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## GOOD GOVERNANCE AND ENERGY SECURITY IN BULGARIA

### Policy Tracker: Economic Governance and Performance of the State-owned Energy Sector

2014

#### 1. Introduction

Bulgaria's energy sector is characterized by severe financial weaknesses related to high levels of indebtedness, low profitability and bad governance. The financial outlook of state-owned enterprises has become **increasingly problematic in the 2011-2013 period**. Part of the problem consists in the continuing bad practices of controlling energy prices for end-consumers, which creates large amounts of intra-system debt, which is accumulated on the balance sheets of the state-owned natural gas distributor, Bulgargaz, and the national electricity wholesale supplier, the National Electrical Company (NEC). Bulgaria's energy policy has been driven primarily by compliance with EU directives in recent years. Although progress has been made, with the country's gas and power markets opening to competition in July 2007, Bulgaria is still some distance from having a truly competitive energy sector. Energy prices are determined by the State Energy and Water Regulatory Commission (SEWRC), which has a mandate to regulate the electricity and gas sectors and awards licenses for generation, transmission, and distribution

of gas and power. It is also responsible for developing and implementing a tariff- and price-setting methodology for electricity, gas, and heating and for approving tariff proposals submitted by companies in the energy sector.

Additionally, scarce public information on the involvement of certain state-owned enterprises in large energy infrastructure projects suggests that state energy companies are overloaded with enormous (in terms of both size and cost) infrastructure projects and burdened by social functions that restrict their investment opportunities. The lack of capacity to manage large projects in order to identify and mitigate project risks signifies management collapse in favour of draining the state-owned enterprises for the sake of linked economic corporate circles. An overview of the financial health of the largest energy companies reveals a desperate need for liquidity and a reform of the pricing method to abolish destabilizing subsidies, improve debt collection and the energy mix, and invest in the minimization of power distribution losses. The financial health of state-

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owned enterprises has deteriorated in 2011-2013 period as all the critical financial characteristics show worsening of the stability of the companies. Moreover, the lack of transparency in the governance of SOEs allows for the conclusion of economically unviable investment deals such as the NPP Belene project or the HPP Tsankov Kamak.

The lack of transparency of governance creates a huge uncertainty over the predictability of cash flows in and out of NEC. Moreover, NEC's indebtedness has been a major hurdle in the process of unbundling the Electricity System Operator (ESO) from NEC,<sup>2</sup> which is an EU requirement for liberalization (as per the Third Energy package) that ought to happen by March 2011, and for which Bulgaria is facing an infringement procedure for a failure to comply with EU regulations. In the natural gas sector, Bulgargaz continues to face external trouble as it needs to import Russian natural gas at some of the highest prices in Europe. Internally, the national gas distributor faces increasing competition from the privately-owned distributor, Overgaz, which now controls more than 60% of the distribution market in the country. Main gas supplier, Gazprom, holds the controlling stake in Overgaz contributing to the two-edged dependency on external energy influence. In addition, since both residential and industrial gas prices in Bulgaria are lower than the EU27 average, rising import prices from Russia have contributed to the growing debt of Bulgargaz. A more detailed overview of the financial problems of the SOEs in the energy sector is to be discussed below.

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<sup>2</sup> It is foreseen that NEC will be involved in electricity production and trade only, while ESO will be responsible for electricity transmission and management of the network.

<sup>3</sup> Note: Excludes big state-owned HPP; overall share of renewables in the energy consumption of the country –

## 2. Overview of Bulgaria's domestic energy organization

Bulgaria's energy sector is dominated by the state-owned Bulgarian Energy Holding (BEH), created in 2008, bringing together a number of entities including coal producer Mini Maritsa Iztok, lignite power plant Maritsa East 2, nuclear plant Kozloduy, National Electric Company (NEC), Electricity System Operator (ESO), telecommunications company Bulgartel, and the two gas companies Bulgargaz and Bulgartransgaz. Bulgargaz EAD is the state-owned natural gas supplier; and Bulgartransgaz EAD is in charge of transmission and storage of natural gas and operates Chiren, the only underground gas storage facility in the country.

Despite the mandatory process of EU liberalization that started in July 2007, only roughly half of the power market is open to competition. Household consumers and small businesses with less than 50 employees cannot choose their electricity provider and they are charged at regulated prices fixed every six months by SEWRC. The price is determined via a careful balancing of the energy production mix, which has become an increasingly difficult process lately with the existence of around 1.89 GW of renewable energy capacity (8% of the total power generation in the country)<sup>3</sup>. Due to the government's commitment of subsidizing power consumption to the poorer segments of the society, SEWRC often mandates prices below cost of production. At the same time, NEC is obliged to purchase the electricity generated by renewable energy sources at high fixed feed-in tariffs written down in long-term contracts. The latter also apply to electricity produced by the two independent coal

16.46%. "Renewable sector in Bulgaria: conditions, challenges and perspectives", Community Council, Ministry of Economy, Energy and Tourism, April 17<sup>th</sup>, 2013

