

TRANSPARENT GOVERNANCE FOR GREATER ENERGY SECURITY IN CEE

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The CEE energy security framework

The national and regional energy security of Central and Eastern European (CEE) countries has become a hot topic of discussion in the EU recently, focusing the attention of experts, policy makers, and the general public on ongoing and future energy projects but also on the features of energy governance in these countries. The interruption of gas supplies to Europe as a result of the Russian-Ukrainian pricing dispute in 2009, the continuing Russian-Ukrainian crisis after the annexation of Crimea, and the EU-Russia controversies regarding the South Stream pipeline project, as well as Gazprom's non-compliance with the EU regulations in several anti-trust cases in the past few years are the major cornerstones that shape the CEE energy security framework and policy options as the region remains heavily dependent on Russian oil, gas, and nuclear technology. At the same time, the fragile democratic traditions in the CEE countries, the existing networks of political protectionism and economic oligarchy, and the opaque business practices nurtured by corruption and links with organized crime, have been reinforced by the negative implications of Russian economic and geo-political influence. Russia has exploited its dominant position in the energy market and its long-term links with certain political and economic

KEY POINTS

- Weak democratic traditions, networks of political protectionism and economic oligarchy, and opaque business practices nurtured by corruption and links with organized crime, have been reinforced by the negative implications of Russian economic and geo-political influence in the countries' energy sectors.
- A major governance challenge is the lack of political agreement on a long-term national energy strategy with supporting financial instruments, which would lower the ad-hoc decision making, often related to suspicions of being influenced by private political and economic interests.
- Romania championed the group in terms of good energy governance due to the improved independence of the national energy regulator with the adoption of new legislation in 2012, as well as due to the continuing overall strong performance in the fight against corruption in the country.
- The governance of the state-owned energy enterprises in CEE is heavily influenced by political interference, distorting their investment independence and regulatory oversight. This is particularly visible in Bulgaria and Ukraine. The politically mandated downward pressure on electricity and gas prices in Bulgaria, Romania, and Serbia increases further the vulnerability of their energy sectors.
- The heavy dependence on a single source and route of gas supply is the major energy security risk for all countries. In Bulgaria and Ukraine, it is coupled with heavy dependence on oil import from the same country – Russia. While Romania, Bulgaria and Ukraine have undertaken diversification efforts, Serbia seems to favour the status quo, even at the expense of paying one of the highest wholesale prices of natural gas in Europe.
- All four countries should step up their diversification efforts leveraging their EU integration efforts, while at the same time undertaking serious SOEs governance reforms, and focusing narrowly on their most immediate energy security vulnerabilities, such as energy poverty and energy efficiency.



groups to shape political decisions across the region according to its own interests, but often to the detriment of the home country consumers. The current **review of energy security risks in four selected CEE countries**, two energy poor – Bulgaria and Serbia, and two energy-resourced – Romania and Ukraine, assesses the factual situation per se and the transparency and accountability of energy policy governance in the region.

I. Energy security components:

- **Availability of resources**

Bulgaria and Serbia are energy poor countries, largely dependent on imports of energy resources – mainly oil and gas. Both rely heavily on Russia, which is their single supplier – and in the case of gas, through a single transit route. In both countries there are substantial reserves and domestic production of low grade lignite coal, which represent about 53% of the gross inland energy consumption in Serbia, and 37% in Bulgaria. Due to the high share of local coal and hydro power in the overall electricity mix, both countries may have good future prospects in terms of energy independence, if they are successful in lowering the energy intensity of their economies and in increasing the energy efficiency in the residential, public, and business sectors. Among the strengths of both countries is the domestic capacity for production of electricity from hydro (and from nuclear in Bulgaria) and the availability of coal resources, as well as the potential for unconventional energy sources. Bulgaria has pioneered shale gas explorations in the EU only to ban any operations in 2012. However, the country has stepped up explorations in the Black Sea. Since adopting EU's renewables targets in 2007, Bulgaria has embarked on the rapid development of heavily subsidized photovoltaic and wind resources, which while improving the country's energy resilience in the longer-term, has turned into a major financial drain on the system, sparking popular consumer discontent and backlash. In Serbia the development of RES has been practically kept at a minimum, besides the adoption of some limited policies since 2009.

Romania and Ukraine have good mixes of their own energy sources, including oil, gas, and coal. Still, both countries need to import crude oil and gas to satisfy domestic demand; which is not the case for coal, especially for Ukraine, which holds some of the largest reserves of high-quality anthracite in Europe. Romania is one of the most energy independent countries in CEE, and is a net exporter of electricity and refined petroleum products – mainly gasoline and diesel oil. The energy dependence of Ukraine is most visible in the natural gas sector, where Kyiv needs to buy half of the locally-consumed gas from abroad, and for years has been locked in price disputes with Russia, its sole supplier. Ukraine imports between 40 and 50 bcm of gas per year making it Gazprom's largest client. This is quickly changing now. Although gas still makes up 33% of the country's final energy demand, the economic crisis and the significant gas price hike after 2009 has put a downward pressure on gas consumption. In 2014, Ukraine consumed almost 50% less gas than in 2004. After the annexation of Crimea and the conflict in Eastern Ukraine, the country lost control over one third of its coal reserves located in Donbass. Although the pro-Russian rebels continued to sell coal to Kyiv, deficits of around 2 mln tons appeared to distort the power generation of some of the TPPs, leading to outages and expensive electricity imports from Russia. By mid-2015, Ukraine had already turned from a net exporter to a net importer of coal. The trade deficit was partially covered by a non-transparent coal import deal with South Africa, which showed that despite the regime change, no major improvement of the energy governance had been achieved. In the oil sector, Ukraine is similarly dependent on crude imports from Russia, which contributes to around 40% of the total crude supply in the country. Only limited quantities of crude oil are imported from Kazakhstan and Azerbaijan. Moreover, around 60% of the domestic fuel demand is satisfied by imports from Russia, Belarus, and Lithuania. Ukraine fuel products' dependence is likely to rise in the short-to-medium term as outdated domestic refineries have mostly halted production except for the Kremenchug and Lisichansk ones, which produce mostly low-quality oil products using heavy Urals crude from Russia and Kazakhstan.

