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CAPTURED ENERGY MARKET OPERATION AND LIBERALISATION EFFORTS²

The article examines several developments in the energy sector in Bulgaria through the prism of the "capture" theory ("interest groups" theory), and regulatory capture in particular. It argues that captured state interventions or the lack thereof lead to inefficiencies in the utilities and to socially inferior results, especially in a highly concentrated market, intensive public ownership and questionable NRA independence context. They are liable to hinder effective market liberalisation and green transition efforts.

Keywords: regulation; capture; liberalization; energy JEL: L51; L94; L95

Introduction

Why do governments intervene in the economy? Traditionally, public service sectors, like the energy sector, are considered to present rather strong market failures compared with other sectors. Utilities involve considerable infrastructure investments and entail significant social, political, security and environmental concerns, that is why during the last century, they were mainly provided by vertically integrated State-owned undertakings. Certain challenges related to the productive and planning capacities of the governments made the doctrine question whether the costs of State intervention may not exceed the costs of the market failure to be fixed. Moreover, it crystallised that natural monopoly characteristics are not typical for the whole vertical production chain, and that parts of the service may be open to competition through unbundling techniques.

Following developments in the telecommunications sector, the EU started liberalisation of the energy sector. This transformation covered both the electricity and the gas sectors. Although it was possible to open/subject some parts of the vertically integrated sections (like generation and supply) to competition, some activities (like transmission and distribution) continued to present monopoly characteristics or dominant market position despite the liberalisation efforts. Introducing effective competition in the energy sector proved to be a challenging task and required the development of significant new legislation through

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consecutive regulatory packages. Furthermore, technical and market evolution revealed shortages that needed to be corrected by further regulatory efforts. As a result, this deregulation/liberalisation led to re-regulation. The regulation became extremely complex. Decarbonisation, green economy and sustainability goals and instruments, as well as general competition policy concerns needed to be balanced against, integrated and coordinated with energy policy goals, and with technical and regional particularities. Today, this is still the case, especially in the context of the ambitious long-term carbon neutrality objective of the European Union under the European Green Deal.

This reaffirms the importance of answering the question: what stays behind regulatory activities and State intervention, especially in Bulgaria, where the transmission, and major parts of the generation and supply assets are held by the State conglomerate Bulgarian Energy Holding. It should also be reminded that as a member of the EU, the country is under an obligation to comply with the policy and regulations of the European Union³.

A number of economic theories have been developed to answer the question of State intervention. The "public interest" theory (the theory of the benevolent regulator) and the "capture" theory (the "interest groups" theory of regulation) take a central part in the work of the doctrine. The following sections will focus on the "capture" theory, on some of the main contributions of the doctrine, its impact and the regulatory "answer" in the energy sector. Then, certain examples of the *de facto* operation of the Bulgarian energy market will be presented in the light of some of the capture theory premises in an attempt to illustrate captured market operation and liberalisation efforts.

I. Regulatory Capture and Energy Market Regulation

The capture theory challenges the arguments of the "public interest "theory. A number of contributions aimed to define, measure the impact and develop techniques for capture-proof regulations in the energy sector. The independence of the regulatory authorities is the key instrument the European Union has embraced in its legislation to cope with capture.

1. The Public Interest Theory vs. Regulatory Capture Theory

The "public interest" theory takes a central role, especially in the field of regulation of natural monopolies. According to its premises, government intervention in an industry is directed at correcting market imperfections for the purpose of social welfare maximisation. It is intended to enhance allocative as well as productive efficiency, securing the financial viability of the

³ Article 4 of the Treaty on the Functioning of the EU provides that energy is among the areas where the EU and Member States exercise shared competence. Art. 194 TFEU provides that in the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment EU policy on energy shall aim, to ensure the functioning of the energy market, ensure security of energy supply in the Union, to promote energy efficiency and energy saving and the development of new and renewable forms of energy; and to promote the interconnection of energy networks.

undertakings. At the same time, it should protect consumers and companies in competitive sections of industry against the abuses of monopoly power (be it private or public) in the sectors dominated by one firm.