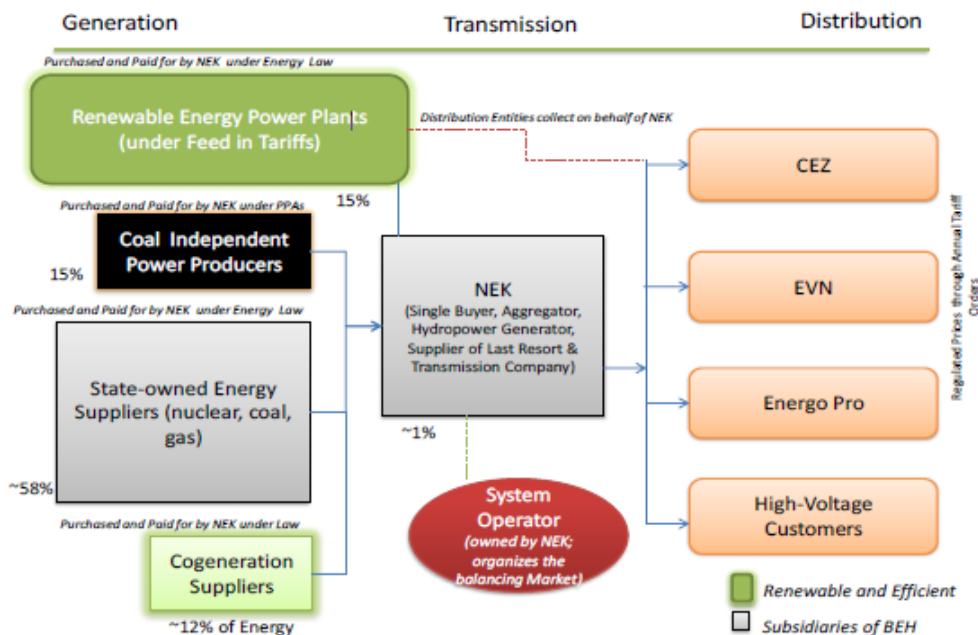
power plants, the 900-MW Maritsa East 3 owned by Contour Global and the 670-MW Maritsa East 1. Meanwhile, NEC is also obliged to buy out the electricity generated by the co-generation facilities, which sell their power at preferential tariffs and buy back electricity for their own use at the regulated market prices, which leads to inefficient cross-subsidization that hits directly NEC. The national power distributor has accumulated debt of more than BGN 2.5 billion, which is partially owed to the inefficiency in the system and partially to the investment in the mega projects – NPP Belene and HPP Tsankov Kamak.

Liberalization in the natural gas sector is also proceeding slowly. Following EU accession in 2007, Bulgaria had to implement the Second Gas Directive, which stipulated that the state-owned natural gas supplier, Bulgargaz has to be unbundled. The restructuring led to the creation of the Bulgargaz Holding EAD, and the business was split off into newly established, separately-owned companies: Bulgartransgaz EAD and Bulgargaz EAD. The former has played the role of the Transmission System Operator

(TSO) transiting the natural gas via the Transbalkan pipeline and distributing natural gas to domestic consumers. The latter was, until 2012, the de-facto monopoly wholesale supplier on the natural gas market in Bulgaria. An amendment to the Energy Law from July 2012 has allowed gas customers to independently choose their supplier, and hence remove Bulgargaz as a sole intermediary selling natural gas to its customer, including its main competitor, the largest private natural gas distributor, Overgas EAD, owned by Overgas Holding (50%), Gazprom Export (49.51%), and Gazprom (0.49%).

While the market has been liberalized since 2007, Bulgargaz has been able to prevent competition in the distribution of natural gas by purchasing in advance the whole transit capacity at the Romanian

**Figure 1. Structure of the electricity system in Bulgaria by the end of 2013**



Source: World Bank, Report on Bulgaria’s Energy Sector, May, 2013

border.<sup>4</sup> On 15 November 2012 Gazprom Export, a subsidiary of Gazprom, signed a new 10-year take-or-pay contract with Bulgargaz for the deliveries of 2.9 bcm/y to Bulgaria. The new contract adopted the changes in the Energy law from July 2012 and removed the natural gas intermediaries allowing for de-facto competition on the domestic market. Private distributors like Overgas or Citygas can conclude natural gas delivery contracts directly with Gazprom without passing first through Bulgargaz. The result of the EU liberalization has been a double-edged sword for Bulgargaz and Bulgarian consumers. On the one hand, the liberalization of the Bulgarian internal market would allow consumers a direct choice of a gas provider, but on the other, it imposes further pressure on the financial health of Bulgargaz, which will continue to lose market share. By the end of 2012, Overgas with all of its subsidiaries controlled 65% of the natural gas distribution market, and close to 35% of the total amount of gas consumed.

While liberalization of the natural gas market is taking place de jure (as per the Third Liberalization Package the third-party access to the Bulgarian gas transmission network is permitted) the sector as a whole is still not unbundled. The largest Bulgarian distribution company, Overgas, the majority share of which is owned by Gazprom and its subsidiary Gazprom Export, violates the condition that the owner of the natural gas resource cannot also be the owner of the distribution company. In this respect, the Bulgarian gas sector remains dependent on one source of gas, and in the near future possibly also on one distribution entity.

