

The Socio-Political Capture of Utilities: The expense of low energy prices in Bulgaria and Hungary

Authors:

Michael Carnegie LaBelle

Assistant Professor, Central European University, CEU Business School and Department of Environmental Sciences and Policy

Corresponding author, Contact: labellem@ceu.edu

Atanas Georgiev

Assistant Professor, Sofia University, Faculty of Economics and Business Administration

[Abstract](#)

Energy regulation underpins the European Union's efforts to establish competitive energy markets in each Member State. Since the 1990s a system of regulatory governance was established, shifting the oversight of the energy sector from a government and politically centric system to one based on independent national regulatory authorities (NRAs). In some Member States the movement towards market pricing and regulatory governance is prompting political action to reassert and challenge the EU's institutional architecture. This chapter will look at the underlining concept of energy regulation and how it is implemented in two Eastern European countries, Bulgaria and Hungary. Intense efforts are made in both countries to keep energy prices low in an attempt to address energy poverty. These actions call into question the ability of these countries to modernize and decarbonize their energy systems. Political efforts to maintain low prices create a system of contested governance, marked by political efforts to undermine regulatory tools balancing long-term investments with short-term pricing pressures.

Key words: Neoliberal, electricity, regulation, governance, risks, energy poverty, Hungary, Bulgaria

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[1 Introduction](#)

Modernization of the energy sector is based on continual investment. Integration of new low carbon technologies rests on investment cycles which continually upgrade the energy system. Within the European Union (EU), a governance system with national regulatory authorities (NRAs) is established to ensure investment occurs while balancing the cost of energy services paid by consumers. This chapter will look at the underlining concept of energy regulation and how it is implemented in practice in two Eastern European countries, Bulgaria and Hungary. Intense efforts are made in both countries to keep energy prices low, calling into question the ability of these countries to modernize and decarbonize their energy systems. Political efforts seek to maintain low prices thereby creating a system of contested governance. This system is marked by political efforts to undermine regulatory tools, with regulators attempting to balance long-term investments with short-term pricing pressures.

The aim of this chapter is to align theoretical concepts of energy regulation with implementation of competitive energy markets within two similar EU Member States. The choice of Bulgaria and Hungary provides a comparison of two former communist countries with modern centralized energy systems that prioritize low prices for household consumers. As both countries are EU member states, both nations are required to place most households on a market rate. In this case, cross-subsidies which drew money from industry and government budgets were removed, forcing households to pay more; exceptions are allowed for officially recognized vulnerable consumers. However, for most households in these countries, the price of market based energy services consume a significant percentage of income. In both Bulgaria and Hungary, there is political action and pressure leveraged at the rates set by their own energy regulators. This results in systemic monetary debts and regulatory instability, which calls into question the ability of these countries to provide sufficient regulatory stability to address both energy poverty and decarbonization.

The first part of this chapter will establish the basis of NRAs, emanating from the struggle seen in the United States to balance the pursuit of profits by private companies and affordability by households and companies. The creation of regulatory institutions became known as the Regulatory Compact (Hirsh, 1999; Oppenheim, 2016), the concept of regulation would later spread to Europe and serve as the foundation for the EU's attempt to build a single European market of energy services. Competition and private ownership in the energy sector are prioritized by the European Commission and overseen by NRAs (Eberlein, 2008; Eberlein and Grande, 2005; Levi-Faur, 2011). This system of governance, administered by experts in the industry and NRAs, receives push-back by politicians in an attempt to align the system of regulation to historical government support for households. The lack of government support, poor housing stock, and low income levels places energy poverty as an important political issue (Buzar, 2007; Tirado Herrero and Ürge-Vorsatz, 2012). The politically induced solution of challenging independent energy regulation leads to contested governance, where profits in the energy sector are banned and alleviation of energy poverty is addressed through price controls, rather than modernization of the energy sector and housing stock.