- **Reliability of supply:**

Since their gas import is fully dependent on Russia and a single supply route through Ukraine, Serbia and Bulgaria were among the hardest hit countries from the gas supply crisis in 2009. Serbia has remained an energy island in terms of gas that has devoted most of its political efforts on promoting Gazprom-led pipelines such as South Stream and most recently, Turkish Stream, and has not sought to diversify its gas supply through the construction of interconnectors with Bulgaria and Croatia. After years of focusing on costly large-scale gas transit projects, such as Nabucco and South Stream, which ultimately fell victim of economic and geopolitical concerns, Bulgaria has recently stepped up its work on the more feasible diversification projects of building interconnectors with the neighboring countries, with a focus on those with Romania and Greece as part of the Southern Gas Corridor. However, Bulgaria remains heavily invested in South Stream without any foreseeable exit strategy, as Russia has chosen not to formally cancel the project. In both Bulgaria and Serbia, the existence and strict implementation of a feasible long-term national energy strategy is a decisive condition for improving the level of the reliability of supply. Both countries need to substantially reduce the energy intensity of their economies, and improve the energy efficiency of their business, public, and residential sectors. More specifically in Serbia, the modernization and expansion of the domestic coal mines and coal-fired TPPs is indispensable for ensuring the reliability of supply regardless of the natural disasters; as the country became painfully aware in 2014, when massive floods effectively halted the work of the largest coal mine in the country, which led to mass power cuts.

Even for the resource-rich countries such as Ukraine and Romania, the overreliance on one major project (e.g. Nabucco for Romania) or one single source

(e.g. Russian gas) have led to geo-political and economic lock-in, limiting the countries' abilities to improve the situation in the short- or mid-term period. In this respect, Romania is in a much better position as the projects on building gas interconnectors with neighboring countries, mainly the ongoing one with Bulgaria and the already built pipeline with Hungary, have the potential for decreasing the country's dependence on Russian gas by 2020. Both countries need also to introduce significant modernization of their coal mines and coal-fired TPPs, as to be able to utilize the potential for increased energy production from domestic coal.

- **Environmental sustainability:**

The capacity for production of electricity from hydro is sizable in both Bulgaria and Serbia. The latter derives close to one third of all power generation from hydro. While in Bulgaria the respective share is smaller (about 7% for 2012) due to the preference given to expensive wind and solar generation - which led to total share of 19% from RES in 2013. Both countries rely heavily on generation of electricity from conventional coal power plants – respectively 43% in Serbia and about 40% in Bulgaria. While Bulgaria has upgraded its key coal generating capacities in terms of CO₂ emissions, in Serbia investments in desulphurization and ash filtering technologies have been very limited, which contributes to the remaining high levels of CO₂ emissions. The use of coal and wood by energy poor households in both countries contributes to the worsening air quality in towns and cities. CO₂ emissions per capita in both countries are some of the highest in CEE, and around 23% and 37% higher than the world average for Serbia and Bulgaria respectively.¹ The high energy intensity of their economies (respectively 652.9 and 610.6 kgoe per EUR 1,000 of GDP in 2013) as compared to the EU28 average (141.1), has also contributed to the high levels of CO₂ emissions despite the positive decreasing trend registered during the last fifteen years.²

¹ European Energy Community, 2012, <http://www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=90&pid=45&aid=8&cid=regions,&syid=1980&eyid=2011&unit=MTCDPP>

² Eurostat, 2014. Energy intensity of the economy is measured as gross inland consumption of energy divided by GDP (kg of oil equivalent per 1,000 EUR).

Yet the use of coal in power generation is not determinant of the overall level of emissions. Romania is the sixth largest coal producer in Europe, having mostly highly-polluting lignite coal, and almost all of it consumed domestically contributing to 27.4% of the generated electricity in 2013. Still, Romania is one of the countries with the lowest share of CO₂ emissions per capita in CEE, and was 13% below the world average in 2012.³

- **Affordability:**

Energy poverty has remained persistent for both Bulgaria and Serbia in recent years, largely due to the combination of two factors. On the one hand, due to the energy price subsidization, particularly of electricity in Bulgaria and of district heating in Serbia, a growing number of the population has experienced problems to cover their bills when the prices started to grow up with the liberalization of the market. On the other hand, the outdated infrastructure of the utility companies, and household energy efficiency remaining way below the OECD average, have pushed the energy bills up. As a result, energy poverty among the population, defined as affordable access to electricity and reliance on traditional use of biomass (mainly wood and coal and inefficient stoves for burning them), has recently increased in both countries. In Bulgaria in 2010, over a third of the households reported being unable to afford keeping their homes adequately warm and roughly 60% reported to using wood and coal as the major heating source.⁴ The 2011 census data confirmed the latter – nearly 54% of the homes in the country used wood and coal for heating, while in rural areas the respective share is 95%. In Serbia around 40% of the population cannot adequately heat their homes.⁵ Unlike Bulgaria where more than half of the population uses solid fuels for heating and cooking, the share in Serbia has hovered around 18%. The possible increase of electricity and central heating prices towards a market-based cost would have disproportionately negative effects on

energy poverty of households, especially in big cities where these are the main sources of energy supply. At the same time, the solid fuels would remain the most likely possibility for replacement as their prices are not likely to increase substantially in the future; which would result in further increase in CO₂ environmental harm. Even in the resource-rich countries of Romania and Ukraine, the subsidization of gas and electricity prices has removed the incentives for improved energy efficiency in the households. At the same time, it led to accumulation of deficits in the state-owned energy enterprises. Particularly the Ukrainian, and on a smaller scale Romanian, energy sectors have been victims of the nexus between energy poverty and systemic mismanagement, in which state-owned energy companies have played the role of a guarantor of social security at the expense of financial stability and investments in infrastructure modernization. In Ukraine, the civil conflict in Donbass and the gas supply halt in 2014 prompted the government to begin an energy sector overhaul in 2015, introducing price liberalization and sectoral restructuring. As a result, the negative effects of a sudden price hike could be expected in 2016. Similarly, in 2013 Romania saw one of the biggest increases in electricity and gas prices paid by households over the last decade on a year-to-year basis. Although at EUR 12.8/100kWh the average household electricity price in Romania was one of the lowest in the EU in 2013, the increase of 17% was one of the highest, only after Germany (22%) and Greece (20%). In terms of purchasing power standard (PPS) though the Romanian electricity prices, as well as these of the other countries in CEE, compared to the prices of other goods and services are among the highest in the EU. Gas prices for households in Romania also increased by 10% year-on-year in 2013; this was also the highest price hike among EU countries as well as the highest peak for the country in the past decade. Nevertheless, the average Romanian gas price of 3.1 EUR/100kWh was the lowest in the EU in absolute figures but around the average in PPS. As a result, about one third of the population in the country is