The status-quo can change if BEH accelerates investment in the construction of regional gas interconnectors, in the expansion of the Chiren gas storage facility and the construction of new ones. The regional gas links can provide access to new alternative

energy sources via LNG terminals in Turkey and Greece, on the one hand, and via new natural gas supply from Azerbaijan from the Trans-Adriatic Pipeline (TAP). Market liberalization via diversification of the gas sources can be achieved also by the development of local natural gas production. Efforts have already provided Bulgaria with limited success in the Black Sea shelf where the Irish company, Melrose, is exploiting two offshore fields, while Total in a partnership with OMV and Repsol are exploring up to 80 bcm of natural gas reserves in the Khan Asparuh offshore block. In addition, the seismic studies by international oil companies like Chevron and Direct Petroleum, as well as an independent study by the US Energy Information Administration, have revealed that Bulgaria may hold between 300 and 450 bcm of shale gas reserves. At this point, the development of these resources is impossible as the previous government of "Citizens for European Development of Bulgaria" (GERB) imposed a moratorium on shale gas exploration and development in response to the protests of environmentalists.

### 3. Financial Tracker

An overview of the financial performance of BEH enterprises shows that NEC, ESO and Bulgargaz are loss-making companies for 2012. As per Q3 2013, the three companies are still characterized by challenging financial situation. In 2012, Bulgargaz registered losses amounting to BGN 113 million, while NEC's financial loss amounts to more than BGN 94 mln. Short of BEH's temporary rescue loans, both Bulgargaz and the NEC are dependent on prices for natural gas and electricity. State-regulated prices (kept artificially low) and the absence of market-based pricing are serious hurdles to bettering the financial conditions of both enterprises. Electricity

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<sup>4</sup> "Bulgargaz already has competition", Capital, November 23, 2012

prices for the final consumer are the lowest in the European Union (EU), and although NEC tries to compensate some of the losses incurred by the fixed power tariffs via selling electricity to the clients on the liberalized market, this is hardly able to eliminate all the financial losses of the national power supplier.

Adding to these, NEC's poor financial results can be directly attributed to its involvement in massive fraudulent infrastructure projects like NPP Belene and HPP Tsankov Kamak. As per Q3 2013, NEC's long-term debt approximates BGN 627.2 mln due to outstanding loans for investment projects realized by NEC, while the financial indicators of the company suggests that merely 4% of the current expenses are readily payable.<sup>5</sup> The World Bank (WB) in its report on Bulgaria's power market in May 2013 pointed to 6 main reasons for the financial unsustainability of the state electricity companies.<sup>6</sup> WB noted that there is overcapacity for power generation but due to administrative constraints it is difficult to export the excess electricity despite favorable market conditions. This creates the paradox that the NPP Kozloduy and the large coal power plant, Maritsa East 2, are oversupplying the domestic market, which means that at times of low they have to switch off part of the capacity to prevent a system's breakdown.

The bottleneck of Bulgaria's export was caused by the existence of a surcharge on the access to the power grid. Second, WB identifies that SEWRC is allocating the power generation quotas to the regulated market inefficiently, which causes distortions in the production profile of generation facilities. The regulatory authorities attempt to balance the interests of different generation facilities by prioritizing the purchase of power from the independent coal plants, the cogeneration plants and the renewable sources including the wind farms and the photovoltaic plants.

The regular has accommodated the rapid expansion of renewable energy capacity by including them in the electricity system at high preferential feed-in tariffs. Similar effect can be identified when observing the financial effects of the long term power purchase contracts with the renewable producers and the AES and Contour-based independent power plants, as well as the mandatory purchase of the electricity generated by the co-generation facilities.

Another major contributor to the worsening of the financial health of the state power companies is the poor management of NEK and ESO's liabilities. The major gaps in the management encompass the lack of transparency in the allocation of public procurement funds for the investment in energy infrastructure; the divergence between market trends in the renewable generation sector and the planning for additional renewable facilities creating regional excess capacity in the South-and Northeastern parts of the country. Moreover, the Bulgarian energy regulator has delayed the start of a balancing virtual power market, which will facilitate the growth of the liberalized market segment.

**On the natural gas side, the financial situation in Bulgargaz remains difficult.** The state regulator, SEWRC, cut gas tariffs by around 10% in Q1 2013 and by another 3.89% in Q2 on the back of lower import prices and a more favourable USD/BGN exchange rate. SEWRC has also continued squeezing the company's profit margins, so that the gas price for domestic consumers remains one of the lowest in the EU. Meanwhile, the domestic supply fell by 18% y/y in Q1 2013 on the back of declining industrial activity. In addition, the Bulgarian heating and power companies owe Bulgargaz around 300 mln leva for delivered gas because they are unable to collect

<sup>5</sup>National Electric Company. 2012. "Annual Report 2012".

<sup>6</sup> "Power Sector Rapid Assessment of Republic of Bulgaria", The World Bank Europe and Central Asia region, May 27<sup>th</sup>, 2013

unpaid bills by customers in large cities. The start of the South Stream pipeline at the end of 2013 will further expose the company to a long-term financial risk. As one payment option, the company mulls using future transit fees as leverage. The gas distributor has tried to stabilize the financial situation by sharply decreasing imports from Russia in Q1. In addition, the company plans to borrow up to USD 150 mln to purchase the natural gas necessary to fill the storage facility at Chiren. SEWRC and Bulgargaz have also negotiated to keep the gas tariffs practically unchanged until the end of 2013, which will give the gas monopoly some breathing space. Nonetheless, it will be difficult to maintain long-term financial stability if the government does not stop subsidizing gas tariffs at the expense of Bulgargaz hoping for a drastic change in Bulgaria's dependence on expensive gas imports.