The two case studies involving Bulgaria and Hungary will specifically evaluate the causes of civil unrest in Bulgaria and the Hungarian government's slashing of utility rates by 25% in 2013 and 2014. The first case study examined is Bulgaria, which concentrates on the privatization process and the shifting regulatory environment for private generation and distribution owners. Significant losses sustained by state and privately owned companies, due to low utility rates and fluctuating energy strategies, pushes the sector into perpetual financial losses that may lead to under-investment in modernizing the energy infrastructure. The second case study, Hungary, provides an example of a country that established strong energy regulation matched by private ownership, but later backtracked by inserting more politically driven decision making into the regulatory structure. The timeframe of analysis starts in 2010, when a legal and regulatory battle emerged as a newly elected Hungarian government sought ways to extract extra taxes, buyback utility assets, and dramatically lower rates; culminating in 2015 with the establishment of a state owned utility that became a de facto universal service provider across the entire country.

The final section of this chapter will bring together the literature on regulatory governance and the findings from the case studies. A concept of 'contested governance' is developed to explain the historical trajectory from "government to governance." This period is marked by governments contesting the regulatory means to control the energy sector without sufficiently addressing the issue of energy poverty.

2 Energy Transitions: Government to Contested Governance

The governance of a competitive and profit orientated energy system in Eastern Europe is founded on an institutionalized system of regulation. NRAs oversee system developments and balance long-term investments with the society's ability to pay for their energy services. Although, as this section makes clear, NRAs have difficulty balancing the demands of privately owned utilities with high rates of energy poverty. As the case studies will later make clear, this led to tension and political action by policy makers to erode or maintain lower energy prices, resulting in mounting financial debts within the energy system. This section covers the theory behind regulatory institutions as a means to balance competing interests, and also highlights issues of poverty when prices exceed the ability of households to afford basic energy services.

2.1 Government

The energy sector is tightly intertwined with state institutions and everyday politics. The foundation of modern economies and the provision of public goods are enabled by energy resources and access to electricity and gas. Government – including politicians – is tightly connected to the direction that energy systems have evolved in different countries. From the US regulatory approach, to former communist countries relying on state planning to control resources and technology, the state is central to influencing energy systems. The government apparatus of the state includes politicians and state institutions. Each is involved in the planning and operations of the system. In the United States, regulation began as a means to balance the argument for public goods and the allowed profit margins by energy companies.

The creation of the public regulator is firmly an American invention that is instituted to balance competing political, economic and social interests by providing a utility (like electricity or gas) as a public good (Hirsh, 2005, 1989). This process became known as the 'Regulatory Compact', "in exchange for investor security, the promise of the opportunity to earn a limited but assured 'reasonable' return on prudent investments for the public service" (Oppenheim, 2016). Monopoly status was solidified in federal legislation in 1935, enabling utilities (both private and government owned) to concentrate on rolling-out universal access and building large scale generation (such as hydroelectric and nuclear power) and centralized networks (Hirsh, 2005, 1989).

In Eastern Europe, after World War II and the instillation of communist rule, industry and governments subsidized the price household consumers would pay for their energy services (electricity and gas) (Buzar, 2007; LaBelle and Jankauskas, 2009). This subsidized rate meant that lower household income levels could afford household energy services. During the 1990s, the transition towards more market orientated economies resulted in the removal of these subsidies and private ownership in electricity and gas distribution became widespread (Buzar, 2007; LaBelle, 2009). This resulted in higher household utility rates that coincided with the establishment of energy regulators in Eastern Europe. Between 1997 and 2001, there were nine NRAs set up in the new EU Member States that joined between 2004 and 2006 (Gonzalez et al., 2008; LaBelle, 2009). These NRAs corresponded with the privatization of electricity and gas companies in their respective countries (Gonzalez et al., 2008; LaBelle, 2009). In short, the sector was transformed from a heavily subsidized system towards a profit orientated system.

Privatization brought in non-state owners that expected financial returns on their investments (LaBelle, 2009; LaBelle and Jankauskas, 2009). After the privatization, NRAs balanced promises made at the time of privatization with strong political and social demands to maintain low energy prices. Privatization is a subset of 1990s neoliberalism, and thus, these reforms require "energy prices to be raised up to economically profitable levels. However, the lack of an adequate social safety net to compensate for energy price increases has forced many households to cut back on their energy purchases" (Buzar, 2007, p. 224). As it will be discussed in the case studies, the current political leadership rejects the maintenance of neoliberal market reforms prescribed in EU Directives (EU Third Energy Package: Directives 2009/72/EC and 2009/73/EC European Parliament and European Council, 2009a, 2009b). The conflict arises between the old state centric method of letting the government (politicians) set prices and the practice of allowing NRAs and politically independent experts to set prices (governance) (Thatcher, 2005). There is a shift in the oversight of the sector, from government to governance, with society's ability to afford energy services directly connected to the outcome.

