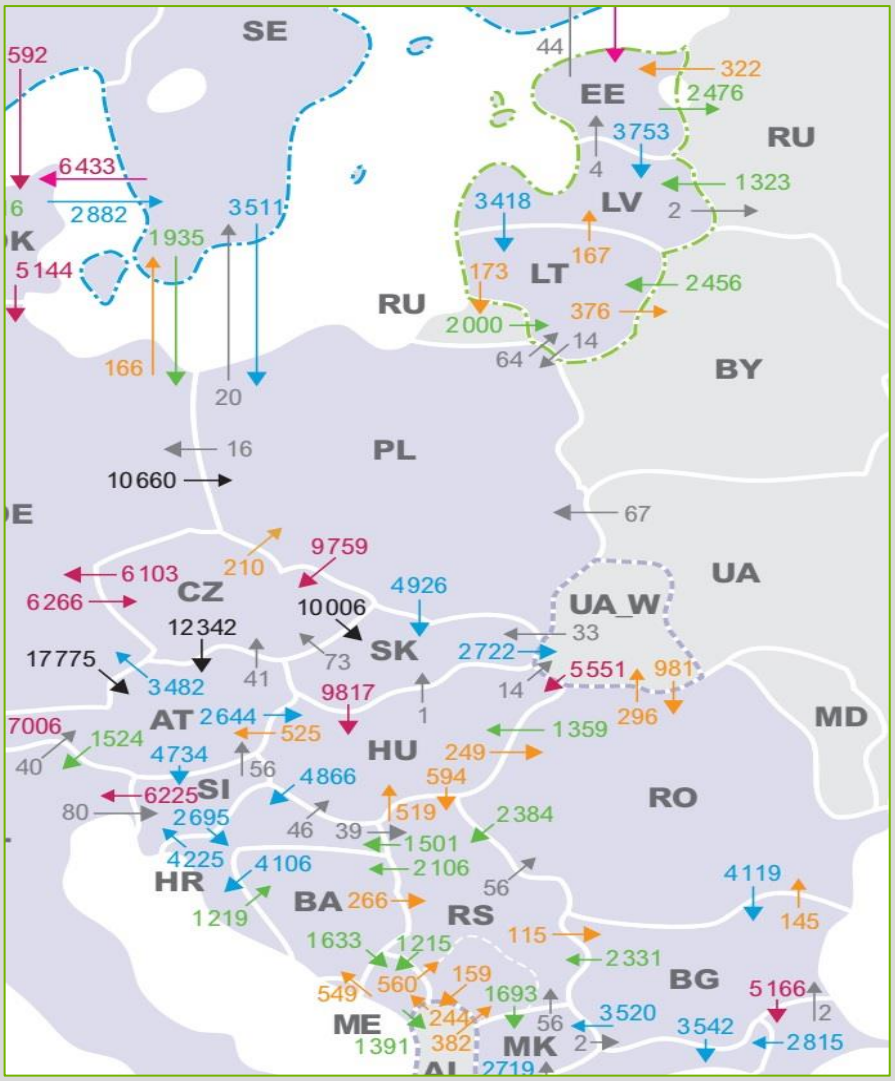
Figure 7. Physical electricity flows (GWh) in CEE, 2015



Source: Entso-E

As the EU-11 economies grow and begin to catch up with their Western partners, it is expected that electricity consumption in the region will rise in the coming years. Power grids in CEE region are usually outdated with several important missing links. V4 countries have very well developed cross-border infrastructure. EU interconnection goal (at least 10% of the installed electricity production capacity by 2020) has already been reached by Slovakia (61%), Hungary (29%) and the Czech Republic (17%), while Poland (less then 10%) has finalised in 2015 its LitPol DC interconnection with Lithuania (different synchronized system). Ukraine, due to having a different electricity system, is poorly connected with EU countries from the CEE region.

Currently, only the so called Burshtyn energy island, separated from the main part of the energy system of Ukraine, is functioning in the mode of parallel operation with Entso-E and is able to provide 650 MW of supplies to the EU. Meanwhile, the Baltic States still remain within the IPS/UPS power system of the former Soviet Union. The EU-11 power sector has generally lower efficiency levels compared to the EU-15. It experiences higher losses in both energy production and consumption than in the rest of the EU. Distribution losses in the EU-11 amount to nearly 10% whilst the comparable statistic is 7% within the EU-15. Losses incurred during the electricity production phase are also higher in the EU-11 with around 8% compared to 6.5% for the EU-15.

While transmission losses amount to 9% of total net production of electricity in the EU-11, they only account for 6% in the EU-15 economies. ▸

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Nevertheless it is also worth noting that a generally high share of fossil fuels is a key difference between CEE and the other EU member states. Fossil fuels accounted for 64% of power generation in the EU-11, whereas only 43% for power generation in the EU-15.

Consequently, higher carbon intensity and a relatively low energy efficiency of industrial production and transmission, makes energy system transformation a much bigger challenge for the EU-11 as compared to the EU-15.

Achievements and challenges for security of electricity sector

The main achievement in the CEE region for increasing the energy security of power sectors is the successful establishment of market coupling between the Czech Republic, Slovakia, Hungary and Romania (4M MC). The project started from the coupling of day-ahead electricity markets between the Czech Republic and Slovakia in 2009. Hungary joined in 2012 followed by Romania in 2014. Transmission system operators (ČEPS, SEPS, MAVIR and Transelectrica) together with power exchanges (OTE, OKTE, HUPX and OPCOM) supported by national energy regulators collaborate to develop and implement all necessary solutions which ensure technical and procedural compatibility of 4M MC with the targeted European solution, which is already implemented in other coupled European regions. Poland is coupled with the Nordic part of Europe via its SwePol undersea DC link. Market coupling intends a higher efficiency of trading and capacity allocation, which leads to a higher security of supply, higher liquidity and lower price volatility.

Another achievement is the trend of growing diversification of the power production portfolio of CEE countries, which, in general, increases power security in the long run. In fact, a recent assessment by the European Environment Agency showed that almost all CEE Member States are on track to achieve or exceed the levels of renewable energy in their energy mixes and all (except for Estonia) are on course to meet their targets on primary renewables energy consumption.