The "interest groups" theory argues that regulations are routinely and predictably "captured" and manipulated to serve the interests of those who are supposed to be subject to them, or the bureaucrats and legislators who write or control them (Etzioni, 2009). Captured regulations thus serve the interest of these interest groups not the public interest. The main task of the capture theory is to explore the role of interest groups in public policy formation, be it commercial interests, trade unions, non–industry groups like the public or the government/politicians.

Different authors propose different definitions of regulatory capture. For example, Ernesto Dal Bo (Dal Bó, 2006) gives a broad and a narrow definition of regulatory capture. In the broad sense, he describes regulatory capture as the process through which special interests affect State intervention in any of its forms, which can include areas as diverse as the setting of taxes, the choice of foreign or monetary policy, or the legislation affecting Research and Development. According to the narrow interpretation, regulatory capture is the process through which regulated monopolies end up manipulating the State agencies that are supposed to control them.

Another definition of (state) capture suggests it is a combination of different forms of corruption which have a single objective: to secure wholesale (by default) and long-term privileges to captors by exploiting the power of governments for private benefit (Center for the Study of Democracy, 2021).

Although capture is determined by the local economic and regulatory context, as well as by historical and even cultural factors, captors are reported to target specific sectors and the energy sector (electricity and gas) is among them (Center for the Study of Democracy, 2021).

2. Theory Origins and Main Contributions

Most authors like Posner (Posner, 1974), Lafont and Tirole (Laffont & Tirole, 1991), trace its origins back to Marx's view that large businesses control institutions and to early 20thcentury political scientists like Arthur Bentley (Bentley, 1908) and David Truman (Truman, 1951) who argued that all political activity is groups, pursuing their interests against the interests of others. Others go back to Montesquieu or Alexis de Tocqueville. However, the major contributions to this theory we owe to authors like Stigler (Stigler, 1971), Olson (Olson, 1971), Posner, Pelzman (Peltzman, 1976), Lafont, Tirole (Laffont & Tirole, 1991), Shleifer, Vishny (Shleifer & Vishny, 1993), Dal Bo and Rossi (Dal Bo & Rossi, 2007).

Stigler's work is considered a breakthrough in the field⁴. According to Stigler (Stigler, 1971), regulation is acquired by the industry and designed and operated mainly for its benefit. He also notes that small industries may capture the regulatory process as well. Stigler's model is illustrated by examples from the regulation of trucks in the United States. While Stigler

⁴ Although it has been subject to critics.

focuses on the industry as the only active part in the capture and does not consider other interest groups, his capture theory has been later further developed by other Chicago School economists. These later contributions differ from Stigler's approach, since they take into consideration that other pressure groups besides the industry may enter into competition for favours as well (Boehm, 2007). These may include – politicians, trade unions, other agencies, foreign governments, consumers, banks, donors along with the regulated firms (Etzioni, 2009).

Posner indicates problems with both the traditional public interest theory and Stigler's approach (Posner, 1974). Regarding the latter, he criticises the lack of clear implications as to the profile of groups benefited by regulation. Stigler emphasises that industries with concentrated ownership would more easily overcome the hurdles facing collective action. However, large groups could attract favourable regulation by vote-seeking politicians. Posner also reminds, that protective regulation can take a variety of forms.

Following Lafont and Tirole (Laffont & Tirole, 1991), the main means of interest groups to influence government decision making (captures) are:

- Monetary bribes;
- Hoped-for future employment for commissions and agency staff with regulated firms or with public interest law firms Revolving doors;
- Personal relationships;
- Industry, which caters to the agency's concern for tranquillity by refraining from criticising the agency's management publicly;
- Industry operates indirect transfers through a few key elected officials who have influence over the agency. These include monetary contributions to political campaigns, corporate votes and lobbying of the "grassroots" (employees, shareholders, suppliers, citizens of communities where plans are located).