2.2 Governance

There needs to be a rethinking of the governing design of national energy systems, whether they are still controlled through a means of government (political) or by regulators (experts).

This enables a re-conceptualization of the role of society in the regulatory structure, which unpins the operational rules of the energy sector. Bringing the social into discussions on energy systems creates a discussion around “socio-energy systems” as a way to more effectively explain societies’ role in the development and operations of energy systems (Miller et al., 2015). A previous way to explain how the regulation was used in energy systems was to understand regulation as a means to balance competing interests between different interest groups (Stigler, 1971). This regulation theory led to the idea of *regulatory capture*, with those valuing a high degree of regulation as a means to maintain dominance and spending the most to ensure regulation was structured in a particular way. Neoliberal economic theory emerged from this questioning of the role of regulation. These ideas would spread during the last days of the Cold War, under President Reagan in the US and Prime Minister Margaret Thatcher in the UK. It became linked to a Cold War economic growth strategy in contrast to the stagnating economies of the Soviet Union and Communist Eastern Europe (Harvey, 2005). The Fall of the Berlin Wall in 1989 led to an embracement of these market-orientated policies with regulation balancing overtly political involvement in markets.

In 1993, the EU was formalized in its present institutional form, built on previous rounds of European integration. During the 1990s, the EU was fostering cooperation between the NRAs. Leading this effort was the European Commission, which pushed the development of cooperation between NRAs to establish a common regulatory framework within the EU (Eberlein and Grande, 2005; Majone, 1997, p. 144). After 2004, procedural methods were put in place for energy regulators. This stemmed from the eastward enlargement of the EU and the passage of the Lisbon Treaty in 2009. The responsibilities of regulators were prescribed; enabling stronger isolation from political involvement in technical issues. The Lisbon Treaty was built upon previous efforts by NRAs and the European Commission. Member States’ NRAs established the Florence Forum for Electricity (1998) and the Madrid Forum for Gas (1999). In 2003, The Commission established the European Regulators’ Group for Electricity and Gas (ERGEG). The idea behind this was that competition and technical solutions to cross-border trade could be developed, “based on professional expertise and outside the political arena” (Eberlein, 2008, p. 78; Eberlein and Grande, 2005; Majone, 1997, p. 144).

The outcome of creating a technocratic rule making and oversight system in electricity and gas markets is a shift from political government involvement to a governance system characterized by technical rule making (Eberlein, 2008; Eberlein and Grande, 2005). This governance is the driving force the European Commission uses to develop competitive energy markets. Clarifying the term ‘governance’ is important because it signals the movement away from direct ‘government’ involvement and into an area where sector experts influence the types and scale of investments, along with market operations of the energy system (Bulmer et al., 2007). Governance is defined as, “the institutions, mechanisms and processes through which economic, political and administrative authority is exercised” (Goldthau, 2014, p. 135). Politics, and even social input may become muted, or equalized in relation to other technical and institutional priorities. In short, governance is the European version of the US’s Regulatory

Compact, where overall system costs are kept low through regulation and regulatory authorities (Bulmer et al., 2007).

2.3 Energy Poverty

Energy poverty in the Central and Eastern Europe (CEE) region stems from two causes: 1) poor and deteriorating housing stock, and 2) large difference between cost of energy services and income levels, caused by shifts in the political-economic system. For example, 50% of residential floor area in Hungary is single-family dwellings built before the 1990s by the owners themselves and their acquaintances to circumvent poorly functioning housing market. These dwellings are highly energy inefficient (Bouzarovski et al., 2015, p. 6). The energy system itself was built under communism in Bulgaria and Hungary, which benefited from significant energy infrastructure improvements financed by the state and industry – householders paid below ‘market’ rates (since there was no market). After the change of the political-economic system, privatization in both countries meant private investors would fund infrastructure developments. As energy prices increased to fund investments and household incomes rose less, disparity between the costs of services and income developed (Buzar, 2007; European Commission, 2015; Tirado Herrero and Ürge-Vorsatz, 2012).