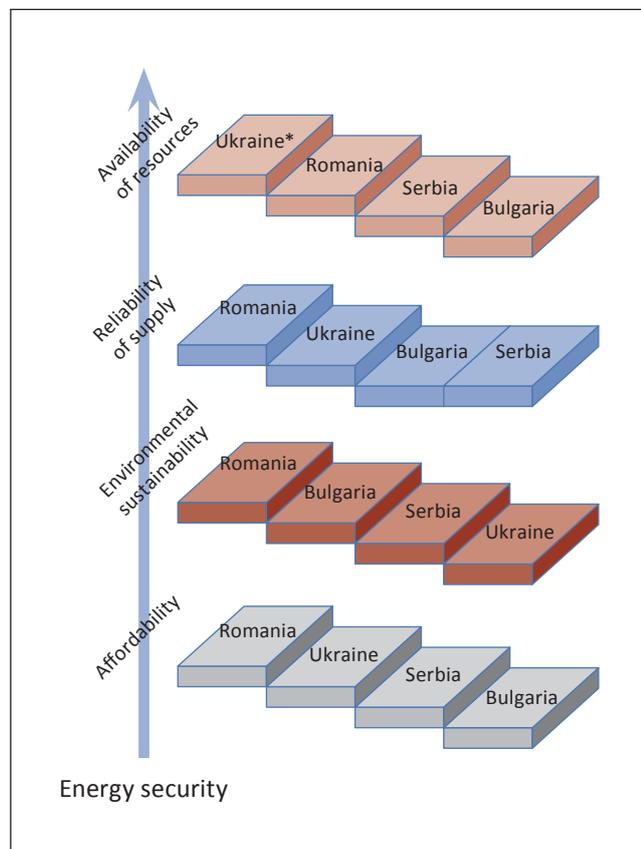
³ European Energy Community, 2012.

⁴ CSD. (2014). Energy Sector Governance and Energy (In)Security in Bulgaria. CSD Reports #30, Sofia, pp. 114, p. 34, <http://www.csd.bg/artShow.php?id=16984>

⁵ Stadtmüller, H. (2014). Understanding the link between energy efficiency and energy poverty in Serbia. Heinrich Böll Stiftung.

heavily exposed to the risk of being unable to cover the cost of adequate heating of their homes.

Figure 1. Energy security framework (2015)



* *Crimea and Eastern Ukraine have been considered as belonging to Ukraine for this assessment.*

II. International Energy Security Risk Index

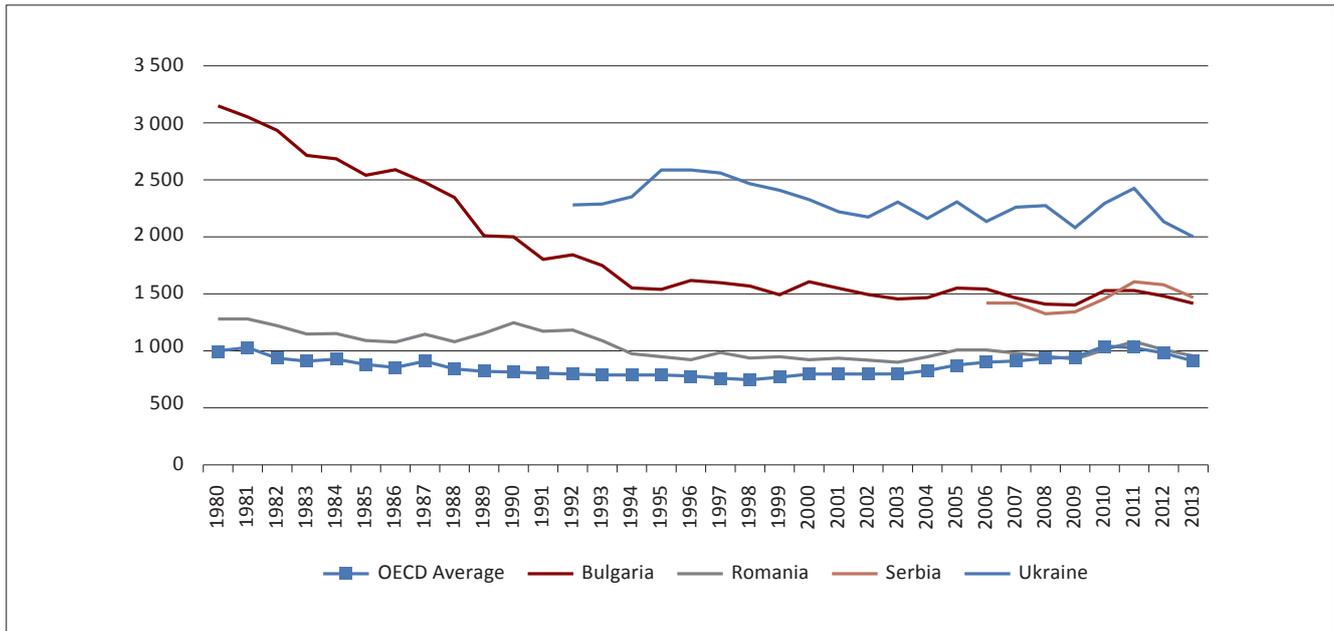
The International Energy Security Risk Index (IESRI)⁶ puts Romania at 15th place among the top 75 energy consumers in the world in its 2015 edition, which is the best result for all CEE countries. The other countries lag much further behind – respectively at 57th place (Bulgaria) and 61st place (Serbia), while Ukraine is at number 72 with only Uzbekistan, Turkmenistan, and Singapore trailing it. Compared to the variance from the OECD countries' average scores, after 1990 Romania has shown a stable trend of improving its energy security position from its worst relative score in 1990 (53% higher than the OECD average),

to its best relative score in 2009 (1% lower than the OECD average); with expected slight worsening of the ranking in the following years. The index components display Romania's highest energy security risks are related to its energy expenditure volatility, energy expenditure intensity, and energy intensity of the economy, and in particular – of the transport sector. These results are mainly due to the combined factors of import dependence on oil and gas, and the not restructured high-energy-intensive economy, incl. the energy sector itself. Although way behind Romania, Bulgaria has also improved its ranking since 1990, as it has gradually closed the gap with the OECD average. Yet even its best risk score of 1398 in 2009 was worse than the OECD average of 939 by approximately 49%. The overall trend of the energy security risk index of Ukraine has also been downward. But the improvement has been much slower than in the case of Bulgaria or even Serbia. IESRI has been tracking the energy security situation in Ukraine since 1992; and the lowest risk score of 2009 in 2013 has put Ukraine close to 120% above the OECD average. Still this is almost twice as better a score as compared to 1992, when it was 233% over the OECD average. The main components, which have led to these results for Ukraine, have been the country's overreliance on the imports of coal, gas, and oil; which has translated in a high level of energy expenditures as a share of GDP, and energy intensity; which has remained at one of the world's worst levels. Serbia is the last newcomer in the International index with data since only 2006. Its results have remained almost unchanged since then. Still, the country's lowest risk score of 1323 in 2008 was around 41% higher than the OECD average. After a slight worsening in the years thereafter, the country's score went down again; in 2013 reaching levels similar to the ones in 2006 – 2007. The country's main energy security risks are related to the high share of the fossil fuels import expenditure relative to GDP, one of the highest energy and carbon intensity, and the relatively high gas import exposure

The major energy security risks in CEE are related to the energy expenditure volatility, mainly due to

⁶ Institute for 21st Century Energy, U.S. Chamber of Commerce, <http://www.energyxxi.org/international-energy-security-risk-index>

Figure 2. Energy Security Risks Scores 1980 – 2013



Source: International Energy Security Risk Index, Edition 2015.

the countries’ import dependence on oil and gas, reinforced by the higher prices they pay as a result of the lack of supply diversification. Another important factor is the critically high level of energy intensity of their economies, mainly as result of the obsolete infrastructure base and limited investments in modernization, including in the energy sector itself. Underlying and exacerbating all these challenges however, is poor energy sector governance, which augments the negative effects of risks, in particular in times of crises.