They develop an agency model which offers a precise framework to understand how asymmetric information can be the main source for regulatory discretion. It examines the possibility for regulated firms and regulators to collude in order to extract and divide rents from the regulator's principal. It depicts the regulation of a natural monopoly, where a national regulatory authority regulates the firm's rate of return and price.

Shleifer and Vishny's work (Shleifer & Vishny, 1993) considers another aspect of capture – the tollbooth theory – where regulation is pursued for the benefit of politicians and bureaucrats. They find that the reason behind the existence of many regulations is to give officials the power to issue licences or deny them and to collect bribes or campaign contributions in return for providing the permits.

Measuring regulatory capture is not an easy task. According to Dal Bo and Rossi (Dal Bo & Rossi, 2007), the use of a nationwide measure of corruption can be correlated to regulatory capture and serve that purpose. Countries, where regulators are more easily captured, should have more inefficient utilities. They study a panel of 80 electricity distribution firms in 13

Latin American countries for the period 1994-2001. They conclude that firms are more inefficient in countries displaying higher corruption.

A recent study (Center for the Study of Democracy, 2021) presents the results from the application of an innovative analytical tool, the State Capture Assessment Diagnostics (SCAD) on a sectoral level, which provides policy-relevant findings about state capture, characterising it as a systemic failure of public governance.

Another interesting study of regulatory capture in the energy sector (Van Koten & Ortmann, 2007) explores the question of whether vertically integrated utilities were able to manipulate the legislative and regulatory process in favour of the weaker form of unbundling, and whether these manipulations were a function of the integrity of legislative and regulatory practices. The authors argue that the fact that weaker forms of unbundling are allowed at all, suggests that the pertinent political, legislative, and regulatory processes might have been unduly (and possibly illegally) influenced. Such influence is considered more effective in countries where the policy and the regulatory processes are more susceptible to manipulation. Countries with less corruption (higher levels of the Corruption Perception Index⁵ score) have more complete unbundling regimes.

Djankov et al. (Djankov, et al., 2002) present an econometric study on the regulation of entry of start-up firms in 85 countries. They argue that more extensive regulation should be associated with socially inferior outcomes, particularly corruption, while the quality of the private or public goods is not better because of regulation. Furthermore, democratic governments are regulating less entry of start-up firms than governments known for being inefficient. They consider these results as providing evidence against public interest theories of regulation and in favour of the public choice view.

3. Captured Regulations Impact

Capture can be very costly to society. Some authors argue that the damage done by corruption to the technical efficiency of regulated utilities is similar in magnitude to operating an environment characterised by poor law and order, *and it is orders of magnitude larger than the damage, done by macroeconomic instability* (Dal Bó, 2006).

Capture allows special interest groups to shape regulations ex-ante or ex-post. They can exert their influence either directly on regulators or indirectly, capturing the authorities who hold power over regulatory agencies. It opens the door for interest groups to weaken regulations that are already in place, to weaken enforcement of the existing regulations, to repeal existing regulations, to manipulate or switch regulators or even to set prices and rates that increase profitability (Etzioni, 2009). It can also lead to the opposite – keeping tariffs and rates below the normal price, thus seriously harming regulated industries. So capture has the effect to either redistribute rents or to change efficiency. Some examples demonstrating this impact from the Bulgarian energy sector will be discussed in the second part of the article.

⁵ CPI shows how corrupt a country's public sector is perceived to be by the experts and business executives.

The key question is not whether regulation is necessary but rather how to make regulation stronger or "capture-proof". It is also important to note that capture can be related to either lobbying or to corruption practices. While lobbying is not prohibited by law, corruption is illegal. Therefore, there are different types of anti-capture measures to be considered. While lobbying practices need to be regulated, fighting corruption requires anti-corruption strategies.

However, the primary purpose of this article is not to propose such measures or to examine this problem in detail. It aims to illustrate some interventions in the Bulgarian energy sector that arguably constitute examples of the influence of different interested parties and to quantify them. The next section presents one of the main "arms" against capture, which is used in the energy sector legislation and policy instruments.