Furthermore, the entry into force of the EU rules on the liberalization of the gas market create the conditions for another gas distribution monopoly by Overgas that threatens to price out Bulgargaz EAD unless Bulgaria applies for derogation until alternative supply routes and sources are made available. Hence, the Bulgarian gas sector faces a paradox that its liberalization and the implementation of European energy legislation will in fact contribute to the worsening of Bulgargaz's financial health and its continued financial reliance on the gas network operator, Bulgartransgaz. The latter sustains itself financially as it receives the gas transit fees from the Greece, Turkey and Macedonia-bound pipelines with the capacity to ship up to 17 bcm per year of Russian gas. According to the audited financial statement of the company, Bulgartransgaz received around USD 114 million (BGN 172 million) in revenues from transit fees<sup>7</sup>. Although under the rules of the Third

Liberalization Package of the EU, Bulgartransgaz is physically and legally separated from Bulgargaz, de facto the latter has become a cash cow for the Bulgarian Energy Holding to cover losses in some of its subsidiaries including Bulgargaz and NEC.

In the long term, similar transfer of funds between the different subsidiaries is unsustainable. The situation may become even more complicated when the South Stream pipeline comes online. The Gazprom-led project will partially circumvent Ukraine in the transit of natural gas to the EU, which will gradually eliminate the transit via Bulgaria on the old Druzhba pipeline. South Stream is planned to ship 63 bcm of natural gas per year but it is likely to be launched in stages. They will be four lines comprising the project with each pipe carrying up to 15.75 bcm per year. Making an analogy with the Nord Stream pipeline with a current utilization rate of 43% (with full capacity of 55 bcm), South Stream is unlikely to be fully utilized unless Gazprom terminates fully the transit through the Ukraine pipeline system.

### 3.1 Specific financial analysis

Within BEH, state-owned enterprises that revealed positive financial results at the end of 2012 are the coal-fired power plant Maritsa East 2, the Maritsa East coal mines (despite reductions in extracted coal quantities), and NPP Kozloduy. However, together with NPP Kozloduy, TPP Maritsa East 2, and Mini Maritsa East, NEC has high level of short-term liabilities, while all companies, except Bulgartransgaz and the BEH, are characterized with low levels of free cash flow availability. The level of "free cash flow" is a telling financial indicator (even more so than net income/profit/loss<sup>8</sup>), as it reveals the amount of cash

<sup>7</sup> 2012 Financial Statement by Bulgartransgaz, [http://www.bulgartransgaz.bg/files/useruploads/files/financial\\_reports/financial\\_statement\\_signed.pdf](http://www.bulgartransgaz.bg/files/useruploads/files/financial_reports/financial_statement_signed.pdf)

<sup>8</sup> "Net Income"

is determined by subtracting the company's total expenses from

the company's total income to determine how much money the company has to spend, while "Free cash flow" indicates cash available for discretionary spending.

available to the company for discretionary spending (like future investments). The Bulgarian Energy Holding (BEH) itself reports expected profit of BGN 36 million for 2012.<sup>9</sup> While created in 2008 as a structure to improve the process of governance of state-owned energy enterprises, the Holding has since had a life-support role for poorly governed state enterprises. For example, in 2008-2009, the Holding's capital was increased with € 204,5 mln to enable investment in and repayment of Toplofikacia Sofia's (the capital's central heating system) debt to Bulgargaz. In exchange, the Holding was to become a majority shareholder in Toplofikacia Sofia, yet, as of 2013, procedures rendering the Holding a majority stakeholder in the capital's central heating system have not been completed.<sup>10</sup>

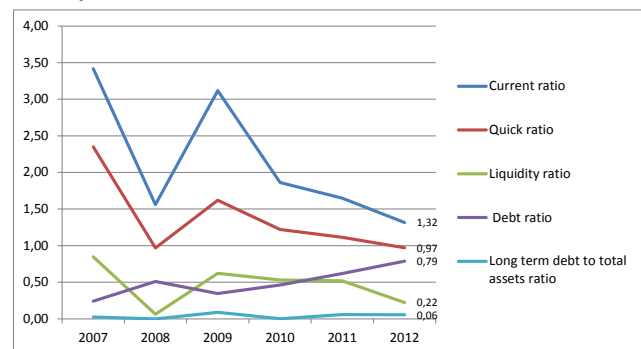
In addition, it is also often the case that BEH redistributes from better performing companies to poor performers which alongside the mandatory prepayment of dividends to the budget (introduced by former Finance Minister Simeon Dyankov - 80% dividend mandatory repayable to the budget) has drained the coffers of BEH and its companies of liquidity and investments. Better-performing state-owned energy companies pay the bulk of their profits as dividends to BEH, which, in turn, offers low-interest-rate loans to the laggards. For example, in 2008, BEH offered a revolving credit line to Bulgargaz, the decision for which has been renewed and, as of 2013, this practice continues. In 2009, BEH provided a loan to Mini Martisa East from the Holding's funds intended for investments to cover the mining company's current expenses. Further, another BGN 103 million also purposed for investments were transferred to NEC to cover outstanding loans for HPP Tsankov Kamak.<sup>11</sup>As