Energy security challenges

I. Energy sector governance

A major governance challenge in Bulgaria, Romania, Serbia and Ukraine is the **lack of political agreement on a long-term national energy strategy** with supporting financial instruments, time schedule, and institutional reforms that would diminish the role of ad-hoc decision making, often linked to suspicions of being influenced by private, political, and economic interests. Even when energy strategy exists, its implementation is often selective and non-consistent, often dependent on the political priorities and wish-

lists of the ruling parties. At the same time, part of the crucial decisions to be made are heavily dependent on the other CEE countries’ and EU decisions in the field of regional energy security. This makes the need for streamlined and pro-active national strategies even more important. The projects for building interconnectors in Bulgaria, Romania, and Serbia, incl. as part of the Southern Gas Corridor, and regional gas pipeline projects such as Eastring, the explorations for both conventional and shale gas, the development of RES, the liberalization of both electricity and gas retail markets, and the retrofitting major coal-fired TPPs in all selected countries are among the hottest topics.

Romania championed the group by adopting new legislation in 2012 significantly strengthening the independence of the national regulator for energy (ANRE) by expanding the fight against corruption in the country. The impact on the energy sector has been more transparent governance, reduction of corruption pressures, and the tackling of state capture practices. However, the Romanian government, like the Bulgarian and Serbian ones, has also delayed the energy market liberalization in order to prevent social unrest provoked by higher energy prices. In Bulgaria, the independence of the national regulator (SEWRC) has been highly compromised in the last

decade, as its decisions are often indirectly dictated either by the top-level ruling parties or by particular private interests. Even the EC have identified several operational shortcomings in the regulator's functions, such as insufficient financial and human resources, which led to low-quality decision-making.⁷ Similarly in Ukraine, top-level decision makers and the management staff in the energy sector, including the regulatory authorities related to the government of the former president Yanukovich, had been accused of corruption, conflicts of interests, and the abuse of power. Suspicions have also remained relevant for the current government's officials. According to some estimates, the country has lost hundreds of millions of US dollars from illegal deals in the gas sector, where oligarchs linked with the former president had been buying natural gas at subsidized prices from the state, and then selling it at a higher price to the industry.⁸ According to the current Ukrainian government, the non-transparent deal for importing coal from South Africa has raised red flags that bad-governance practices are yet to be eradicated.

In Serbia, the prosecution has been investigating an alleged corruption scheme surrounding the sale of 51% stake in Naftna Industrija Srbije (NIS) to GazpromNeft by the then-government of president Tadic. Civil society and energy experts speculated that Gazprom has pressured the government into selling NIS at a below-market price in exchange for building the South Stream gas pipeline, which unfortunately for the government, was suspended in late 2014. The agreement for the sale of NIS included also the signing of a 30-year gas supply contract with Gazprom, which has limited the government's options for energy supply diversification.

An important aspect of energy sector governance in the CEE region is the **governance of large energy infrastructure projects** such as the planned two reactors at the Cernavoda NPP (ca EUR 6.5 bln) and the HPP at Tarnita (ca EUR 1 bln) in Romania, Belene NPP (ca EUR 10 bln), HPP Tsankov Kamak (ca EUR 0.5 bln), and the South Stream project (ca EUR 4.2 bln for the inland infrastructure) in Bulgaria, as well as the regional gas interconnector project in Romania, Bulgaria, and Serbia.⁹ These projects have often been an object of suspicions for high level political corruption, conflicts of interests, and being state captured by private, local, or foreign economic interests. In the same example cases, evidence has been made publicly available by independent investigative journalists, anti-corruption experts, or even by EC officials that have backed the existing accusations but never led to official charges. The same accusations have been raised for the regulatory policy implementation regarding the boom of euro-multimillions RES projects and particularly the development of micro hydropower plants, large wind farms (in Bulgaria and Romania), and solar parks (in Bulgaria and Serbia). In these cases, the companies used EU funds during the project development phase and hence, the results often violated the EU environmental regulations e.g. the regulations on the Natura-2000 regions.¹⁰ In very few cases the suspicions for criminal management of RES projects have been confirmed by official authorities, leading to the filing of court cases – e.g. by the National Anticorruption Directorate investigating possible corruption, conflicts of interests, tax frauds in Romania,¹¹ and the case of the European Court of Justice against Bulgaria for its failure to ensure

⁷ For detailed analysis, see CSD. (2014). Energy Sector Governance and Energy (In)Security in Bulgaria. CSD Reports #30, Sofia, p. 76-77, <http://www.csd.bg/artShow.php?id=16984>

⁸ Energy Corruption in Ukraine: Causes and Cures, 28.08.2015, <http://euromaidanpress.com/2015/08/28/energy-corruption-in-ukraine-causes-and-cures/>

Energy Reform for Ukraine: If Not Now, When?, 11.05.2015, <http://www.naturalgaseurope.com/ukrainina-energy-reform-23565>

⁹ See the dedicated chapter in: CSD (2014). Energy Sector Governance and Energy (In)Security in Bulgaria. CSD Reports #30, Sofia, pp. 114, <http://www.csd.bg/artShow.php?id=16984>

¹⁰ Rivers run dry as claims of illegality surround Romania's hydropower boom, the Guardian, 4.02.2014, <http://www.theguardian.com/environment/2014/feb/04/romania-hydropower-illegality-claims-green-tariffs>

¹¹ Ibid. See also: Romania's anti-corruption prosecutors order seizure of PM's assets, Independent Balkan News Agency, 13.07.2015, <http://www.balkan.eu.com/romania-anti-corruption-prosecutors-order-seizure-pms-assets/>

adequate assessments of the environmental effects from the construction of numerous wind farms in the Northeastern part of the country.¹²