4. Energy Regulatory Bodies Independence – A Tool for Capture Proof Regulation?

The energy sector transformation efforts in the European Union have been ongoing for almost three decades. The introduction and establishment of institutions/bodies both at a national and supranational level, including national energy regulatory authorities and EU level oversight is an essential element of the liberalisation process of the electricity market. Their existence is based on the need to regulate energy networks (as natural monopolies) and, in particular, to ensure non-discriminatory access to the energy networks. Consecutive legislative instruments formulated requirements intended to ensure national regulatory authorities (NRA) powers, independence, resources, transparency and accountability, and to diminish the fragmentation of the regulatory oversight at the European Union.

The independence of regulators preserves stability and continuity in the setting of rules, avoids political interference in business decisions and regulatory risks, and maintains high standards of expertise and professionalism (Capros, 2003). Independence is a cornerstone of the functioning and position of NRAs since they are entitled to ensure a balance between commercial interests, policy objectives and social welfare considerations. It is considered that one of the very reasons why regulators were created in the first place was to ensure that decisions about the energy market would be shielded from commercial and political interests, thereby addressing the conflict of interests that can arise where the government has a stake in energy or network companies (Directorate-General for Energy (European Commission), 2019).

Regulators must be independent both from the industry they regulate and from the government (CEER, 2016), as the State has, at least potentially, economic or political interests, particularly with the incumbent companies. In the case of countries, like Bulgaria, where State-owned public monopolies had prevailed, the liberalisation further necessitates a clear separation of the State as a regulator, and the State as the owner of public utilities, either through privatisation or through the establishment of (not only *de jure* but also *de facto*) independent regulators or both. In addition, with the energy sector accounting for a considerable part of most countries' economies, there are real risks that private and/or public entities seek to interfere with the regulatory decision-making (Capros, 2003).

II. Regulatory Capture and the Case of the Bulgarian Energy Sector

The electricity sectors of the Republic of Bulgaria and Malta are the last to remain not fully liberalised in the European Union⁶. Liberalisation is perceived as the possibility for customers to choose their supplier at a retail level, and the freedom for utilities to choose their partners at a wholesale level.

It can be argued that regulatory capture is one of the main drivers for the policy action and legislative developments in several aspects. Although energy sector legislation in the EU stipulates that NRAs must be impartial and independent from both commercial and political influence, a number of examples of government intervention in the work of the Bulgarian energy regulators can be pointed out. Furthermore, examples of government intervention distorting competition at the EU level through export bans will be examined. The price regulation techniques of the Bulgarian Energy and Water Regulatory Commission and their devastating implications on the activities of a regulated company will be discussed. Last but not least, several developments in the sector with significant implications for the regulated business will be pointed, which were either results of questionable competence and expertise, or blunt examples of the influence of interest groups.

1. Government intervention during the cold spell in 2017

By Order of Jan. 11, 2017, the Minister of Energy imposed on the company certified as independent transmission operator (ITO) an "additional public service obligation" entailing an export ban. The measure consisted of the termination of access to the electricity transmission network of users exporting electricity generated in the country for the period from Jan. 13, 2017, until the reserves necessary for the operation of Bulgaria's electricity system have been restored. This intervention resulted in a suspension of the cross-border capacity allocation for exports through Feb. 9, 2017.

Platts' report for the European Commission (Platts report for the European Commission, DG Energy, 2017) concluded that this was a non-market measure and that *it was not necessary through the entire period*. They consider the measure particularly distortive in the days when the average dispatching of Bulgarian plants was below 5200 MW. In those days, the spread between Bulgaria and Greece (or Hungary, a benchmark in the region) was unusually wide, given prior winters' observations, suggesting the Bulgarian system was artificially oversupplied. They argue that as a consequence, Bulgarian plants lost the opportunity to sell power to neighbouring countries given there was enough generation capacity and the price spread was wider than historical levels. According to Platts, the estimated daily loss amounted to $\notin 1$ million, leading to a total loss for generators around $\notin 27$ million.