The share of growing renewables, however, translates into short-term risks and a decrease in power security. The key energy security challenge for Central Europe in the power sector are loop-flows phenomena that is unscheduled power flows across the borders of the CEE countries. They are an effect of congestions in the internal power grid of Germany, unable effectively transit electricity from renewable sources (mainly from wind farms in the north) to the south of Germany and further down to Austria. As a consequence, the power grids of Poland and the Czech Republic are more and more often used by these unscheduled flows. Also, they block a significant part of transmission capacities on the borders of the CEE countries. This, in turn, not only limits possibilities for trade, but also represents a major threat for stability of power grids. So far V4 were collaborating on this issues quite successfully and prepared joint study on the negative effects of the unscheduled loop flows (ČEPS, MAVIR, PSE and SEPS in 2013[6]) and presented common position to ACER, suggesting - as a measure to solve the problem – a split of the common bidding zone between Austria and Germany into two separated trading zones which was positively assessed by the agency.

Another challenge is modernisation of the power generation park and transmission lines, which is a precondition for long term power supply security. Most of the EU-11 power generation plants are old and there is a risk that in the mid-term perspective the power shortages, as experienced in Poland in summer 2015, could happen more often. It is important to note that because of the unscheduled loop flows blocking the Polish-German border, Poland was unable to import electricity at that moment in order to alleviate its balancing problem of the day. The CEE region is pursuing several important generation investments, inter alia in nuclear capacities in Slovakia and Hungary.

Poland is planning to build the first nuclear power plant, but developments are slow. It now attempts to develop and modernise its generation fleet by introducing the capacity market in order to secure its electricity market in medium term. The Czech Republic was also considering extending power capacities of NPP, but recently the project was frozen. The main challenge will be to expand power generation facilities in a transparent manner and to create conditions for financial profitability of the power sector. ▸

6. http://www.pse.pl/uploads/pliki/Unplanned_flows_in_the_CEE_region.pdf

CEEP ANALYSIS

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Conclusions

Energy markets in the CEE region are in the process of profound transformation. Gas markets from rigid, monopolistic, and rather isolated structures, are becoming more dynamic, competitive and integrated with neighbours. These changes are particularly visible in the V4 countries and Ukraine, but the whole CEE region is definitely moving in the same direction. The main achievement is higher interconnectivity allowing the above-mentioned countries to secure supplies in emergency situations.

The introduction of bi-directional flows on main pipelines, as well as some new infrastructural investments, have increased the region's resilience to potential supply disruptions. However, the diversification of sources in CEE, which is the cornerstone for long term energy security, is still missing.

The only investment which can guarantee access to completely new gas sources in CEE has been the Polish and Lithuanian LNG terminal as well as Polish project of the Northern Gate. Infrastructural bottlenecks and some missing parts on the North-South Corridor, prevent gas diversification across the region.

In turn, Nord Stream 2 project as well as increased access of Gazprom to OPAL pipeline as a result of European Commission decision, increase the risks of gas supply distortions to the CEE region and represent a challenge for use of current gas infrastructure as well as the legal constraints. The European Commission decision on OPAL pipeline increased the risk of supplies disruption on current routes and decreased the trust among CEE countries.

Therefore, the region should keep focusing on intensification of infrastructure development efforts enabling access of other than Russian gas to the region as the key precondition for functional regional market. The region should also do more to offer transparent and competitive gas storage services. Moreover, the countries should gradually withdraw from gas market distortion measures such as regulation of gas prices. This in the long run will bring new market actors and new investments, thus translating into higher energy security levels.

As far as electricity markets are concerned, the region should create attractive conditions to invest in generation capacities, as well as transmission and distribution lines. The priority task is an active involvement in a current debate over new electricity market design, along with new renewables and efficiency measures proposed in the winter package.

The region should speak with a strong and common voice in order to keep to the technology neutrality principle, and further the establishment of a level playing field for all generation technologies.

Declining wholesale electricity prices question the viability of the majority of existing conventional power plants, whilst they do not provide for the stability of electricity generation based on RES. The coal based generation faces mounting pressure (EU climate policy obligations) in Poland and the Czech Republic. Nuclear energy might face the same fate, if negative political attitudes prevail. Gas based electricity generation is apparent in Hungary. Taking the above-mentioned factors into consideration, we can observe a serious lack of generation capacity that is stable enough and can efficiently back-up the growing volume of intermittent RES.

Therefore, finding the right balance between short-term financial and market considerations on the one side, and a long-term vision for building a truly integrated and diversified region on the other, seems to be the key challenge to keep pace with infrastructural development. ▸

CEEP ANALYSIS

CONTINUED

CEEP key recommendations

Gas sector

- The most important challenge is to diversify the gas supplies to the region, not only by its routes, but first of all, the sources of supplies. This will allow the creation of a real internal gas market, where there is free competition between suppliers and a freedom of choice for customers.
- For instance, there is still a low number of such projects: Polish and Lithuanian LNG terminals serve as an example of how the new ways of supplying gas, can bring a decrease in its prices. The LNG terminal in Krk Island in Croatia, should be built without delay, in order to complete the connection between the Baltic and the Adriatic Seas.
- There is a need to further pursue the completion of the North South Corridor, in the promotion of which, CEEP has been active since 2014. The implementation of major investments in interconnections between the CEE countries on the North South axis has to be accelerated, so as to make it reality.
- The Polish project of bringing the gas from Norwegian Continental Shelf (NCS-Poland pipeline, including Baltic Pipe) could constitute a significant game changer in the CEE region. Once constructed, it will contribute significantly to the Energy Union objectives, contrary to other planned gas projects. Therefore it deserves an attention and support of the European institutions. CEEP stands to support this project as perceives it as one which can substantially change the gas market in the region due to diminishing a dominant position of Gazprom in the region.
- The European Commission should assist Central and Eastern Europe countries, in their efforts to build up a real gas market through technical assistance, but first and foremost, a financial one. CEEP calls, therefore, on the Commission to pay more attention to the development of the infrastructure in the region, and dedicate more financial assistance.
- There should be a clear and unequivocal assessment of the Nord Stream 2 project by the European institutions. This project is undoubtedly contradictory to the Energy Union's goals, whose main pillars are diversification of supplies, routes, and sources, as well as "increasing energy security, solidarity, and trust". Nord Stream 2 harms the EU's solidarity values and undermines the strategic partnership with Ukraine.
- The same approach should be pursued to the OPAL pipeline which constitutes the same threat for the CEE gas market (including Ukraine). The further exemption approved by the European Commission allowing Gazprom to increase access to the capacities of the OPAL pipeline is contrary to the Energy Union principles and its basis is legally doubtful. As such, it has been challenged in the court by Polish and most probably will be challenged by Ukrainian companies. ▸