II. Security of gas and oil supply

The heavy dependence of the CEE countries on a single source and single gas supply route is one of the major energy security risks for them. About 90% of the natural gas in Bulgaria and half of the gas import in Ukraine are coming from Russia directly through the transit pipelines crossing Ukraine. For Bulgaria and Ukraine, the security of gas supply is coupled with heavy dependence on oil import coming from the same source country – Russia. While Serbia and Romania also rely on Russian supply of gas and oil, currently they are among the less dependent countries in CEE due to the high share of coal and hydro power generation in Serbia, and a good mix of their own energy sources of oil, gas, and coal in Romania. In the Serbian case, only a quarter of the country's final energy consumption is satisfied by imports, while the domestic resources in Romania make the country the largest producer of oil and gas in the CEE region and one of the most energy-independent countries in Europe.¹³ In terms of the future security of energy supply, Serbia is the only country among the four selected ones, which has in fact supported its own dependence on gas supply from Russia, even at the expense of having one of the highest wholesale prices of natural gas in Europe. During the last decade, the country has firmly backed large-scale gas pipeline projects promoted by Russia instead of seeking diversification options via interconnectors with Croatia and Bulgaria. As a result, the high gas prices have dissuaded Serbians from pursuing domestic gasification, pushing them out of the district heating systems in big cities. Similar to the Bulgarian case, securing affordable gas supply is one of the most sustainable future energy alternatives for Serbia, especially if natural gas replaces coal and wood use as the main heating

source in rural areas and electricity in big cities. However unlike in Bulgaria, where source and route diversification of gas supply have been identified by consecutive governments as one of the major energy security risks following the gas supply interruption in 2009, in Serbia gas supply diversification is still only marginally on the political agenda. Despite the more strategic approach, Bulgaria has achieved only very modest progress towards real diversification. From a short-term perspective, Serbia has improved its gas security profile by opening its newly constructed Banatski Dvor UGS storage facility in 2011, although with Gazprom as the main shareholder and the only supplier. Unless the country is able to connect to potential Azeri gas supply via the Bulgaria-Greece interconnector and LNG deliveries from an upcoming regasification terminal in Croatia, Serbia is likely to remain dependent on Russian gas supply for the next 5 to 10 years. Declining short and medium-term options for improving its gas import dependence, Serbia is in fact closing other options for improving its energy security, related to the gasification of residential and public sectors. Enhanced residential gasification would be able to tackle the dual problem of energy poverty and air pollution in cities caused by burning solid fuels. In both Serbia and Bulgaria, the monopolistic structure of the national gas supply and distribution market provides ample opportunities for lack of transparency and rent-seeking behavior of state actors. The bulk of information regarding the transit of gas through the country (tariffs, taxes, fees, and revenues) is also not publicly available in both countries. Particular government decisions in the last five years, e.g. the decision of the Bulgarian government to leave the transit fee revenues with Bulgartransgaz EAD, which is also the practice in Serbia, infused an additional element of non-transparency. It prevents state authorities and taxpayers from overseeing what part of the payments go to the company for the gas transportation costs, and what share go to royalties for the state.

¹² Commission takes Bulgaria to Court for failing to protect endangered species, 17.10.2013, http://europa.eu/rapid/press-release_IP-13-966_en.htm

¹³ For detailed analysis of availability of energy resources and import dependence, see the recently published factsheets for Bulgaria, Romania, Serbia and Ukraine, available online at <http://www.csd.bg/artShowbg.php?id=17508>

In Ukraine, the continued importance of Russian gas imports would be felt most acutely in the winter when the capacity of the reverse gas flows from Slovakia, Hungary, and Poland would not be able to satisfy domestic consumption. While domestic production was able to cover just a third of Ukraine's gas needs in the past, slowing down gas consumption and the gradual phasing out of gas in power generation after the annexation of Crimea and the conflict in Eastern Ukraine have increased the share of the domestic output to 50%. Subdued economic growth, planned large-scale investment in energy efficiency improvements, and gas transmission network modernization could impose further downward pressure on gas imports. Complete gas independence requires also enhanced investment in domestic natural gas production by developing both the country's conventional reserves and by unlocking Ukraine's vast coalbed methane and shale gas potential. In order to accelerate E&P activities, the government should ease the tax burden for independent drilling companies and provide market-based royalty regimes that are not prohibitive to investment. Despite the reversal of some production tax hikes, the tax regime is still arbitrary, primarily driven by the government's aims to expand budget revenues at the expense of gas producers.

As mentioned, Bulgaria's gas dependence is coupled with full reliance on crude oil imports for satisfying domestic demand. Around 80% of the crude deliveries come from Russia with limited amounts originating in Kazakhstan. The influence of Russian oil companies is also translated to the wholesale fuels market as all of the imported oil is processed in Lukoil's Neftohim refinery, the biggest one in the Balkans. Despite the formal liberalization of the oil sector, there is still high concentration of market power, which influences both the price formation and the competition within the fuels market. Consecutive governments have provided Lukoil with political protection, and the episodic

(and selective) efforts of some state authorities (e.g. Commission for Protection of Competition and National Revenue Agency) to impose stricter control and improve the public accountability of Lukoil have failed.¹⁴

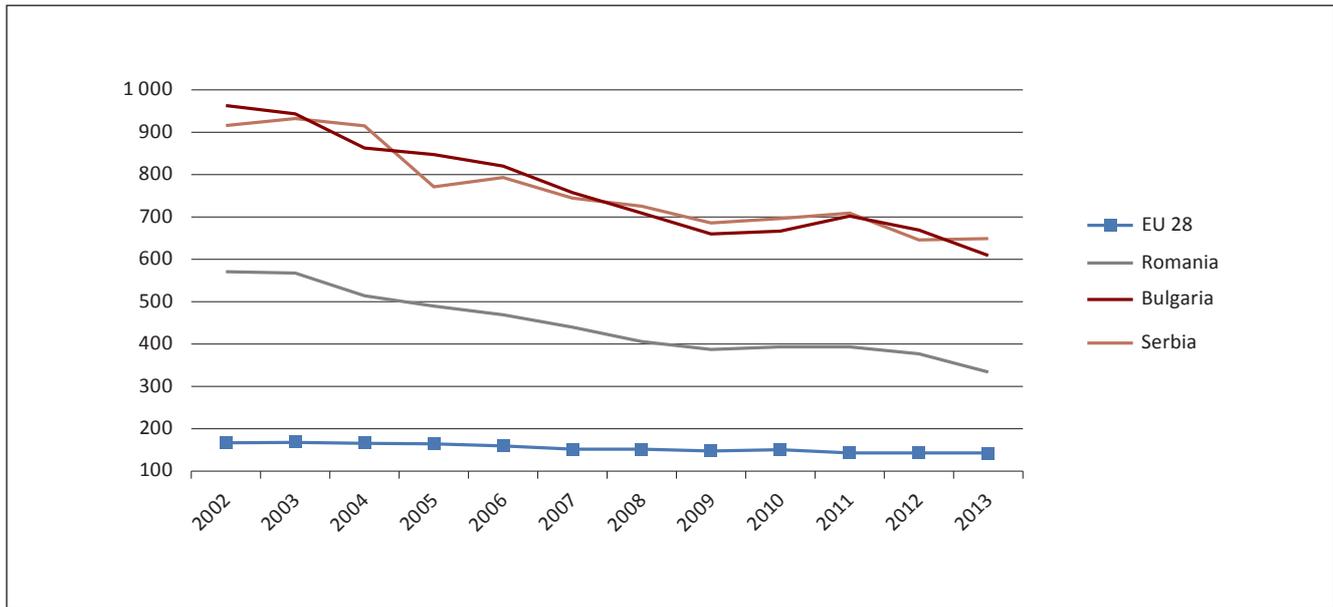
III. Unsustainable energy consumption and energy poverty