Clearly, the measure was counterproductive for the power producers in Bulgaria, and it was a non-market measure, which interfered with the interests of the utilities. The measure was

⁶ https://ec.europa.eu/energy/content/electricity-market-liberalization en.

also harmful to the ITO, as it incurred losses from the non-allocated cross border capacity and from the transmission fees, that it would have otherwise realised.

However, the ban led to "preserving" low prices for the Bulgarian non-residential customers. One could argue that the fact for a political/government representative to instruct non-proportionate measures that could not be objectively justified, constitutes an example of regulatory capture. As we have seen, regulatory capture may be driven by a desire of politicians to secure political support for their administrations and the government. In this case, the interests of large industrial consumers in the country were protected at the expense of the utilities and the system operator. Furthermore, it also undoubtedly affected EU energy market liquidity and prices.

2. Government Intervention in the Price Determination of Regulated Industries

Another intervention in the normal course of work of the industry presents the characteristics of the capture exercised over the regulatory process. On Sept. 1, 2020, the Minister of energy ordered the regulated supplier of natural gas – Bulgargaz to withdraw its price application, thus hindering the NRA from exercising its powers to set the regulated price for the company⁷. The Minister's concern was that the gas supplier requested a price increase of about 20.3 percent. The regulatory process was interrupted and the price regulation procedure was delayed and restarted only when the Minister of energy gave a permission. Here again, following a concern of political order – securing consumers' support for the government as the main reason behind this intervention. At the time of the intervention, large protests were taking place in the country, and a significant price increase would have resulted in losing political support for the government. It should be mentioned that in 2013 electricity prices increase led to massive anti-government protests and to the fall of the government⁸.

3. Government and NRA Inaction towards NEK's Tariff Deficit

Regulatory capture interferes with consumer welfare, business interests and adequate policy formation. According to the narrow definition of regulatory capture proposed at the beginning of the article, capture is the process through which regulated monopolies end up manipulating the State agencies that are supposed to control them to their benefit. But capture also has the potential to lead to detrimental consequences for the financial health of regulated undertakings, especially where price setting is involved.

As outlined in Part I, the independence of regulators is a key prerequisite for capture-free decision making. It is said to preserve stability and continuity in the setting of rules, avoid

 ⁷ https://www.mediapool.bg/zelena-svetlina-za-po-skap-s-20-gaz-za-septemvri-news311916.html.
 ⁸ https://www.reuters.com/article/us-bulgaria-protests-electricity/tens-of-thousands-join-electricity-protests-across-bulgaria-idUSBRE91G0C520130217.

political interference in business decisions and regulatory risks, and maintain high standards of expertise and professionalism.

In 2014 a paper prepared for the European Commission defined electricity tariff deficit as *a* deficit or debt built up in the electricity sector, often in the regulated segments of transmission or distribution system operators, but in some cases also in the competitive segments, e.g. in incumbent utilities. A deficit is accumulated due to the fact that the regulated tariffs, which should cover the system's operating costs, including e.g. subsidies to renewables, are either set too low or not allowed to increase at a pace that cover rising production or service costs. As these deficits accumulate due to government regulation of tariff or price levels, they have been recognised as contingent liabilities of the State in a few Member States. However, in some other Member States, they appear as losses on the financial statements of energy companies (Directorate-General for Economic and Financial Affairs (European Commission), 2014).

Natsionalna Elektricheska Kompania EAD (NEK) is a public supplier on the Bulgarian electricity market. As such, the company is subject to tariff setting, as the market in the country has only been partially liberalised and residential customers still buy electricity under regulated tariffs. For many years the company has been under an obligation to purchase renewable energy and to secure the support for combined heat and power producers under mandatory buy-out obligations. These support measures were intended to be passed on to the final energy consumers and for NEK to recover the costs of these obligations.