CEEP ANALYSIS

CONTINUED

CEEP key recommendations

Power sector

- First of all, the Central European countries should address the loop flows phenomena, which significantly harms the transmission systems in the region, and seriously limits trading cross-border capacities, with increased risks of interconnectors overloading. The introduction of the first Phase Shifting Transformers on the Polish-German border is a step in the right direction. Therefore, CEEP considers that only a holistic regional approach, involving States, companies, and EU representatives, can resolve the problem.
- A proper market design for integrated energy markets of CEE countries, constitutes a strategic goal for energy co-operation in the region. However, the accompanying ambition should go beyond just the development of physical infrastructure and interconnections, and also include a regulatory framework. There is still a broad space in the field of harmonisation of regulatory policies which can be implemented in the region, in order to determine the proper functioning of the market. Ultimately, the regulatory side of electricity market reforms should follow the physics of electricity.
- The development of interconnectivity remains one of the main tasks for the region. However, setting the goals without considering market demand and the network constraints, could be harmful for the whole regional system of transmissions, and may result in stranded costs. Therefore, in CEEP's opinion, the proposed interconnectivity targets should be thoroughly analysed. Badly designed interconnectivity may negatively affect the electricity markets in CEE, given a limited ability of the interconnectors to transport the unscheduled loop flows. This could substantially influence the flows of energy in the Member States, making the whole system unstable.
- In this context, CEEP underlines the point that the security of supply in the electricity sector should take into account the different electricity mixes of the EU Member States, and it should also address the power availability for trade and market transactions.
- The significant problem for CEE countries in the mid-term perspective, is that of possible shortages of power, which could happen due to ageing infrastructure and too ambitious EU climate policy goals. Therefore, CEEP recommends the pursuit of a common regional study on capacity markets which can be a useful starting point for ensuring the security of supply. ■

CEEP
Central Europe Energy Partners

INTERVIEW

Márton SCHŐBERL: the success of the Energy Union rests on the ability to recognise common challenges

Márton SCHŐBERL
Director-General, Institute for Foreign Affairs and Trade, IFAT

How would you describe the overall situation of the electricity and natural gas markets in your country?

Natural gas demand has been decreasing since its peak in 2005, but still remains the dominant fuel in Hungary's energy-mix. The country does boast some domestic production: nonetheless, this mostly originates from mature fields. As a result, Hungary is characterised by a relatively high import dependency (approx. 80% in the case of natural gas), of which the Russian Federation is the primary supplier.

As for electricity markets: Hungarian electricity demand is expected to grow by approx. 1% per annum in the new few decades. Electricity generation is under the legal and technical oversight of the state-owned electricity company, MVM Hungarian Electricity. 45% of electricity production is covered by the Paks nuclear power plant located in central Hungary. Around one-fifth of electricity is imported from abroad and this has been on an upward trend in recent years.

Are the issues described above, specific to Hungary only, or are they valid for the entire Central and Eastern Europe (CEE) region?

All CEE countries have their own unique characteristics in their respective energy sectors, but some common traits should nonetheless be mentioned. One such example is that, per capita energy consumption in CEE countries, tends to fall below the EU or OECD average, but is likely to gradually grow over the coming decades. Another factor is that these countries are usually dependent upon imports to a large degree, and traditionally, these fossil fuel imports often come from Russia, and/or other countries of the former Soviet Union. Consequently, a third common characteristic is the important political role that questions pertaining to energy security play in these countries, an issue which came to the forefront following the 2006 and 2009 Ukraine-Russia gas crises.

What are the regional infrastructure needs, and how can the necessary investments be attracted, in order to develop a more resilient CEE energy market?

The CEE countries, and the Visegrad States, in particular, have made significant advances in terms of gas interconnectivity in the past few years. Most cross-border infrastructural links have already been constructed, although some areas still require upgrading, or reverse flow ensured. Historically, most of the energy industry infrastructure in our part of Europe was oriented in an east-west direction; now, is the chance to build more north-south linkages, so that we can improve the security of energy supply.

> Hungarian electricity demand is expected to grow by approx. 1% per annum

Existing problems hindering these developments, for the time being, include uncoordinated national policies, the lack of a common political position on some issues, along with possible uncertainties regarding the business and legal environments.

What are the main natural gas and electricity infrastructure projects of the country?

Much has been done over the past few years, in the natural gas sector, to improve energy security: Hungary's ▸

INTERVIEW

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Márton SCHŐBERL: the success of the Energy Union rests on the ability to recognise common challenges

Márton SCHŐBERL
Director-General, Institute for Foreign Affairs and Trade, IFAT

natural gas network is now connected to that of almost all its neighbours. Interconnectors between Hungary and Romania (2010), and with Croatia (2011), were constructed, and Hungary enabled the reverse flow of gas supplies to Ukraine in 2013. Two milestones were achieved in 2015: an inter-governmental agreement with Bulgaria, Slovakia and Romania was signed on gas transmission network integration, whereas the Central Eastern and South-Eastern Europe Gas Connectivity (CESEC) initiative was launched, with the support of the European Commission.

The most important recent development in the Hungarian electricity sector has undoubtedly been the planned expansion of the Paks nuclear power plant: two additional nuclear reactors will be constructed by Rosatom with a loan from the Russian government. The first new unit is expected to come online in the period, 2023-2025.

How can co-operation at the CEE level contribute to the faster elimination of these challenges, to ensure sufficient electricity and natural gas supply in Central and Eastern Europe?

A key first step, the joint realisation of the national security importance of energy security, has already been taken. Any future co-operation could ideally take place on two levels. On a political level, it would be useful if the countries of the region agreed on common standpoints, on issues such as energy security, infrastructural development or climate change adaptation/mitigation. On a second, technical level, such co-operation would probably entail the dismantling of existing physical or regulatory barriers between markets. For the time being, the most likely framework for such efforts is the EU's Energy Union, a plan, to which the entire CEE region (including both the Visegrad bloc and Ukraine) is vital.

According to you, what can make the Energy Union initiative a genuine success?