these practices seem to fall short of sustaining the Holding, BEH raised EUR 250 million through the issue of a corporate bond at the end of October 2013. BEH will use the bulk of the raised funds (EUR 195 million) to cover bridge financing provided by Citigroup to finance the repayment of a loan from BNB Paribas to one of BEH's subsidiaries. The remainder will be reportedly used to cover deficits of subsidiary companies and for building a new gas pipeline.

### 3.2 Financial data interpretation

The financial results NEC and Bulgargaz have deteriorated after 2007. Above all, levels of liquidity and quick access to cash and callable resources have significantly eroded, while debt has been re-accumulated. The very ability of the state-owned companies to repay short-term and long-term obligations has been put at risk. NEC is in a state of technical insolvency, while Bulgargaz is also in a particular challenging financial situation (Figure 2 and Figure 3).

**Figure 2. Bulgargaz Financial Ratios (2007-2012)**

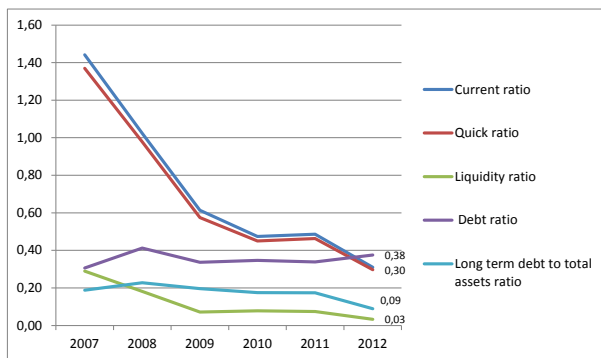


Source: CSD, based on Ministry of Finance data

<sup>9</sup> "Capital" newspaper, December 12, 2012, [http://www.capital.bg/biznes/kompanii/2012/12/20/1973562\\_beh\\_ochakva\\_pechalba\\_ot\\_36 mln\\_lv\\_za\\_2012\\_g/](http://www.capital.bg/biznes/kompanii/2012/12/20/1973562_beh_ochakva_pechalba_ot_36 mln_lv_za_2012_g/)

<sup>10</sup> Public Financial Inspection Agency. 2009. "Report on Carried Out Financial Inspection of the Ministry of Economy, Energy and Tourism".

<sup>11</sup> BEH. 2011. "Annual Report of the activities and a Financial Report"; PFIA. 2009. "Report on Carried Out Financial Inspection of the Ministry of Economy, Energy and Tourism".

**Figure 3. NEC Financial Ratios (2007-2012)**

Source: CSD, based on Ministry of Finance data

- The current ratio** of a company is the ratio of current assets to current liabilities. It shows the company's ability to meet its short-term liabilities (debt and payables) with its short-term assets (cash, inventory, receivables). The higher the current ratio, the more capable the company is of paying its obligations. A ratio under 1 suggests that the company would be unable to pay off its obligations if they came due at that point. NEC's current ratio is well beyond 1 – 0.30, while Bulgargaz results are slightly better and above the technical bankruptcy threshold with 1.32 current ratio. Both NEC and Bulgargaz show extreme deterioration in the last few years as their current ratio levels have decreased by 78.5% and 61.4% respectively compared to levels in 2007.
- The quick ratio** is an indicator of a company's short-term liquidity. The quick ratio measures the company's ability to meet its short-term obligations with its most liquid assets. For this reason, the ratio excludes inventories from current assets, and is then divided by current liabilities. The quick ratio measures the amount of liquid assets available for each unit of current liabilities. Thus, a quick ratio of 1.5 means that a company has \$1.50 of liquid assets available to cover each \$1 of current liabilities. The higher the quick ratio, the

better the company's liquidity position. Quick ratios of both NEC and Bulgargaz are below 1 – 0.37 showing that the companies have very limited access to liquid assets and would need external financing if they were to pay creditors at the current moment. Negative trend of constant decrease in the ratio value is witnessed in the 2007-2012 for both companies.

- The liquidity ratio** expresses a company's ability to repay short-term creditors out of its total cash. The liquidity ratio is the result of dividing the total cash by short-term borrowings. It shows the number of times short-term liabilities are covered by cash. If the value is greater than 1, it means fully covered. Liquidity ratios of NEC and Bulgargaz stand considerably below 1 0.03 and 0.22 respectively. Negative trend of constant decrease in the ratio value is witnessed in the 2007-2012 for both companies.
- The debt ratio** is a financial ratio that measures the extent of a company's leverage. The debt ratio is defined as the ratio of total debt to total assets, expressed in percentage, and can be interpreted as the proportion of a company's assets that are financed by debt. The higher this ratio, the more leveraged the company and the greater its financial risk. Debt ratios of NEC and Bulgargaz are below 1 but there is a negative trend of constant increase in the ratio values witnessed in the 2007-2012 for both companies. There are suspicions that the actual debt/assets ratio could be distorted by assets not being properly revalued to market benchmark (i.e. they are kept artificially overvalued – asset value is reflecting different aspects – book value –



market value – liquidation value (against the background of worsening revenues forecasts)