For CEE countries, the high energy intensity of their economies and the low energy efficiency of their residential and public sectors are major energy security challenges, especially when they are coupled with a high share of energy poverty among the population. The expected liberalization of the gas and electricity market in combination with the negative outlook for the current economic development, may increase sizably the country's energy poverty. Among the case study countries, Romania has the best opportunity to improve its short and medium-term position, especially if the general political situation improves as result of the anti-corruption and rule of law campaign in the country. Romania's energy intensity has been continuously declining since 2000 and is closer to the levels of Central European countries (e.g. Poland and Hungary), and lower than in other Balkan countries like Serbia, Bulgaria, FYR Macedonia, and Montenegro. However, still in 2013 the Romanian level is twice as high as the EU average (334.7 against 141.6 kg of oil equivalent per 1,000 EUR).¹⁵ The high energy intensity level is the outcome of insufficient modernization of the inherited from the socialism obsolete technological base and infrastructure, as well as the structure of the economy and the lack of incentives for decreasing energy intensity due to subsidized energy prices over the years. The same factors have also affected negatively the energy intensity in Serbia and Bulgaria, which despite the downward trend are still the countries with the highest rates among the CEE and EU states, whose value is still four times higher than the EU28 average in 2013.

¹⁴ See more in: CSD. (2014). Energy Sector Governance and Energy (In)Security in Bulgaria. CSD Reports #30, Sofia, p. 65-68, <http://www.csd.bg/artShow.php?id=16984>

¹⁵ Eurostat, 2014.

Figure 3. Energy intensity of the economy



Source: Eurostat 2014.

A particular problem for all CEE countries are the persistent energy losses generated in the processes of transformation, transmission, and distribution of electricity caused by outdated technological base and electricity grid and the lack of enough investment in modernization projects. In addition, the high energy intensity is the product of unsustainable consumption incentivized by artificially low energy prices for end users. In Bulgaria almost half of the energy (48% as an average share for the period 2000 – 2013) available for gross inland consumption is lost, while in Serbia the respective share is 41% and in Romania 32% – still higher than the EU28 average of 29%.¹⁶ As it became evident in Bulgaria, the outdated power grid posed specific challenges for the accommodation of the growing electricity generation by RES.

The situation looks similar in the residential sector, where the lack of adequate building maintenance, limited wall and window insulation, and outdated heating systems have exposed persistent inefficiencies. As over two thirds of all residential buildings

in Bulgaria, Serbia, and Romania were built before 1990¹⁷ when no energy efficiency considerations were taken in account, the outdated building stock in combination with the use of high-consumption energy appliances are the main causes for low energy efficiency in the residential sector. According to official estimates, energy consumption in these buildings is 2-3 times higher than in the newer buildings consistent with the EU energy efficiency building standards.¹⁸ In addition, the potential for their own energy production is still largely untapped in the three countries, as only a minor share of the residential buildings had installed rooftop solar panels. The key challenges for improving the energy efficiency in the residential sector are the lack of detailed energy consumption data, limited implementation of savings measures impeding both the targeting and the monitoring processes, as well as the low average incomes and high level of energy poverty among households.

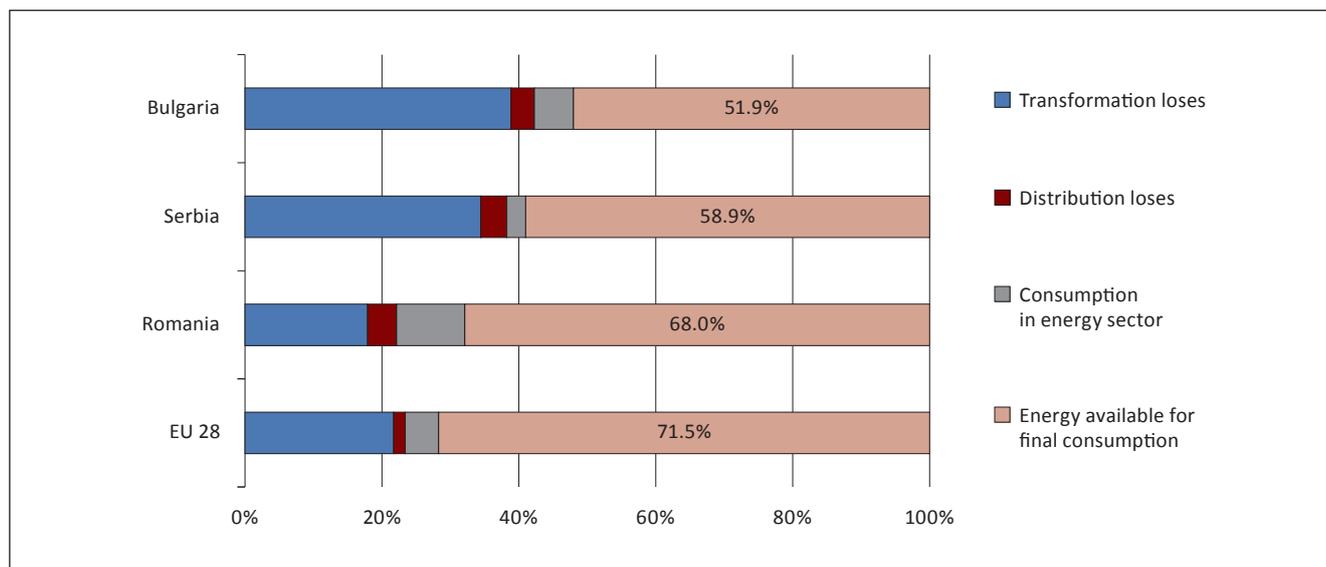
In terms of energy poverty, Romania is in a better position than Bulgaria and Serbia although about

¹⁶ Own calculations based on Eurostat data.

¹⁷ 88% of residential buildings in Bulgaria were built before 1990; 74% – in Serbia before 1985 and about 80% – in Romania before 1990.

¹⁸ The First Energy Efficiency Plan of the Republic of Serbia for the Period from 2010 to 2012, published in July, 2010.