The EU Energy Union has several (at times, somewhat contradictory) aims: to make energy affordable, environmentally sustainable, and secure all sources at the same time. This includes a greater market share for new technologies (i.e. renewable energy) and the upgrading of existing infrastructure. The countries of the Central and Eastern European region, including Hungary, could play a key role in both these respects.

Overall, the success of the Energy Union ultimately rests on the Member States' ability to recognise common challenges (i.e. climate change, energy security), and to put aside individual national interests, for the sake of working together to achieve long-term, sustainable results. ■

Ambassador Márton SCHŐBERL
Director-General of the Institute for Foreign Affairs and Trade (Budapest, Hungary)
Ambassador Schőberl graduated from the Faculty of Humanities at Pázmány Péter Catholic University. He has worked as a professional expert in the IT sector, and was Head of the Department of Asset Supervision for Higher Education in the Hungarian Ministry for National Development. He was appointed Director-General of IFAT in December, 2014. Ambassador Schőberl speaks English, German and Italian.

INTERVIEW

Alexander DULEBA: The future of the Energy Union is in the hands of the Member States

Alexander DULEBA
Director of the Research Centre of the Slovak Foreign Policy Association (RC SFPA)

How would you describe the overall situation of the electricity and natural gas markets in your country?

In terms of access of consumers to natural gas and electricity, as well as competition, the Slovak energy market might be characterised as a relatively functioning one.

There are many retail companies that are licensed to deliver their services in distribution, and supply electricity and natural gas to end consumers. Much has been done in the field of the external security of natural gas supply, after the gas crisis in 2009. When it comes to electricity, Slovakia has a balanced nexus between domestic generation and consumption.

However, the main ongoing problem concerns regulatory policy. The share of regulated segments, in terms of the structure of price on electricity, is higher than market ones. As a result, the latter creates a window of opportunity for governmental investments, especially in the field of the use of renewables and energy efficiency measures.

On the other hand, it undermines private and market driven investments in the energy sector. The key question is about the sustainability of the current regulatory regime, including its impacts on generation capacities and energy infrastructure, in the long-term perspective.

Are the issues described above, specific to Slovakia only, or are they valid for the entire Central and Eastern Europe (CEE) region?

CEE countries face similar problems in the field of the external security of natural gas supply; however, they are quite different as far as a regulatory framework is concerned.

There are two main reasons which might help to explain the above differences: first, the different energy mixes of CEE countries, and second, the different political will of CEE governments, when it comes to de-regulation of their national energy markets.

Nevertheless, should we move towards a regional energy market, our governments have to show a stronger political will to co-operate, in particular, within the field of the harmonisation of regulatory policies.

What are the regional infrastructure needs, and how can the necessary investments be attracted, in order to develop a more resilient CEE energy market?

Another crucial step towards the creation of an integrated regional gas market between the V4 countries, following the agreement of the V4 Prime Ministers, in 2012, is the completion of the Polish-Slovak and Polish-Czech gas interconnectors.

> The Energy Union might become a mission impossible without the political will of the Member States

When it comes to the field of electricity, priority should be given to strengthening cross-border infrastructure within CZ-SK-HU-RO market-coupling, together with interconnections with neighbouring countries, that will allow for future expansion of the CEE day ahead market zone, including Ukraine and Moldova.

The main sources of funding for infrastructure projects, in the region so far, are the EU programmes. To make those projects more attractive, also for commercial investors, CEE countries should achieve real progress in integration of their national energy markets. ▸

INTERVIEW

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Alexander DULEBA: The future of the Energy Union is in the hands of the Member States

Alexander DULEBA
Director of the Research Centre of the Slovak Foreign Policy Association (RC SFPA)

What are the main natural gas and electricity infrastructure projects of the country? What factors may jeopardise their implementation plans?

In the case of Slovakia, I see the following two infrastructure projects as the priority ones: a natural gas interconnector with Poland, and strengthening electricity transmission capacity with Hungary. A gas interconnector with Poland will finalise the implementation of a series of security measures adopted by the Slovak government after the 2009 gas crisis, including putting in place gas interconnections with all neighboring countries. In addition, a Polish-Slovak interconnector is central to the whole North-South gas corridor in CEE.

Strengthening electricity transmission capacity towards Hungary is important for Slovakia, in terms of getting more robust access to Southern European markets. There are many factors which might jeopardize the implementation of the above two projects, not to mention other important infrastructure projects in the region.

However, I see the eventual failure of CEE governments to work together on the creation of a regional energy market, as being the ultimate, crucial factor.

How can co-operation at the CEE level contribute to the faster elimination of these challenges, to ensure sufficient electricity and natural gas supply in Central and Eastern Europe?

The V4 HLGES proved to be very efficient platform for achieving regional agreement on the development of priority interconnectors that, significantly strengthened the security of gas supply in the region, in comparison with the pre-2009 gas crisis situation, and became physical fundamentals for a regional energy market in the future.

Maybe it is time to re-think, and consequently, upgrade the V4 HLGES institutional framework, including its political level.

According to you, what can make the Energy Union initiative a genuine success?

The future of the Energy Union initiative is in the hands of the governments of the Member States, even though its main driver is the European Commission. The most ambitious goal of the Energy Union is the creation of the single energy market. It might become a mission impossible without the political will of the Member States to share their national competencies in the energy sector. ■

Alexander Duleba
Director of the Research Centre of the Slovak Foreign Policy Association (RC SFPA)
He obtained a PhD degree in Political Science from the Institute for Political Sciences of the Slovak Academy of Sciences in 1998, and the Associate Prof. (Doc.) degree from the Comenius University in Bratislava in 2009. From May 1993 until August 1995, he was an analyst with the Slovak Institute for International Studies at the Ministry of Foreign Affairs of the Slovak Republic. From September 1995, he has worked as a research fellow for the RC SFPA; and in May 2000, he became its Director, and simultaneously, the head of the Centre's *Eastern Europe* research programme. In May 2010, he also became a lecturer at the Institute of Political Science of Presov University.

INTERVIEW

Christopher HARTWELL: There is very little new policy in the Energy Union

Christopher HARTWELL
President of CASE

How would you describe the overall situation of the electricity and natural gas markets in your country?

In relation to gas, although the market has been growing at a stable and fairly impressive rate, it is dominated by one supplier, meaning a lack of competition and incentives for improvement. Indeed, if we look at the actual number of customers who have desired a change in their gas supplier, as of 2016, only 65,000 have actually done so.