Further refinement of energy poverty reveals the high energy intensity of households, which are ‘forced’ to consume large amounts of aging and inefficient district heating (e.g. highly inefficient panel houses) and low income levels in relation to the cost of energy services (Tirado Herrero and Ürge-Vorsatz, 2012). Access to energy services underpins foundational human rights in our modern society (Sovacool et al., 2013), such as education and adequate housing; this transformational role alter energy poverty into energy justice. As noted by Buzar (2007, 227-228), there is a lack of regulatory or governance mechanisms to support the poor, while the state fails to acknowledge how social inequalities contribute to energy poverty.

The emergence of post-socialist energy poverty is connected to the policy-makers' failure to perceive the causes and consequences of the problem [in] a comprehensive manner. Moreover, social protection mechanisms in post-socialist states have been assessed via a reductionist view of poverty, and there is an inadequate understanding of the role of institutional legacies in producing inequalities" (Buzar, 2007, p. 228).

Shifts in the political-economic system remove the safety net built in the previous economic system, the latter which used to ensure affordable access to energy services. Energy poverty emerges in these OECD countries due to shifting politics but without an adequate alternative in place to support borderline households. Energy poverty deprives households of economic opportunities. Thirty percent of households living in panel houses spent more on energy than on food (Tirado Herrero and Ürge-Vorsatz, 2012, p. 62). For our discussion here, a comprehensive definition of energy justice is avoided; preference is instead given to highlighting the socio-political actions against private energy companies – in an attempt to alleviate energy poverty.

Expansion of the EU into Central and Eastern Europe reinforces regulatory governance stemming from neoliberal policies. Utility privatizations and regulatory institutions existed beforehand, it was membership in the supranational organization that fully integrated these institutions into a rule-making structure with legal and regulatory clarity, infused with expectations of best practices (LaBelle, 2009). Political influence was reduced in price setting. The conflict quickly arose over regulatory and political culture rooted in the historical distribution of power over the energy sector (Bohne, 2011; Gonzalez et al., 2008), and cross-subsidization of energy resources and services. Differences between regulatory institutions and powers, including respect for independence, results in different approaches in the Member States. The following case studies on Bulgaria and Hungary bring this transition to light and show how policy makers address energy poverty by taking the regulatory reins and keeping energy prices affordable, while creating financial instability elsewhere in the energy system.

3 Case Studies: Market policies of Bulgaria and Hungary

Social protection against energy poverty differs in Eastern Europe due to the large swath of the population that fits within the category. The population at risk for energy poverty between 2005 and 2013 was stagnate in Hungary at around 23%, while Bulgaria has seen a reduction of around six percent, although almost 30% of the population remains at risk of suffering from the effects of energy poverty. In comparison, vulnerable consumers in the Czech Republic represented only around six percent, while in France around seven percent of the population was at risk of the effects of energy poverty (European Commission, 2015, p. 42). Bulgaria and Hungary are also representative of the populations at risk in Latvia and Lithuania within Eastern Europe. With such a large portion of the population falling within energy poverty, it is hard for the politicians to ignore a social issue that stems from the economic policies marking the transition from communism to capitalism. This section will examine this transition process in Bulgaria and Hungary, and how each country addressed the movement towards a market centric energy system and subsequent political backtracking in an attempt to address issues surrounding energy poverty and the loss of political control in the energy sector.

3.1 Bulgaria: Sustained losses and sustained low prices

Bulgaria's energy sector privatization began almost a decade before the country's accession to the EU. In 1997, the government of the United Democratic Forces came into power immediately following a large financial crisis in Bulgaria. This government was the first to complete its full four-year term and began reforms in the electricity sector. The economic situation in the country shifted dramatically around the elections. Bulgaria's GDP decreased by 8-10% in 1996, the inflation rate in February 1997 reached a peak of 243%, and the annual inflation in 1997 was 392%. The exchange rate of the Bulgarian currency depreciated by 247% in the first three months of 1997. In response to the Bulgarian President's appeal for support, the World Bank sent experts to work with the government on reforms, including in the energy sector (World Bank, 1997).