Figure 4. Energy losses and energy available for final consumption (as % of gross inland consumption – average 2000 – 2013)



Source: Eurostat 2014.

one third of its population has been estimated to be at risk of fuel poverty in 2012, placing the country in 21st place among 28 European countries; ranked by the average value of the three fuel poverty indicators – inability of people to keep their home adequately warm, to pay their utility bills, and to live in a dwelling without defects (leakages, damp walls, etc.)¹⁹ The same ranking has placed Bulgaria in last place with about half of the population being at risk of fuel poverty. Serbia was not covered in the survey but other sources estimate that the level of energy poverty in the country is around 40%.²⁰

As living standards rose in the past decade, so did overall energy consumption in residential buildings. In both Bulgaria and Serbia a large portion of this increase came from the bigger use of electricity for household heating purposes. According to official estimates, about one third of households in these countries predominantly use electricity for heating, while at least another third occasionally switch on radiators or AC devices to supplement their main heating source. The switch from district heating to

electricity was also prompted by artificially kept low prices of electricity in both countries and rising natural gas import prices in Serbia. Still, a bit more than half of the Bulgarian population (54% in 2011) and a much smaller share in Serbia (about 18%) use wood and coal as their main heating sources, which are cheaper than district heating and electricity, especially in rural areas and small cities.

Ukraine has quite a different energy consumption profile than the other three countries mainly due to the mass gasification of the country dating back to the Soviet times. Between 2005 and 2011, the energy consumption per unit of GDP fell by more than 20%, mostly on the back of falling natural gas consumption in the public sector, which includes also the residential areas. However, households still make up close to 40% of the total gas demand, as 75% of them have direct access to natural gas. With few buildings having installed individual gas meters or gone through energy efficiency refurbishment, it is unlikely that the public sector would be able to cut its gas demand in the short-term despite a policy target of a 30%

¹⁹ BPIE (2014). Alleviating fuel poverty in the EU. p. 25, http://bpie.eu/uploads/lib/document/attachment/60/BPIE_Fuel_Poverty_May2014.pdf

²⁰ Stadtmüller, H. (2014). Understanding the link between energy efficiency and energy poverty in Serbia. Heinrich Böll Stiftung.

reduction of consumption by 2030.²¹ As most of the residential infrastructure is very outdated, there is enormous potential for additional energy savings in buildings. One study points out that heating demand could fall by between 30 and 40% if energy efficiency measures are implemented.²² Among these policies should be the reversal of costly energy subsidies to households. Before the recent partial liberalization, heating and gas tariffs have been based on the size of apartments and not on actual consumption. This has removed the incentive for households to conserve energy or invest in wall and window insulation. The most substantial decline in gas consumption has been visible in the industrial segment, as well as in energy production and transmission itself. The civil conflict and the economic crisis from 2013 – 2014 hit the main industrial gas consumer, the chemical sector, especially hard. Severed economic ties with Russia and government attacks against large chemical holdings, controlled by oligarchs close to the former president Yanukovich, led to a significant decline in fertilizer output. A protracted reorientation to new markets in the EU and the abolishment of state subsidies all mean that industrial gas demand is likely to remain subdued in the medium-run. Large potential for energy savings also exist in the steel, manufacturing, and agricultural sectors; but it is left unused as companies used to benefit from cheap power or have been engaged in illegal schemes for gas and power diversion.

IV. Financial outlook and management of state-owned energy enterprises

The state-owned energy enterprises (SOEEs) are an integral part of the energy market in the CEE region often shaping its development. The governance of the SOEEs is directly influenced by political meddling, which often distorts the management independence of the energy companies and the national regulator. Especially in Bulgaria and Ukraine, and on a smaller scale in Romania and Serbia, systemic corruption and capture of SOEEs by private, economic, and political interests have crippled the process of market

liberalization and have exposed the companies to criminal mismanagement at the benefit of private interests.

Since independence, the Ukrainian politicians have not only tolerated, but also promoted corrupt gas intermediaries, which have used their position to extract illegal rents at the expense of the state. The result is that Naftogaz' loss for 2014 alone reached USD 4.12 bln, or five times bigger than its loss in 2013. The company's total debt reached around USD 7.5 bln by the end of 2014, around a third of which is due in the next 12 months. Part of the explanation for Naftogaz' persistent deficits has been the decision of consecutive energy regulators to maintain gas tariffs to households and public institutions below the cost of supply. This policy has prevented large-scale social discontent and has kept a significant share of the vulnerable population above the poverty threshold. Private businesses, on the other hand, have been able to effectively bribe company and energy sector officials to avoid paying for their gas consumption.

In Bulgaria, the financial situation of the SOEEs has further deteriorated in the past 24 months with some of the major companies (e.g. National Electric Company /NEC/) being in a technical default for at least one year. On one hand, the regulated price for electricity has been kept artificially low under the market level, which led to the accumulation of financial losses in NEC. Regulated tariffs for household consumers are at least 54% lower than NEC's power purchase prices. On the other hand, due to the mismanagement and state capture of large energy infrastructure projects such as NPP Belene and HPP Tsankov Kamak, both the Bulgarian Energy Holding (BEH) and its subsidiaries have been overburdened with long-term debt. The financial performance of the state-owned energy companies for the 2007 – 2014 period shows that NEC and the national transmission system operator ESO have been loss-making companies for at least the last three years. The financial results for both enterprises in 2015 and in the medium term are expected to be negative.

²¹ IEA (2012). Ukraine 2012. Energy Policies beyond IEA countries.

²² IFC, Ukraine Residential Energy Efficiency Project, www.inogateee.org/sites/default/files/news/Leaflet_EN.pdf

The coal-fired Maritsa East 2 TPP and the Mini Maritsa East coal mines are also in very difficult financial situations. The SOEEs' annual financial reports point to the deterioration of the companies' current and quick ratios that reveal their inability to pay off their obligations if they were demanded immediately, as well as their limited access to liquidate assets, which would result in a need for additional external financing if they were to pay creditors. In general, the deterioration of the companies' financial results after 2007 has eroded their ability to recover their costs. The financial results of NPP Kozloduy and especially of Bulgartransgas have been much more positive. The latter is the champion among the Bulgarian SOEEs in terms of both short and long-term financial stability, as its transit revenues have continuously exceeded the company's costs for operating the transmission and transit pipelines. The former, on the other hand, is the least costly power producer in the country that is supplying more than a third of the domestic power generation, as well as a significant share of the country's electricity exports. However, their future opportunities are often undermined by the practice of BEH to redistribute their profits to poor performers among the Holding's subsidiaries. The lack of transparency and public accountability about the deals and financial flows between the companies within BEH increases the risks for the Holding's corporate governance, especially in terms of suspicions for political influence and protection of given private interests over others.

Unlike in Bulgaria where regulated power tariffs have placed the state-owned supplier under an immense financial pressure, in Serbia the vertically-integrated monopoly, EPC, remains a largely sustainable company as is visible in its financial indicators. The company's net profit rose by 36% to USD 24.7 mln in 2014 despite the decline in power output amid the massive flooding. The government has also embarked on a difficult restructuring process unbundling the mining and power producing units, and creating the EPS Supply wholesaler selling to industrial consumers.