There is hope for the future, as there are a large number of potential natural gas suppliers in the wings: 165 companies already hold a license to sell and trade in gaseous fuels in Poland. However, their small size and lack of reach into the mar-ket, means that the "liberalisation" of the gas sector has been mainly an accounting exercise, rather than true devolution of power to the market.

Turning to electricity, Poland has also been increasing its production, and especially its generation facilities, but this has not translated into increased security of supply.

When it comes to reliability and availability of energy sources, a large part of the power infrastructure is not available, due to mismatches between capacity and de-mand, whilst large portions of the grid have been put on stand-by mode. This means there will be time inconsistency problems, should the excess capacity ever need to be called upon.

Are the issues described above, specific to the Czech Republic only, or are they valid for the entire Central and Eastern Europe (CEE) region?

Although Poland does not have to deal with obsolete nuclear stations, like other V4 countries, the issue of ageing power plants is quite common for the whole region, and especially in Poland.

In relation to gas, the V4 countries as a whole, suffer from being relatively small and largely segregated markets. They also depend greatly on a single source, Russia, for external supplies, and markets are dominated by state-owned or state-guaranteed mega-firms. In that sense, Poland's situation in the gas market mirrors much of the V4.

The electricity infrastructure in the V4 is still more integrated than the gas one, and in relatively good shape, even though parts of the grid need a facelift.

As in the rest of Europe, the greatest challenge will come from the need to integrate larger volumes of renewable energy sources into the grid.

What are the regional infrastructure needs, and how can the necessary investments be attracted, in order to develop a more resilient CEE energy market?

While CEE countries have achieved significant progress towards meeting their specific national energy efficiency targets, they are still playing catch-up with Western Europe. Moreover, there is a sense of misguided priorities in the region, with a focus on interconnectors and reverse flows between countries, rather than an emphasis on one of the true problems in the region, energy loss due to theft, waste, or dilapidated infrastructure. Much needs to be done to improve energy savings by end customers, lowering energy consumption by improving customers' equipment, and trying to minimise losses in the transmission and distribution of electricity, heat, and gas.

New proposals to attract investments in energy infrastructure in Poland, are necessary, due to the current political situation in the country; further expansion of financial assistance from the European Commission is politically unfeasible, while outright public financing of infrastructure is a questionable proposition, economically inefficient, and impossible to undertake in the disastrous fiscal situation in which Poland finds itself. A solution may be a greater role for the European Investment Bank, or subsidised/concessional interest rates, offered (meaning greater rates of return for specific projects) in order to attract pension funds or institutional investors (a model that has been applied in individual Member States in the past). ▸

INTERVIEW

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Christopher HARTWELL: There is very little new policy in the Energy Union

Christopher HARTWELL
President of CASE

What are the main natural gas and electricity infrastructure projects of the country? What factors may jeopardise their implementation plans?

The gas market in Poland is no longer insular, thanks to an extension of gas infrastruc-ture with the new LNG terminal in Świnoujście, and improved import capabilities at Mallnow reverse flow station. However, the change of government in 2015, has re-sulted in a change of focus in Poland's energy sector, with coal being the govern-ment's main source of attention. . This is not entirely surprising, as coal provides jobs to hundreds of thousands of people, and is a resource in abundance in Poland (i.e. requiring no imports or energy dependence). According to the Polish Energy Minister, the next two years will be dedicated to "saving" and "developing" the Polish mining industry, meaning a substantial allocation of government funding to coal, and away from other infrastructure needs.

As an example of the scale of this spending, by 2018, the closing of problematic mines could cost up to PLN 7 billion, and Poland has already spent more than one-third of that amount, including the money meant for the Material Reserves Agency and the Fund for Restructuring. Public-owned companies have expended an addition-al PLN 2.7 billion to rescue the Polish Mining Group. Of course, the government does not regard this as an expenditure, but as an investment; however, neglecting other pressing energies for the long-term, is likely to result in diminished energy security.

How can co-operation at the CEE level contribute to the faster elimination of these challenges, to ensure sufficient electricity and natural gas supply in Central and Eastern Europe?

In the first instance, the V4 should speak with one voice in international fora, whether it be within the EU, in broader energy gatherings, the UN, or elsewhere. Such co-ordination is especially true for the gas sector.

A goal of this CEE co-operation would then be to ensure that as many CEE projects as possible, make it to the final European list of ideas to be funded from EU sources. Governments from the region should also co-operate closely with local transmission system operators, and improve their governing legislation on these markets, allowing for true competition.

Such encouragement of the private sector may also involve prioritising projects, which enhance the diversification of supply routes ahead of 'green' projects, and supporting proposals aimed at preserving and increasing gas volumes transported through the transit network of the V4 countries. To this end, they should also consider a joint effort to make gas underground reservoirs eligible for receiving PCI status. Most importantly, they should agree on what a liberalised gas market in CEE should look like: where are the opportunities, what are the incentives, what are the challenges, and how can the private sector be involved to overcome them?

According to you, what can make the Energy Union initiative a genuine success?

There is very little new policy in the Energy Union initiative, which is a shame, given the importance of the topic. Moreover, the EC seems ambiguous about the future role of natural gas in the energy-mix of Europe: it has indicated that it does not want to increase the share of gas within the supply of all energy sources in the EU, but it does want to reduce the share of Russian resources. Somewhat schizophrenically, it also wants more investments in gas infrastructure - but who wants to invest in a commodity without prospects for growth? Does the EC expect investments in energy infrastructure in CEE to be made without additional incentives? Why should a clean energy such as natural gas have its potential artificially capped?