**This is critical to understand- Also some of the assets are liabilities or not reconciled losses – Belene.**

- **Long-term debt to total assets ratio** is a measurement representing the percentage of a corporation's assets that are financed with loans and financial obligations lasting more than one year. The ratio provides a general measure of the financial position of a company, including its ability to meet financial requirements for outstanding loans. A year-over-year decrease in this metric would suggest the company is progressively becoming less dependent on long-term debt to grow their business and vice versa. The latter is the case with Bulgargaz and NEC as long-term debt to total assets ratio is the only indicator that yields slightly positive results for the two companies, possibly indicating the existence of buffers for long lending as a way out from the particularly difficult financial situation.

#### 4. Regulatory and legal tracker

The management of Bulgaria's state energy companies is marked by very inconsistent legislation, which undermines the predictability and sustainability of decision-making in the energy sector. This is clearly visible by the many changes to the country's energy laws in a short span of time. There were eight changes in the main energy law for the 2012-2013 period including three amendments to the power tariffs to household and business consumers. Some of the legal changes constitute legislative U-turns as they directly reverse previously set laws and proclaimed goals. With the changes in the "Energy Law" as of **17<sup>th</sup> July 2012**,<sup>12</sup>

EU's "Third Liberalization Package" requirements for liberalizing the natural gas and electricity markets were adopted as part of national legislation, including increasing the discretionary power of the regulator (State Energy and Water Regulatory Commission /SEWRC/). On **28<sup>th</sup> February 2013**,<sup>13</sup> in the aftermath of the social crisis that occurred as a backlash to high electricity bills in January 2013, changes in the Energy Law were promulgated, that provided ample opportunities for political influence and in fact started unleashing state regulatory power at the expense of SEWRC's independent discretion. A Public Council supervising the work of SEWRC was created and a new rule about setting electricity prices for the regulated market more than once per year (practically unlimited), as opposed to the power given with the establishment of SEWRC to set prices only once per year, was voted by Parliament. New emergency measures were introduced during the Caretaker's government in the period between March 2013 and May 2013. These measures mainly focused on developing a new approach to energy sector management, including changes in price formation model and temporary alleviation of electricity price burden through limiting consumption of renewable energy and co-generation production, and reducing "cold reserves" capacity. On **5<sup>th</sup> July 2013**,<sup>14</sup> another major redrawing of the main energy law was adopted, formulating another approach alteration to regulated electricity price formation, leading to a 5% reduction in prices. The proposed reasoning behind the legislative change of July 2013 could be summarized as follows:

- reviewing the existing rules on feed-in tariffs in order to ensure that they are not economically unjustified, discriminative, and obstructive to electricity export;

<sup>12</sup> State Gazette, Issue 17 July, 2012

<sup>13</sup> State Gazette, Issue 28 February, 2013

<sup>14</sup> State Gazette, Issue 5 July, 2013

- removing 'green' and 'brown' surcharge (feed-in subsidies) on the export price of electricity;
- reviewing the level of "cold reserves" in order to avoid unnecessary redundancy of capacity, obliging the network operator ESO EAD to buy all cold reserve necessary through open and transparent tendering procedures;
- limiting volumes of electricity production in cases of overproduction;
- introducing efficiency monitoring for electricity production of combined heat and power (CHP) cogeneration as per energy efficiency criteria in national and EU legislation;
- liberalizing sale of greenhouse emissions allowances in order to subsidize the electricity producers and increase energy market liquidity

The legal changes of July 2013 represented the third consecutive price formation model modification and according price update in less than 12 months, following changes from July 2012 and the changes prepared by the Caretaker government in the spring of 2013. As proclaimed by the government, the July 2013 changes targeted reduction of household prices and increase in market liquidity through export facilitation; however, it has been also severely criticized for failing to address a number of existing issues while creating other problems, including but not limited to:

- assuming unrealistic incomes of BGN 498m from sale of CO2 emissions for 2013, while most optimistic projections show BGN 135m – BGN 150m per year
- wholesale price reduction of Kozloduy NPP power, explicitly at the expense of investment program execution (decapitalization)

- continued subsidization of non-efficient CHP co-generation plants (in particular Brikel TPP and Bobov Dol TPP)
- occurrence of two types of revenue streams (one for produced electricity and one for availability) for the electricity produced by TPS AES Galabovo (Maritsa East 1) and Contour Global Maritsa East 3 TPP, as the guidelines practically allow for the electricity produced by these two plants to be once paid by the state due to a 82% - 85% mandatory state purchase quota and then purchased by CHP plants and re-sold through CHP feed-in tariffs;