The major SOEE – NIS, has also improved significantly its financial situation since its EUR 400 million take-over by GazpromNeft in 2009. From generating losses of around USD 50 mln per year, the new management has turned profit of over USD 300 mln in 2013. Most of it has come on the back of a USD 750 mln investment on the Novi Sad and Pancevo refinery modernization and oil output expansion. GazpromNeft has expanded its presence in the whole region including in Bosnia, Bulgaria, and Romania after upgrading its refinery capacities to fulfill the stringent EU environmental standards.

Romania has remained the best performer among the selected four countries in terms of the financial outlook of its SOEEs, but it still suffers from the same weaknesses in their governance as result of corruption and mismanagement. Like in Serbia and Bulgaria, the extended preservation of regulated gas and electricity retail tariffs below market levels may undermine the financial stability of the energy companies translating into additional energy security for the country. Romania's biggest electricity supplier and distributor, Electrica SA raised about EUR 444 mln in its initial public offering, selling a 51% stake on the Bucharest and London Stock Exchanges between June and July of 2014, attracting both individual and institutional investors, incl. the European Bank for Reconstruction and Development, which invested about EUR 75 mln for an 8.6% stake in Electrica.²³ The key financial indicators of the Romanian SOEEs demonstrate better short-term liquidity and current assets (cash, inventory, receivables) ratios. However, their long-term financial situation is worse than that of their peers in the region including for Rompetrol, whose current liabilities are already higher than the company's current assets. Among the SOEEs Transgaz SA – the operator of the national natural gas transmission and transportation system where the state has a 58.5% stake – has the best financial performance indicators reporting a net profit of EUR 72.4 mln for the first half of 2015, which is a 9% increase year-on-year.²⁴

²³ Romania's Electrica starts trading in Bucharest and London, EBRD, 4 July 2014.

²⁴ Romania: Transgaz profit up 9% year-on-year, 14.08.2015, <http://www.energyworldmag.com/14/08/2015/romania-transgaz-profit-up-9-year-on-year/>

Transgas was put in the center of the EU-Russia dispute regarding the rules for good governance, transparency and accountability of SOEs, as it was questioned officially by the Energy Community Secretariat for its non-compliance with the transparency requirements outlined in the Third Energy Package and particularly for not publishing Russian transit gas flow data at the entry and exit points with Ukraine and Bulgaria along the Trans-Balkan gas pipeline. Admitting to its non-compliance, Transgaz pointed out that its long-term ship-or-pay contract with Gazprom is preventing it from aligning its transparency policies with the European requirements. Transgaz argued further that any breach of its commercial terms with Gazprom could prompt the latter to instigate litigation, claim compensation, or jeopardize the energy security of the region.²⁵ The Gazprom case reveals one of the permanent weaknesses in the SOEs governance not only in Romania, but across the CEE region, especially where the countries are heavily dependent on Russian energy imports. Russia has successfully used this dominant position on regional markets to influence the decision-making in state-owned energy companies hindering transparency and preventing energy diversification initiatives.

The review of the governance practices of SOEs in the CEE region reveals the existence of bad governance practices that are often the product of wide-spread state capture practices benefitting third-party interests both domestically and in a regional context. The availability and public access to basic information and data on the financial performance and management of SOEs in the selected case studies has ensured and provided a stable basis for further analysis of the companies' weaknesses opening the window of opportunity for proposing additional recommendations for how to improve the governance of the sector.

Policy recommendations:

Improving the governance of the energy sector in the CEE region, including the functioning and management of SOEs requires the following actions:

- Reducing direct involvement of political leadership in the operational management of energy enterprises and instead focus on policy development in the following areas:
 - Improving the long-term strategic planning, with supporting financial instruments to lower ad-hoc decision making in order to ensure non-selective and consistent implementation of energy sector reforms.
 - Tackling state capture and improving transparency and accountability in the sector through provision of public data and widening information disclosure mechanisms, affecting state-owned energy enterprises, regulatory bodies, controlling authorities and policy decision makers.
 - Increasing administrative and financial capacities of the controlling and regulatory state authorities, especially where monopolistic or oligopolistic national markets exist.
- Introducing compulsory corporate governance standards for SOEs following the best international principles such as the OECD Guidelines on Corporate Governance of State-Owned Enterprises. The standards shall ensure reporting and disclosure of data and information regarding:
 - Financial results, implementing the existing practices and methods, used by publicly traded companies;
 - Key financial indicators for monitoring and assessment of the operational management performance;
 - Consistent and comparative reporting of the implemented programs and policies over time, including of the key indicators for monitoring their implementation and for allowing ex-ante, mid-term and ex-post impact assessment.

²⁵ European officials quiz Romania's Transgaz over non-compliance, ICIS, 9.04.2015, <http://www.icis.com/resources/news/2015/04/09/9874102/european-officials-quiz-romania-s-transgaz-over-non-compliance/>

- Enlarging the existing and introducing new long-term programs for improving the energy efficiency in residential and public sectors, as well as the reduction of the energy intensity of the economies in Bulgaria, Serbia, Romania and Ukraine, including through the development of innovative financial instruments of public-private partnerships (incl. involving international financial institutions to implement the best practices of monitoring and impact assessment – e.g. EBRD, EIB, World Bank, IMF, International Finance Corporation, etc.)
- Shift in national energy policies away from developing new generating capacities and towards the fulfillment of EU 2020 targets as a goal in itself towards ensuring the stability and security of energy supply, including through diversification of supply sources and routes and the reduction of energy poverty as one of the major energy security risks in CEE.
- Introducing decision-making procedures for prioritization and selection of large investment projects based on clear and transparent criteria and fact-based analyses, synchronized with the EU and CEE regional priorities.
- Increasing the institutional capacity of the national energy regulators, their independence from political and private economic interests, and the transparency of their decision-making and their accountability to both the national parliaments and the general public.
- Speeding up the liberalization of national wholesale and retail energy markets in order to improve the long-term financial stability of state-owned energy enterprises, as well as implementing the EU Third liberalization package. Tailor market liberalization reforms by synchronizing the energy, economic and social policy of the government to mitigate the negative social impacts such as an increase in energy poverty and price shocks for vulnerable groups.
- Increase the regional coordination and cooperation in the design and implementation of energy policy in CEE through the expansion of the scope of the High Level Group on Gas Connectivity in Central and South East Europe to issues regarding electricity infrastructure and regional energy markets.
- Lowering administrative, regulatory and political burdens at national level to speed up those energy infrastructure projects, which may have regional and European effect, such as the gas interconnectors between Bulgaria, Romania and Greece as part of the Southern Gas Corridor, as well as the establishment of a regional power exchange (e.g. the South East European Power Exchange).