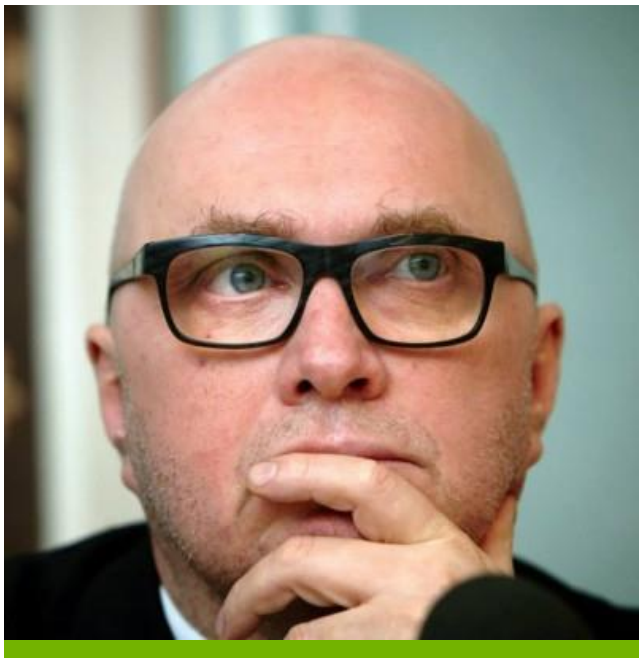
If EU leaders want natural gas to play a prominent role in its fuel mix, and given the renewables agenda, its focus should be on completing the internal market and creating the proper incentives (i.e. liberalising), rather than quarrelling about one external supplier. Such a political debate is distant from market realities. ■

Christopher Hartwell
President of CASE
Christopher Hartwell (PhD) has over 20 years of experience in research projects around the world. Currently, President of CASE in Warsaw, he holds a PhD from the Warsaw School of Economics and a Master's Degree in Public Policy from Harvard. He is also the author of 'Institutional Barriers in the Transition to Market' (Palgrave Macmillan, 2013) and 'Two Roads Diverge: The Transition Experience of Poland and Ukraine' (Cambridge University Press, 2016).

INTERVIEW

Jan MACHACEK: The Energy Union can only succeed if it is approached rationally

Jan MACHACEK
Chairman of the Institute for Politics and Society



How would you describe the overall situation of the electricity and natural gas markets in your country?

The Czech electricity and gas markets are arguably the most liberalised of the four V4 countries' energy markets. Retail markets have been fully liberalised for all electricity customers, including households, since 2006, and the gas market followed suit in 2007.

There are no price controls on the commodity retail prices in either of the markets. Retail gas and electricity prices are generally lower than in the EU-15, and more or less on a par with their counterparts in the other V4 countries. There seems to be no strong evidence that retail price regulation systematically leads to lower retail prices, whilst liberalisation appears to allow for more customer choice.

What are the regional infrastructure needs, and how can the necessary investments be attracted, in order to develop a more resilient CEE energy market?

Electricity: Transborder connections are at a good level, based on the common history of CEE countries in the former Eastern bloc.

The V4 countries, and especially their energy regulators, need to develop a strong theoretical and practical understanding of how the electricity market works, something which is not always present. Gas: Poland, which is by far the most invested in the idea, lacks any significant interconnection with the rest of the group.

Without the necessary infrastructure between Poland, the Czech Republic, and/or Slovakia, the common V4 gas market cannot operate in any meaningful way. The political representations in all the four V4 countries claim to fully support the idea, but this is not at all matched at the level of the actual decision-makers, most notably the NRAs.

What are the main natural gas and electricity infrastructure projects of the country? What factors may jeopardise their implementation plans?

Czech gas transmission and distribution networks are not in need of large reinforcement or new project investments. The recent problems with some of the gas PCI projects testify to that. The Stork II and BACI projects offer little added value to the Czech market and customers, and their selection for PCI status, showed poor project assessment on the part of the Czech authorities.

> We may see a return of much more national, command-and-control-like and less economically efficient and secure energy systems

The electricity networks are a different story. The state-owned TSO face very few financial constraints, and unless the government, significantly changes its dividend policy, which seems unlikely, this will also remain the case in the future. The basic problem during the construction of new lines is, in particular, the excessive administrative burden. ▸

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Jan MACHACEK: The Energy Union can only succeed if it is approached rationally

Jan Machacek
Chairman of the Institute for Politics and Society

Local distributors have problems with purchasing land for new construction sites. The problem will be resolved only by new legislation about expropriation in public interest. Electricity lines are arguably even more difficult to build than gas infrastructures.

How can co-operation at the CEE level contribute to the faster elimination of these challenges, to ensure sufficient electricity and natural gas supply in Central and Eastern Europe?

The Czech Republic, and to a limited extent, also Slovakia and Hungary, can, due to sufficient transmission capacity, source their gas supplies from the German market. Poland, due to more limited interconnection with Germany, cannot really benefit from this option. That is probably the main reason Poland has been the main proponent of the idea to integrate the V4 gas markets.

At any rate, this solution would also benefit the other three V4 countries, not least, because it would reduce their exposure to the German market, which is itself, not overly liquid and is quite fragmented, and more importantly, because of changes in German regulatory and foreign policy.

On the electricity side, there is no denying that the CEE countries need new infrastructures to cater for the expected increase in consumption, and to allow for higher flexibility in tomorrow's system, which will be characterised by more intermittency, and longer distances between load and generation.

According to you, what can make the Energy Union initiative a genuine success?

The European Energy Union can only succeed if it is approached rationally. That means ensuring that the Energy Union project would be spread over a longer period of time, i.e. 15-20 years, and with support for RES reduced, funds for science and research would be re-directed into the field of conventional fuels and resources, etc. On the other hand, without a much-improved European institutional framework, the internal energy market is either going to stop its progress (which would be the safer option), or is going to carry on with a very unstable footing, which may lead to very dangerous outcomes, in terms of security of supply. Either way, it is likely to contract over time, and we may yet see a return of much more national, more command-and-control-like, and ultimately, less economically efficient and secure energy systems. ■

Jan Machacek
Chairman of the Institute for Politics and Society
Jan Machacek is a leading Czech commentator and an analyst of political, economic, European and geopolitical issues. Currently, he publishes regular columns in the daily newspaper, 'Lidove noviny', and he writes his daily column, 'Monitor', on its internet version. He also provides expert analysis for Czech Radio and TV stations. Jan Machacek is also well-known as a musician and former dissident. He currently serves as Chairman of the Institute for Politics and Society, a Prague-based think tank.

INSTITUTE FOR POLITICS AND SOCIETY

INTERVIEW

Anatoliy RACHOK: A successful Energy Union will bring consistent, comprehensive, but not selective compliance

Anatoliy RACHOK
Razumkov Centre's General Director

How would you describe the overall situation of the electricity and natural gas markets in your country?

Over the past three years, the Ukrainian energy market has been undergoing a deep transformation. The reform covers all major sectors of the energy market: natural gas and electricity. The adoption of the Natural Gas Market Law in 2015, was an important event in the development of the natural gas market.