There were several main goals of the energy sector privatization: to generate revenues for the state budget; to attract know-how and investments in the energy sector; and to diminish the inefficiencies of the state-run enterprises and the prevalence of corruption. In 1999, one of the most important steps of that government was to set up the national regulatory agency – the State Energy Regulatory Commission, responsible for the regulation in electricity, gas, and heating utilities. In 2005 it was renamed State Energy and Water Regulatory Commission (SEWRC), after a new law for water utilities set up a national regulatory framework for this sector as well.

The unbundling of the incumbent National Electric Company (NEK EAD) began in 2000, when all the seven regional distribution companies, as well as the largest generating capacities of the Kozloduy nuclear power plant (NPP), thermal power plant (TPP) Maritsa East 2, TPP Ruse, and other plants were unbundled from NEK. These plants were established as separate 100% state-owned companies. In 2000, the reform (drafted out by the IMF and the World Bank after the crisis in 1997) was delayed, because the government was not eager to increase prices along the lines of the plan negotiated with international financial institutions. Following the unbundling of the state owned companies, the next step was the privatization of smaller generating plants. Private investors wanted guarantees for the price of power they would receive from the state for their investments. This agreement came in the form of two large power purchase agreements (PPAs) between NEK and two American investors – for the refurbishment of TPP Maritsa East 3 (later taken over by Enel and in March 2011 sold to the US-based ContourGlobal) and for the construction of a new TPP on the site of Maritsa East 1 signed with the US-based AES Corporation. With the agreements, investors expected their monetary investments to be reimbursed.

The next full-term government (2001-2005), led by the former Bulgarian King Simeon II's party NDSV and in coalition with the Turkish minority party DPS, managed to continue some of the reforms and adopted the first comprehensive energy strategy of Bulgaria. In 2002, this strategy was adopted and remained valid until 2011. Its main steps in the energy sector included the privatization of 67% of stakes in the electricity distribution companies. In 2004, these were sold to CEZ, EVN, and E.ON – all of them with experience in liberalized markets (one of the most important compulsory conditions in the tender). In addition, there was a restarting of preparations for the construction of the controversial NPP Belene project inside the state-owned NEK. The government managed to privatize some of the smaller power plants and heating utilities. In the autumn of 2004, it also started the formal liberalization of the power market, by allowing the first bilateral contracts between the state-owned NPP Kozloduy and baseload industrial consumers. The initial plans were for a swift liberalization process and the setting up of a power exchange in 2-3 years, as envisaged by the Second Energy Package.

The movement towards a more market centered energy system began to stall in 2005 and subsequent years. The next three-party government, led by the Socialist Party (2005-2009) in coalition with the two parties from the previous government, was more concerned with

maintaining government ownership and involvement. Even after the accession of Bulgaria to the EU in 2007, the state did not accelerate the liberalization of the electricity and gas sectors. Rather the government maintained control over the sector through two ways: 1) politicization of members heading SEWRC; and 2) through the 100% state ownership of the power plants, generating more than 60% of the electricity in the country. Competition would not come and regulators would not push for competition.

The Socialist led government did not build on the previous experience of privatization. Instead, they focused on Russian participation in large energy projects. One of the most significant energy-sector events was in September 2008, when all the large state-owned energy assets were reorganized under the Bulgarian Energy Holding (BEH EAD) company – some analysts say, that this was done in order to guarantee a stable asset base for the 4-5 billion EUR investment in the NPP Belene project (Nuclear Monitor, 2009). Instead of unbundling the sector, the Ministry of Economy and Energy decided to put under BEH the following companies: NPP Kozloduy (2000 MW), TPP Maritsa East 2 (1600 MW), NEK EAD, which included HPPs over 2700 MW, the only pumped-storage hydropower plants (PSHPPs) with a capacity of 940 MW, and the whole transmission network and TSO under its subsidiary company ESO EAD. In addition, BEH also consumed the incumbent wholesale gas supplier Bulgargas, the gas transmission operator Bulgartransgaz, and the lignite producer Maritsa East Mines, which supplies coal to Maritsa East 2 and the two American producers with PPAs).