The last energy law change did not try to directly tackle the main problem of financial misbalance of the sector, which leads to the systemic increase in the indebtedness of NEC and the regional distribution companies. The SEWRC neglected the fact that by decreasing end-prices for households, it removes the ability of NEC to cover the purchase of the electricity produced by renewable sources. Until the middle of March 2014, the regional distribution companies were responsible to covering the renewable costs but they have terminated payments to NEC amounting to around BGN 500 million<sup>15</sup>. SEWRC threatened the power distributors that unless they pay their debts to NEC within 3 days, it can revoke their licenses. The problem is rooted in the fact that the renewable energy capacity boom after March 2012 led to the inability of NEC to sustain the high fixed tariffs. Since it could not revoke its obligations to the renewable producers, the SEWRC obligated the distribution companies to pay for the renewable energy generated by the capacity above the one existing in March 2012. The regional distributors were compensated by the state via a grid access fee that renewable producers had to pay to

<sup>15</sup> "Energy in collapse", Capital Daily, March 17<sup>th</sup>, 2014

ESO after a change to the law in September 2012. However, the excess fee was successfully challenged by renewable companies in the High Administrative Court, which meant a return to the status-quo and the distributors' repayment of the taxes they previously collected, an outcome that severely undermined the financial stability of the power distributors<sup>16</sup>.

At this juncture, from January 1<sup>st</sup>, 2014, DKEVR imposed a grid access tax of BGN 2.45 per MWh for the solar and wind power plants only, whose goal is to cover part of the deficit of NEC. The interest groups defending the renewable producers vowed to challenge the tax again in court, which is likely to end with another reversal by the court. The amendment of the energy law from July 2013 tried to cover the financial gap in NEC by earmarking between BGN 150 and 250 million from the sale of CO<sub>2</sub> emission certificates<sup>17</sup>. However, this amount is largely unable to cover NEC's losses from the purchase of renewable energy, which means that a much more comprehensive energy law reform is necessary if the system is to remain solvent.

The often change in the energy legislation and the constant urge to balance all the interest groups involved in power generation and distribution is not only nontransparent, but can provoke unexpected errors in the decision-making undermining the stability of the whole system. Inconsistency of decision-making and lack of predictability of the direction of energy reform remove the incentive for companies to invest in rehabilitation of the existing infrastructure, the construction of new generating capacity and the improvement of the quality of the services.

## 5. Management tracker

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<sup>16</sup> Ibid

<sup>17</sup> "Revenue from the sale of emission certificates can be between BGN 150 and 250 million", OffNews, July 10<sup>th</sup>, 2013

Good governance is not limited only to the financial and regulatory conditions prevalent in the sector but includes also the direct management of state enterprises, including on a human resources level. The state-owned Bulgarian Energy Holding (BEH) has compromised the transparency in its management for the sake of promoting specific interests. Prevalent conflict of interest is not the only characteristic of the state management style. The government is also preventing the independence of the state energy regulator in order to push through legislation that keeps power tariffs artificially low.

One has also witnessed the widespread involvement of political leaders in the operations of energy enterprises. In the last 2 years, BEH has adopted the practice of constantly shifting and changing the directors and executive managers of the energy companies according to party interests, on the one hand, and according to specific interest groups to be defended at the key moments. This trend in managing human resources has been prevalent throughout the 2000s but became more pronounced during the last two governments of GERB and the current ruling coalition of BSP and MRF. NEC already has had 6 different managing directors within 12 months. Bulgargaz changed its top executive twice in 2013, while in one year, BEH has had three directors. In total, there have been 34 changes to the managing bodies of the Bulgarian state-owned energy enterprises in the last 5 years. Half of these happened in 2013 amid a period of energy protests, change of government and increasing destabilization of the power system of Bulgaria.

The frequent change of the top management of energy companies has predisposed their lack of independence from political influence and has made the corporate strategy very inconsistent, often

marked by inadequacies prompting financial and regulatory deficiency in their management. The ultimate result of state capture of the Bulgarian energy system is becoming more and more visible as NEC and Bulgargaz strive to stay afloat amid deteriorating energy balance.

**Table 1. Number of changes to the management body of the Bulgarian Energy Holding (BEH) and its subsidiaries**

	2009	2010	2011	2012	2013	Q1/2 014	Total
BEH	-	-	1	-	1	1	3
NEC	1	1	-	-	2	1	5
Bulgargaz	1	1	-	-	2	-	4
Bulgartransgaz	1	1	1		1		4
NPP Kozloduy	1	1	1	1	1		5
Maritsa Iztok 2	1	-	-	-	1	-	2
Mini-Maritsa Iztok	2	-	1	-	1	1	5
ESO	-	-	-	-	3	-	3
SEWRC	-	-	-	-	3	-	3
<b>Total</b>	<b>7</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>15</b>	<b>3</b>	<b>34</b>

Sources: BEH, ESO and Capital Daily

The independence of the state energy regulator has been questioned as the state meddles in the decision-making of SEWRC. Instead of providing an objective balanced approach towards the energy system, the regulator often follows the mandate of governments

to decrease or maintain electricity prices at artificially low levels. The political crisis that ensued after the protests in February 2013 showed how the government can use its leverage over SEWRC to push a tariff decline announcing the price cut before SEWRC has officially taken any decision.