The Law established the need to unbundle regional gas companies by separating the regional gas network operator functions from the natural gas vendor functions; this process should be completed by 2016. As far as the Electricity market is concerned, the Verkhovna Rada of Ukraine adopted the Law "On the National Commission for state regulation of energy and utilities", and the draft Law "On the electricity market in Ukraine" had its first reading in September, 2016.

A fundamental transformation of the electricity market is expected by establishing the organisational tools used in EU countries, and price liberalisation within the next 2 years. Since 2015, the Government introduced a mechanism for reimbursing the cost of housing and utility services for households with insufficient revenues, and those classified as vulnerable consumers.

Are the issues described above, specific to Ukraine only, or are they valid for the entire Central and Eastern Europe (CEE) region?

Ukraine is now implementing energy sector reforms, which most Central European countries completed about 15-20 years ago. Nevertheless, there are several typical issues related to improving the functioning of energy markets. A major one is the need to ensure a sufficient level of competition in major segments of the energy market.

In 2015-2016, more than ten companies from Europe, including ENGIE, Statoil, E.ON and others, provided the wholesale supplies of natural gas to Ukraine. Thus, according to the criteria presented in the Directive 2009/73/EC, Ukraine can be classified as a country with an open gas market since 2015.

At the same time, the presence of natural monopolies with about 80% of the total amount of electricity production, controlled by only two companies – Energoatom (56%) and DTEK (24%) is a specific issue in the domestic electricity market. This factor requires rigid price and tariff regulation by the national energy regulator.

What are the regional infrastructure needs, and how can the necessary investments be attracted, in order to develop a more resilient CEE energy market?

Ukraine is characterised by a high level of losses in transportation and distribution of natural gas, and especially, electricity in distribution networks, and high energy consumption for the internal needs of the energy sector itself. The high level of energy losses is caused by their long period of exploitation, limited financial resources for reconstruction, modernisation, and the new construction of distribution grids. In order to remedy this situation, Ukraine primarily relies on its own reserves, introducing new pricing principles to the distribution of energy goods, based on application of the RAB approach. It is expected that such measures will form additional incentives for attracting sufficient investments to ensure the necessary modernisation of network grids. The infrastructure of the main transportation of natural gas and electricity is in much better condition and smoothly executes its functions, thanks to the constant attention and effort from the TSOs Ukrtransgaz and Ukrenergo, in order to ensure the current repair, upgrading, and even developing their transportation networks, including attraction of loans from European financial institutions.

What are the main natural gas and electricity infrastructure projects of the country? What factors may jeopardise their implementation plans?

Renovation is envisaged for several sections of the linear part of pipelines, and a number of compressor and gas-metering stations on the main gas pipelines: Soyuz, Urengoy–Pomary–Uzhgorod; and Progress, Yelets–Kremenchuk–Ananyiv–Izmail. Ukraine is planning the construction of the Drozdovychy–Germanovychy main gas interconnecting pipeline. ▸

INTERVIEW

CONTINUED

Anatoliy RACHOK: A successful Energy Union will bring consistent, comprehensive, but not selective compliance

Anatoliy RACHOK
Razumkov Centre's General Director

This joint Ukrainian-Polish pipeline must be an organic supplement to the Polish Northern Gate project, which is to bring Norwegian gas to Central Europe. This project, together with the Eastring project, and considering the capabilities of Ukraine's GTS with its network of underground gas storage facilities in the western part of the country, has now gained a new window of opportunity.

Currently, NNEGC "Energoatom" and its European partners are developing the "Energy Bridge" project for power supply, through the temporarily "frozen" Khmelnytsky NPP-Rzeszow (Poland) overhead power transmission line that will create a financial mechanism for the construction of Units 3 and 4 of the Khmelnytsky NPP, with a nominal capacity of 2000 MW-e. The maintenance and development of Ukrainian GTS is under threat of being seen as creating an alternative, and avoiding Ukrainian routes of natural gas supply from Russia to EU countries. In this context, the European Commission, unexpectedly, issued its decision on the 28th of October, 2016, related to extending capacity utilisation by the Russian gas monopoly, Gazprom, on the OPAL main gas pipeline.

How can co-operation at the CEE level contribute to the faster elimination of these challenges, to ensure sufficient electricity and natural gas supply in Central and Eastern Europe?

From the point of view of Ukrainian officials and internationally recognised energy experts, this decision will allow Gazprom to start an active campaign for completion of Nord Stream 2. According to NJSC "Naftogaz of Ukraine", as a consequence of this decision regarding the Opal pipeline, the company may lose up to EUR 380 million of revenue, annually.

An important argument against the decision of the European Commission, is the need to adhere to the key goals and objectives set out during the establishment of the Energy Community. These goals include creating an integrated market for natural gas, increasing the reliability of supplies, and developing competition in the gas market. Meanwhile, members of the Energy Community must refrain from any actions that could threaten the achievement of the organisation`s objectives.

Allowing expansion of the market position of a monopoly on the European gas market, the Commission must provide convincing arguments, regarding how it will affect the reliability of gas supplies and competition in the market, not only in the context of the interests of Ukraine, Poland, or Slovakia, but also within the entire single European energy market.

According to you, what can make the Energy Union initiative a genuine success?

In our opinion, a genuine success of the Energy Union will bring consistent, comprehensive, but not selective compliance, with the rules and requirements of EU directives and regulations, and the Third Energy Package, in particular. In this context, Ukraine calls for the EU and Energy Community to consider Ukraine's interests, when formulating decisions related to the development of the routes of energy resources supply, so that reliability is ensured, along with maintenance of the appropriate level of competition for the entire single European energy market. ■

Anatoliy RACHOK
Razumkov Centre's General Director

Mr. Rachok graduated from National Taras Shevchenko University, Kiev, Ukraine. Since December, 1999, he has been Razumkov Centre's General Director.
The Razumkov Centre occupies 60th position in Top Think Tanks Worldwide and 5th position in Think Tanks in Central and Eastern Europe's ranking for 2015, according to the results of a University of Pennsylvania rating study (2016).

Central Europe Energy Partners represents the interests of the energy and energy-intensive companies from Central Europe in order to strengthen the region's energy security within the framework of the EU energy and energy security policy.

It is the first major body to represent the energy sector companies from the region at the EU level.

CEEP is an international non-profit association with its headquarters in Brussels.

Central Europe needs to pursue its economic growth and this means access to low energy prices. As CEEP members, we stand for an Energy Union based on mutual trust and solidarity. There are no national solutions to the challenges we are confronted with.