As the political parties changed in Bulgaria, there was little willingness to move back towards a more market based system. From 2009 to 2013, there was a right wing government that did not change the market. Moreover, some of its actions to keep prices low have been counter-productive in terms of improving the investment environment, with a small amount of deals on the liberalized market (only between a handful of producers, traders, and consumers). For example, a regulated market, overseen by SEWRC existed for almost all consumers. Until 2013, up to 80% of the electricity produced was funneled through the “regulated” segment of the electricity market. That is, only 20% of the electricity was sold at a market price. SEWRC defined production quotas for the regulated producers, as well as regulated network prices for transmission and distribution services. Also, any resale of electricity was regulated – thus eliminating any potential for competition to develop for consumers, even in the area of business consumers. Importantly, there was no set methodology to determine production from certain power plants. These production ‘quotas’ were defined in an arbitrary way and the main purpose was to introduce more energy from “cheap” power plants (mainly the state-owned NPP Kozloduy and TPP Maritsa East 2, but also some independent power producers) into the regulated market. According to the European Commission, this quota system should be phased out gradually, together with the existing single-buyer model (European Commission, 2014).

From the point of view of investors who bought companies in the early 2000s, the return on their investments has not born the fruit originally expected. Overall, there is a general atmosphere where private owners in the electricity sector are attacked by a coalition of the

legislature, the executive branch (with its control over state-owned companies), and the NRA. The companies could only watch as politicians promised lower energy prices to voters. As the DSOs have unbundled after 2005, their end-supplier companies were squeezed between two regulated prices – the purchasing price of electricity from the wholesale incumbent NEK EAD and the selling price for end-customers. This has led to the first arbitration procedures started against Bulgaria from electricity distribution companies (Prodhan, 2013). Even though the privatization contracts have promised 16% ROI p.a. for the initial three-year regulatory period (September 2005 to June 2008), after the privatization and 12% p.a. for the next five-year regulatory period (July 2008 to July 2013), the companies observed that they never reached these values. After a long regulatory battle, one of the three investors, E.ON Energie, finally divested and sold all its assets (59% of the North-east Bulgarian DSOs) to the Czech-based Energo-Pro by the end of 2011 for 133 million EUR. The move was explained by analysts (Novinite.com, 2011) as a result of the government's continued efforts to cross-subsidize NEK EAD and keep end-users prices low through lower revenues for the private DSOs/end-suppliers.

Additional problems have mounted in the area of renewable energy. The electricity market is suffering from a poorly-structured supporting scheme for renewable energy and too generous subsidies for efficient cogeneration production. Eventually, this has led to initial applications for 12,000 MW of new RES capacities (in a market with min-max consumption of 2500-7500 MWh/h and a total capacity of 14 GW). However, there was the construction of about 2 GW of RES capacities up to 2012. Additionally, NEK is a central player in the RES and cogeneration feed-in tariff compensation scheme. However, some of the producers (with capacity under 5 MW) are connected to the distribution grids and their energy is purchased by the private end suppliers of CEZ, EVN, and Energo-Pro. The attempt to keep prices low by the government and regulators led to under-compensation of the private companies in 2013, although they still had not received full repayment as of the summer of 2016.

By 2012, businesses were taken off the regulated rates and allowed to purchase electricity on the open market. However, electricity sold by producers on this market was the cheapest available. This situation left only expensive generation as a supply for vulnerable consumers on the household market. The rise in prices during 2012, as well as some uneven metering periods in the winter, finally resulted in organized public protests in Sofia's streets and in the resignation of the government six months before the end of their mandate in February 2013. Rising energy prices held an important role in the government's resignation, underscoring the precarious position of governments between household consumers and energy producers and distributors.

The sense of strong political dependence on the NRA was supported with several suggestions by different energy ministers, arguing that prices should be lowered by a stated amount (e.g. 5%), which was strictly followed by respective regulatory decisions throughout 2013 (Bulgarian Ministry of Economy and Energy, 2013). The end prices of power utilities were decreased three times – in March, August, and in late December of 2013. There have also been several attempts

to expropriate part of the RES-investors revenues during 2012 and 2013, and all of them were cancelled by the Supreme Administrative Court (for the SEWRC's decisions) and the Constitutional Court – for the law proposing a 20% tax on all RES-producers' revenues.

Part of the price changes also negatively affected some of the state-owned power producers – the NPP Kozloduy's cross-subsidizes sales on the regulated market with sales on the liberalized segment (NPP Kozloduy, 2013, p. 17), which affects baseload energy consumers and other consumers in the bilateral-contracts market. An easy way to cut distribution grid service prices turned out to be the administrative decreasing of the allowed percentage of "technical losses" without appropriate justification, which directly hit the allowed revenues of the private companies.