In 2014 the NRA⁹ recognised a tariff deficit for NEK's regulated activities in 2012-2013, amounting to approximately 1,5 billion BGN. It established a five-year compensation plan for the company. However, the 2014 Decision has not been implemented since the company received only partial compensation for the first year of the plan. During the following regulatory periods, the tariff deficit accumulation continued.

In its price-setting application in 2019, NEK claimed that the tariff deficit recognised by the NRA in its 2014 decision and the respective sums should be recovered and additionally the deficit accumulated through 2014-2018 should be recognised and recovered by the NRA. However, the NRA price-setting decision from 2019 refused to accept the company claims, stating that the exact amounts of the tariff deficit and the compensatory mechanism needed to be further clarified. The same happened in 2020¹⁰ and 2021¹¹ when in its decisions the regulatory body again postponed tariff deficit compensation for NEK.

The public supplier has been facing bankruptcy and its sole owner, the state company Bulgarian Energy Holding secured financing (loans) to its subsidiary NEK. Clearly, no private company/investor would be in the position to incur such losses and to continue operation for such a long period of time.

It can be argued the activities of the NRA are not an example of capture-free price-setting technique. Electricity prices have been a highly sensitive issue and price increases have led

⁹ Decision LI-12/30.06.2014 of the State Water and Energy Regulatory Commission of Bulgaria.

¹⁰ At the time NEK pretended for tariff deficit amounting at nearly 2,5 billion BGN.

¹¹ Decision II-27/01.07.21 of the State Water and Energy Regulatory Commission of Bulgaria.

to turmoil and government resignations in 2013¹². Keeping the electricity bills low is an instrument for the government to secure political support, but such courtesy to the political parties in power has been detrimental to NEK, as evidenced by its financial losses over the past 10 years. If the State refuses to recognise NEK's tariff deficit as a contingent liability, sooner or later, the deficit would eventually be transferred to the consumers through a significant increase in the electricity bills.

4. Government Inaction towards Strategic Assets in Carbon Neutrality Objectives Context

As mentioned earlier, the European Union has set a climate neutrality objective for 2050. EU institutions have recognised the need to put in place an enabling framework to reach this goal. The green transition is closely related to coal phase-out and all political documents and the legislative framework in place have set the rules and financial framework, including a Just Transition Fund intended for high carbon intensity regions with a significant level of employment in the industry. Bulgaria is one of the countries where solid fossil fuels represent a significant part of the national electricity generation mix and where strategic planning and measures are needed.

The EU energy regulations provided for a transitional period and instruments regarding coalphase out such as Capacity mechanisms. Unfortunately, Bulgaria has not to this day presented a strategy for the future of the Maritsa-East region and the thousands of employed people in the industry. It was also not able to present in a timely manner a capacity mechanism for the transitional period.

A number of thermal power plants (TPPs) and the biggest coal mine in the country¹³ are located in the region. The lack of action by political representatives provoked by fear of losing political support for the government has the potential to lead to catastrophic consequences for the State-owned TPP in the region, which is exposed to carbon emissions payments and is no longer competitive on the electricity market. Only short-term measures have been implemented over the past two years, where the Minister of Energy uses a rather controversial technique of imposing "additional public obligations" in order to prolong for a year the life of the State-owned TPP. The public obligations consist of defining a quota for the regulated market, where the public supplier NEK is under a mandatory obligation to buy the power produced by the undertaking at a non-competitive price. This, in turn, is passed on to the final consumer through an increase of prices in the electricity bills and taxes. Not only this situation is detrimental for the companies, for the employed in the region, but it is also harmful to the consumers.

 $[\]label{eq:linear} {}^{12} \ https://www.nytimes.com/2013/02/21/world/europe/bulgarian-government-is-reported-set-to-resign.html.$

¹³ The largest TPP and the coal mine are both subsidiaries of Bulgarian Energy Holding.

5. (In)dependence of the NRA

The revolving doors problem is one of the main obstacles to the independence of the decisions of the regulator. The hope for future employment or the appointment of officials in the regulatory agencies, who are closely related to industry representatives, is notorious in Bulgaria. Interestingly, according to the Bulgarian Energy Act the NRA is politically independent of the executive power, without any mention of independence from commercial or other interests¹⁴.