At the same time the government attempts to place the blame for the misbalance in the system on the decision-making of SEWRC. The latter, on the other hand, does not follow a specific accounting guidance for the state utilities, and does not use the cost of generation or distribution as a point of reference for energy prices. Some of the decisions of the SEWRC do not follow any market logic, and the regulator is often used as a political tool to punish a market participant that does not conform to the political stance prevalent in the country in the moment. Hence, there has been a constant change in the principle for allocation of generation quotas to the regulated market, where efficiency is not the criterion.

On a human resource level, SEWRC is simply understaffed having only 128 experts working at very low salaries determined by one of the lowest budgets in the EU. The staff and inventory expenditures were severely limited by an amendment to the energy law from May 18<sup>th</sup>, 2012<sup>18</sup>. The government continued to expand its role in the managing the appointments of the regulator with a law from 17 July, 2012, which allowed for direct government appointments<sup>19,20</sup>. The last major energy law amendment from July 5<sup>th</sup>, 2013, also changed the way SEWRC works by mandating the regulator to guarantee end-consumer protection and a balance between production and demand of

<sup>18</sup> Law for the amendment and supplement to the Law for the Civil Servant, Additional Decrees, State Gazette Issue 38 from 18 May 2013, p.23, para 41.

<sup>19</sup> Law for the amendment of Energy Law - Paragraph 7

<sup>20</sup> Article 11(2) of Energy Law

energy in the internal market<sup>21</sup>. Further amendments remove the power of the Commission to control the electricity prices between energy producers and end suppliers and thermal energy prices between producers and heating system utilities and their customers, however it is allowed to control the price (component), through which all customers participate in public expense compensation.

## 6. Conclusion

The Bulgarian state energy regulator is under enormous financial pressure as the state energy regulator, SEWRC, tries to find the right formula to allocate the generation quotas on the regulated market and determine how to finance the high feed-in tariffs for renewable power generation and expensive co-generation power. The sector's large financial deficits undermine the stability of the system and prevent the consistent investment policy by the Bulgarian Energy Holding (BEH). The public trust in the state-owned companies and in the energy regulator is at all-time low as it is becoming apparent that there is a strong link between the management of energy companies and the political situation in the country.

State capture of the energy sector is visible in the frequent changes to the energy law, which lack predictability or do not follow efficiency logic or cost benchmarking. Instead there is a political effort to maintain power tariffs at artificially low levels to calm down social tensions. Despite the government's strategy energy poverty is still prevalent, while energy efficiency remains a distant goal. The state has created artificial incentives in the form of unsustainable subsidies for specific energy producers at the cost of the financial health of the state-owned generation companies including Maritsa Iztok 2 coal power plant and the NPP "Kozloduy".

Instead of managing the power system proactively, the last two governments have enacted legislation that is either serving a specific interest group or is directed towards a concrete issue without taking into account the impact of one legal change on the whole system. Large – scale activities taken in the last 10-15 years, including big investment projects, involvement in international pipelines and renewable energy development have not been managed efficiently and have led to loss of national wealth. They have often been the result of state-capture deficiencies of policy-making in the sector.

In addition to state capture and legislative volatility, the energy sector has been the victim of inefficient management including of the human resources and appointments, which has brought NEC to a technical insolvency without government support, and has deteriorated the financial health of Bulgargaz, among other energy majors. Bulgaria's government is overwhelmed by third party initiated projects, side-lining own planning and investment needs and leading to subordinate treatment of energy security focus projects such as interconnectors and storage facilities, gas and power exchange, energy efficiency and energy saving.

Moreover, the independence of the state regulator has been compromised making SEWRC the victim of constant lobbying activity, political pressure and frequent changes of leadership. Understaffed and underbudgeted, the regulator can hardly keep up with the complexity of the power system. It is also exposed to a lot of public pressure and blame for the problems in the sector, while it is not provided with the tools to adequately influence the current system.

## 7. Policy Recommendations

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<sup>21</sup> Law for the amendment and supplement of the Energy Law, State Gazette Issue 59 of 5 July 2013, p. 1.

- The current model of centralized administration and excess electricity production creates strong incentives for corruption and financial abuses at the expense of state-owned enterprises and, ultimately, end users. The current model should give way to decentralized production, sensible liberalization of the energy market, and adequate mechanisms to cushion vulnerable energy poor groups against the transition.
- There is a need for an emergency bailout plan for Bulgaria's energy sector in order for extreme catastrophic scenarios to be avoided and controlled wind-down followed by subsequent market restructuring and technology upgrade of main system's inefficiencies to be implemented.
- The independence of the state energy regulator has to be guaranteed by excluding the role of the government in the appointments of the board.
- The market has to be gradually liberalized to account for an efficient allocation of the generation capacity among all of the energy players in the system.
- Power tariffs have to be determined by the cost functions of generation facilities with an adequate investment margin, so that the national supplier, NEC, does not have to cover the losses on the purchasing contracts. The rise in prices has to be buffered by an increase of energy poverty assistance to targeted social groups.
- Human resource management has to be guided by strict principles that eliminate conflict of interests and allow for the most qualified experts to take over the top management positions.
- The state has to distance itself from the energy sector by removing inefficient incentives that foster speculative investment. It has to proceed with the creation of an effective

virtual energy market allowing for more competition. The ultimate result should be that the end consumers can choose their power supplier independently.