The price-cutting trend was abruptly stopped by SEWRC in June 2014, when it conceded that the pricing model had actually led to a deficit in the regulated activities of NEK for about 767 million EUR in the last four years. Some additional 716 million EUR deficit in NEK was caused by its investments in non-regulated activities: the start (and stop) of the NPP Belene project and the finishing of the 80-MW HPP Tsankov kamak with the staggering 476 million EUR (Novinite.com, 2014).

Any presumption of regulatory independence for SEWRC is undermined by the numerous political resignations. There were five resignations of the SEWRC's chairmen in only one year – 2013, followed by a collective resignation of the six other members of the commission in the autumn of 2013. Another resignation of the NRA's chairman and two of the members followed in August 2014, after early elections and a new change in government. Both the Third Energy Package, and the national legislation, underlined the notion that regulatory commission members could not be "replaced" by the appointing body (Council of Ministers), so all the resignations were explained by personal reasons. In general, the seven-member regulatory board had 17 different members during 2013, and six of them had previously chaired the commission. The NRA is still not fully financially independent and has an annual budget of only 1.9 million EUR, even though it generates, through license fees and fines, almost 4.9 million EUR every year (State Energy and Water Regulatory Commission, 2013). According to the European Commission, the current budget is not enough for SEWRC to build up the stable and highly qualified staff that is required to carry out its legal tasks (European Commission, 2014).

3.2 Hungary: Privatization and political capture

Hungary's privatization of electricity distribution companies was not facilitated by the country's accession to the EU in 2004. Rather, the necessity to finance the state's day-to-day operations enabled privatization in 1994. In 2010, the election victory of the political party Fidesz resulted in government actions to restrict market forces and politicize the regulatory environment. Previously, Hungary adhered to a more market based approach with regulatory oversight and semi-independent regulatory actions. With the new government in 2010, a new political

philosophy would guide the regulation of the sector; profits were viewed as ill-gotten gains to the detriment of the Hungarian consumers.

Privatization of Hungary's energy assets began in 1989, when eight generation and six regional distribution and supply companies were created. The Hungarian TSO was also established during this time. Each generation company had a mix of two to three power plants. Thus, "big enough to sell but not too big to dominate the market" (Personal communication Nagy, 2014). State owned Hungarian Electrical Works (MVM) remained the 'middleman' buying power from generators and reselling to distribution companies, and it continues this role today. The original purpose was to balance out expensive generation with lower cost generation for to supply consumers with affordable power.

In 1995, private foreign owners began operating in Hungary. ENEL, EDF, RWE, EON each owned both generation and distribution. The operational efficiency of the distribution companies was improving before privatization. Within a few years of privatization, operational efficiency had reached equal levels with Western European DSOs. However, consumption remained much lower in Hungary, although maintenance costs of the network are the same, making network charges a higher percentage in final bills (Personal communication Nagy, 2014).

Development of the Hungarian electricity system is tightly connected to a regional CEE market. Hungary imports 20% of its electricity with 50% of domestically produced electricity generated by the Paks Nuclear Power Plant in 2014. Thus, generation - and the amount the end user pays - is closely connected with prices in neighboring countries and cross-border capacities facilitating trade. The Hungarian electricity market is now coupled to the Czech, Slovak and Romanian markets with energy traders facilitating activity between the markets. Thus, Hungarian industrial and business consumers have a competitive market to purchase power.

Competition for Hungarian households does not exist. In 2009, EU rules in the Third Energy Package were transposed and consumers were given the right to choose their supplier. Nonetheless, only Magyar Telecom began to offer electricity services, and no established electricity provider set out to compete against another (Horvath Kadar, 2012). The lack of competition did not drive prices lower. In pushing further towards a market environment, long term power purchase contracts were canceled to comply with the European Commission rules. In Hungary, these were conceived to entice investors to spend money to modernize the privatized generation sector. Despite protest from some of the companies, the final result was altered agreements which were more market based, but still offered similar returns, with overall assurances for continued operations (Nagy, 2014).