Another important factor for the decision-making processes is the nomination and appointment procedures for Board members of the NRA. Questionably the requirements for the nomination of board members were significantly lowered in 2020, when an amendment of the Energy Act introduced a requirement for only 5 years of professional experience¹⁵, including the Chair of the NRA. Given the significance and complexity of the tasks performed by the NRA, it can be noted that this is a rather strange turn in the regulation. The commissioners - members of the NRA - are directly appointed and dismissed by the parliament following nominations from the different political parties in the country and a public procedure¹⁶. Here again, we could expect that each of the candidates would be rather bound to following the instructions of the nominating party, than following independent decision-making practices. The appointment and dismissal process, combined with a rather short term, suggests that nominees work at the agency is limited in time and directly dependent on political will in the government. That is why there is a risk for the integrity, independence, stability and continuity in the work of the regulator in the energy sector in Bulgaria. Given that the appointment process is highly dependent on the constellation of political forces in parliament, one could argue that few professionals and experts in the field would agree to be nominated for such positions given the short horizon and potential influences on their activity.

It should be noted, however, that regarding any life-cycle effect, related to the capture, researchers (Dnes & Seaton, 1999) neither find evidence that regulatory agencies become more captured as time passes, nor that a lack of experience makes them most vulnerable to capture. Therefore, it is not certain whether term lengths should be adjusted to reduce regulatory capture.

Added to this, there is another problem, identified by the doctrine – agencies do not dispose of sufficient finances to be able to attract competent experts in their administrations. The wages in the NRA are considerably lower than in the industry.

In 2019 a study, commissioned by the European Commission, to assess the *de jure* and *de facto* independence of the national regulatory authorities in the field of energy and their effectiveness in performing key tasks in 12 Member States, including Bulgaria (Directorate-General for Energy (European Commission), 2019), confirms some of the assumptions made

¹⁴ Article 10 of the Energy Act.

¹⁵ Article 12 of the Energy Act.

¹⁶ Article 12a of the Energy Act.

above. According to the field research performed by the report team – the "*de facto aspects*" for the independence of the NRA are as follows:

- Most survey participants consider that the NRA is not independent of the political decision-makers. 50% of the 12 Bulgarian survey respondents think that the NRA is to no extent independent from government influence.
- The appointment and dismissal systems are flawed. The majority of the stakeholders in Bulgaria held the view that parliamentary involvement was more likely to result in board members who are dependent on and accountable to political parties.
- Even though some operators are state-owned, the NRA is not perceived as favouring these
 players by any of the stakeholders consulted.
- 71% of the Bulgarian survey respondents mentioned, that the approval of the budget has been used as a means to jeopardise NRA's ability to carry out its duties and exercise its powers in an efficient and effective manner.
- Governmental involvement in fixing salaries is considered to be an obstacle or potential obstacle in attracting adequate staff.
- The majority of survey respondents consider that the number of staff, working at the NRA, is inadequate to appropriately fulfil its tasks. Only 8% think that the staff and management of the NRA are neutral and competent; while 50% think it is not neutral and competent (and 33% only somewhat neutral and competent).

Conclusion

The evidence provided above suggests that the market operation and liberalisation efforts on the energy market in Bulgaria are also susceptible to regulatory capture, as defined by the doctrine. Although the main policy and legal framework are adopted at EU level¹⁷, at national level, the actions and inactions which were examined show that regulatory activities are exploited by captors. This view is also supported by the stakeholders regarding the national regulatory authorities' independence in the survey.

The ownership structure on the Bulgarian market, together with a strong market concentration, contribute significantly to this vulnerability of State interventions to capture. The actions and inactions of public authorities, allegedly attributable to capture, lead to significant consequences for the financial health of utilities, which in turn impacts their performance and efficiency. They are also capable of compromising effective participation in programs and financial instruments related to the green transition of the country with regard to the binding commitments under the European Union's climate neutrality policies and regulations.