Eryk Kłossowski
Chairman of the Board of Directors, CEEP

Major Tasks

- To increase the energy security of Central Europe, as well as the European Union as a whole;
- To strengthen the idea of energy solidarity within the Energy Union. We do believe that only common activities of all EU Member States could be successful in enhancing the energy security of Europe;
- To build relations and facilitate contacts between member organisations and EU institutions and agencies, individual representatives and associations of energy and energy-intensive sector companies, as well as international energy sector think-tanks and lobbies.

CEEP is participating in the activities of many EU institutions

In the European Commission:
- European Refining Forum
- Civil Society Dialogue
- Lech Energy Forum

In the European Parliament:
- Roundtable on Coal (renamed in 2015: European Roundtable on Coal and Steel)
- ITRE and ENVI Committees
- Hearings and Workshops

Competition. Co-operation. Solidarity.

CEEP's mission is convergent with and supports the concept of the Energy Union which is aiming at ensuring Europe with secure, affordable and climate-friendly energy.

CEEP is independent, private, international, not affiliated to any government, political party or European institution.

Working Groups active in 2016

- Coal and Lignite
- Gas and Oil
- Renewables
- Fundraising
- TTIP
- Electrical Energy

Members of Central Europe Energy Partners

ACHEMA, ArcelorMittal, Clifford Chance, Grupa Azoty, HEP, KGHM, LOTOS, LITGRID, PERN, Sumy NPO, Polish Higher Education - Business Forum, PSE, SI POWER, WARDYNSKI & WSPÓLNICY

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22
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16
member companies and organisations

28
press releases distributed by CEEP

75
conferences attended by CEEP representatives

147
CEEP followers on LinkedIn

200
articles and analyses in the CEEP Report

306
CEEP followers on Twitter

575
articles on CEEP in international press

Our recent activities and meetings

ETS and what it means for Central and Eastern Europe

Central Europe Energy Partners and Fertilizers Europe together with Mr. Marian Jean Marinescu, MEP, organised a dinner-debate on "The ETS reform and what it means for Central and Eastern Europe.

Mr. Christian Holzleitner, Policy Advisor to the Director-General for Climate Action was a keynote speaker on behalf of the European Commission.

Bridging Europe's energy divide – How to link Central and Western Europe?

The 5th edition of the '29+1' Annual Energy Summit was organised by Central Europe Energy Partners in co-operation with GLOBSEC, on October the 27th–28th, in Bratislava. The Bratislava Memorandum was handed to Commissioner Šefčovič on this occasion and underlined that the Energy Union should be built on mutual trust and solidarity.

First Central European Day of Energy (CEDE)

The first CEDE event will provide a comprehensive information concerning the Central European (CE) energy sectors. We aim to establish a forum for useful networking, discussing energy infrastructure issues, especially in relation to North-South Interconnections in the CE region, and linking the EU with Eastern countries, such as Ukraine.

At Central Europe Energy Partners (CEEP)

we make energy producers and consumers from **Central Europe speak with one voice**

€30 billion

aggregated annual income of the current CEEP members

200 thousand

total number of employees of the current CEEP members

CEEP
Central Europe Energy Partners

We are more than just a think-tank or Europe's energy policy watchdog

As a CEEP member, you are part of companies, universities and scientific institutions, originating from six countries from Central Europe

What are your benefits of CEEP membership?

Expertise

Get exclusive access to high-quality reports and analyses on Europe's energy market

Our recent report on the North–South Corridor has made a real difference in the understanding of the EU's energy challenges

Networking

Discuss your issues with EU decision makers and policy regulators

Our annual 29+1 roundtable, closed to the media, provides a platform for discussion between CEEP members and the EU's Energy Commissioner

Visibility

Collaborate with EU regulatory institutions and energy organisations

Our conferences, debates and high-profile meetings, make the voice of CEEP members heard in the EU

Information

Obtain the current, accurate and timely information that ensures your proper decisions

Our monthly CEEP Report, as well as memos and position papers, provide you with indispensable sources of knowledge

Become a CEEP member

and strengthen the idea of energy solidarity within the European Union!

www.ceep.be
Transparency Register No.
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Our recent papers and reports

Rokas Masiulis on Lithuania's energy security

Lithuania's energy situation changed considerably after the Klaipeda terminal was launched. Gas prices for industrial consumers are now 40% lower than before the terminal's completion.

Lithuania's Minister of Energy, Rokas Masiulis, talked to the CEEP Report about his country's methods of raising its energy security.

Jerzy Buzek on the challenges of the Energy Union

Secure, cheaper and cleaner energy is a challenge which no EU Member State is capable of solving separately.

Prof. Jerzy Buzek, Chairman of the ITRE Committee (EP), talked to the CEEP Report about his vision on the Energy Union, what should be the priorities for the coming months and what this project means for the industry.

Making it happen.

Paving the way for the Central European North-South Infrastructure Corridor

The Central European North-South Infrastructure Corridor is a key enabler for completing the European integration process by bolstering the connectivity, competitiveness and security of the EU- 11 and the European Union overall. Successful implementation of the Corridor would be a historical milestone in European integration.

CEEP

Central Europe Energy Partners (CEEP) represents the interests of the energy and energy-intensive companies from Central Europe (EU-11) in order to strengthen the region's energy security within the framework of a common EU energy and energy security policy. It is the first major body to represent the widely understood Central European energy sector (coal, gas, oil, renewables, nuclear, grids), and energy-intensive industries such as steel and chemicals, etc. at the EU level.

CEEP is an independent, private, international non-profit association with its' headquarters in Brussels (Belgium). We are not affiliated to any government, political party, or European institution.

CEEP's Major Tasks:

- To increase the energy security of Central Europe, as well as the European Union, as a whole.
- To strengthen the idea of energy solidarity within the Energy Union. We do believe that only the common activities of all EU Member States can be successful in enhancing Europe's energy security.
- To build relations and facilitate contacts between Member organisations and EU bodies and agencies, individual representatives, and associations of companies from the energy and energy-intensive sectors, as well as international think-tanks and lobbies from these sectors.

For further information on CEEP membership and CEEP activities please contact:

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Follow CEEP on Twitter at @CEEP_energy. Reply, re-tweet, mark as favourite, join the debate!

Engage with CEEP on LinkedIn and contribute to shaping a network of energy professionals!