¹⁷ European policy and regulatory instruments formation and capture have not been discussed in this article. Nevertheless, regulatory developments and policy formation are not capture-proof at both national and supranational level.

In the absence of specialised policies and regulations addressing capture in a systematic manner, significant efforts need to be made to fighting the negative aspects of this phenomenon, especially on the social welfare and business environment.

Some proven measures are, for example, implementing actual (as opposed to formal) guarantees for NRA independence and enforcing transparency and public involvement in decision making. Further levers could be strategic, timely planning and policy formation, improving the professional and administrative capacity of key public institutions, as well as effective anti-corruption strategies and lobbying activities regulation.

References

Bentley, A. F. (1908). The Process of Government: A Study of Social Pressures. Chicago: University of Chicago Press.

Boehm, F. (2007). Regulatory capture Revisited - Lessons from Economics of Corruption. - Internet Centre for Corruption Research (ICGG) Working Paper.

Capros. (2003). Independence of energy regulators: new challenges. Rome: World Forum on Energy Regulation. CEER. (2016). Safeguarding the independence of regulators - Insights from Europe's energy.

Center for the Study of Democracy. (2021). State Capture Assessment on Sectoral Level. Sofia: CSD.

Center for the Study of Democracy. (2021). State Capture Deconstructed. Sofia: CSD.

Dal Bó, E. (2006). Regulatory Capture: a Review. - Oxford Review of Economic Policy, 22(2), pp. 203-225.

Dal Bo, E., Rossi, M. A. (2007). Corruption and inefficiency: Theory and evidence from electric utilities. - Journal

of Public Economics, 91(5-6), pp. 939-962. Directorate-General for Economic and Financial Affairs (European Commission). (2014). Electricity Tariff Deficit: Temporary or Permanent problem in the EU?.

Directorate-General for Energy (European Commission). (2019). Assessing the independence and effectiveness of national regulatory authorities in the field of energy.

Djankov, S., La Porta, R., Lopez de Silanes, F., Shleifer, A. (2002). The Regulation of Entry. - Quarterly Journal of Economics, 117(1), pp. 1-37.

Dnes, A., Seaton, J. S. (1999). The regulation of electricity: results from an event study. - Applied Economics, 31(5), pp. 609-618.

Etzioni, A. (2009). The Capture Theory of Regulations - Revisited. Society, Vol. 46, pp. 319-323.

European Commission, Directorate General for Energy, Spark, Trinomics, University of Groningen. (2019). Assessing the independence and effectiveness of national regulatory authorities in the field of energy. EU publications.

Laffont, Tirole. (1991). The Politics of Government Decision-Making: A Theory of Regulatory Capture. - The Quarterly Journal of Economics, 106(4), pp. 1089-1127.

Olson, M. (1971). The Logic of Collective Action: Public Goods and the Theory of Groups. Second Printing with a New Preface and Appendix. London: Harvard University Press.

Peltzman, S. (1976). Toward a More General Theory of Regulation. - The Journal of Law & Economics, 19(2), pp. 211-240.

Platts report for the European Commission, DG Energ. (2017). EU Electricity Markets in January and February 2017.

Posner, R. (1974). Theories of Economic Regulation. - The Bell Journal of Economics and Management Science, 5(2), pp. 335-358.

Shleifer, A., Vishny, R. (1993). Corruption. - The Quarterly Journal of Economics, 108(3), pp. 599-617.

Stigler, G. (1971). The Theory of Economic Regulation. - The Bell Journal of Economics and Management Science, 2(1), pp. 3-21.

Truman, D. B. (1951). The Governmental Process: Political Interests and Public Opinion. New York: Alfred A. Knopf, Inc..

Van Koten, S., Ortmann, A. (2007). The Unbundling Regime for Electricity Utilities in the EU: A Case of Legislative and Regulatory Capture?. - CERGE-EI Working Papers.