The political-economic order changed after parliamentary elections in 2010. Fidesz-KDNP, which won the elections with a two-thirds majority, systematically altered state institutions. The era of neoliberal economics was declared dead by the new Prime Minister, Viktor Orban. "While we have put an end to the basic principles of a neoliberal era, we have yet to build up the non-liberal economic policy of the 21st century, in terms of planning, coordination and

practices,” Orban said (MTI, 2011). The government began to work at altering the energy sector to deprive private utilities of profits.

In 2010, Hungary removed the price setting authority from the Hungarian Energy Office (HEO) and placed this responsibility with the National Development Ministry. A parliamentary committee closely coordinates the set price. The legislation enables the committee to place a price cap on gas and electricity, after consultation with the HEO. In 2011, the parliament passed a law altering HEO regulation to one based on end-user pricing (thus establishing a price-cap, running counter to EU Directives) (Felsmann, 2014). In January 2013, the parliament passed a law stipulating that household consumers receive a 10% reduction in electricity, gas and district heating. Nonetheless, it was the HEO that would implement the change. The cost of the reduction would mainly come from the foreign owned electricity and gas service providers.

The 10% reduction was challenged in court by electricity and gas distributors. The courts found the 10% reduction unfounded. Immediately after this court ruling the parliament passed another law abolishing the HEO and preventing court appeals on network usage - only allowing in certain instances appeals to Hungary’s constitutional court (Hungary Around the Clock, 2013). At the time of the creation of the new Hungarian Energy and Public Utility Regulatory Authority (MEKH) the parliament began discussions on a further 11% cut in utility prices. In 2013 both the earlier 10% cut was passed, and a second cut of 11%, was instituted in October of 2013. A third cut of 5.7% in electricity and 6.5% in gas was passed early in 2014. Each price cut took place just before national elections (April 2014) and local elections (September 2014). Altogether electricity prices declined by 25% between 2011 and 2014.

The forced price cuts were also matched with three additional taxes on utilities: 1) A pre-existing ‘Robin Hood’ tax of 11 %, implemented by the previous socialist government on profits was increased to 31%; 2) In addition corporate income tax stood at 19% bringing the total tax to 50% at the end of 2013 (US Department of State, 2013). 3) In 2010, the so called “crisis tax” was introduced that set a 1.05% tax on energy companies' taxable revenue. This crisis tax was replaced in 2013 with a tax on public utility networks, such as, water, natural gas, telecoms, electricity, this was set at HUF 125 (EUR 0.44) per meter (Schonherr Legal Insights, 2013).

Nonetheless, it is obvious the firms have adapted to these tax changes. The average level of corporate tax paid by foreign energy firms in 2010 was Hungarian Forint (HUF) 719 million, in 2013 this dropped to HUF 443 million. However, restructuring of tax liabilities within firms may also play a role in the overall decline (Felsmann, 2014). Operating profits of the utility sector as a whole inverted from a profit of HUF 224 billion in 2009 to a HUF 119 billion loss in 2012 (LaBelle and Deak, 2015).

The private utility (both gas and electricity), according to Felsmann (2014), have responded in three ways: 1) sell - or offer to sell - companies to the state (this has occurred in the gas sector); 2) cut investments, increase operational efficiency and perform capital extraction, by increasing the dividends paid to shareholders (often foreign mother companies); and 3) allow taxes and

lowered revenue to financially scuttle the enterprise, thus eroding its capital position and destroying its value (Felsmann 2014). Paid out dividends doubled between 2010 and 2013 (Felsmann 2014) while sector investment declined from HUF 247 billion in 2010 to HUF 148 in 2012. Private utilities adjusted to the dual squeeze of price cuts and extra taxes by withdrawing funds and slashing investments. Profits are still being made by utilities, but significant alterations to their businesses needed to occur. Overall, there are long-term systemic risks around the unpredictability of the regulatory environment.

In the area of gas distribution, these changes are pronounced. First, a non-profit universal service provider was set up for households. The intent was to sell electricity and gas directly to consumers, thus leaving the private companies to operate the distribution network. In 2016, projected deals to take electricity distribution companies over by the state remained in limbo. In 2015, all privately owned gas distribution companies returned their household service licenses, while MEKH (the new Hungarian utility regulator) approved the now state owned FOGAZ to supply all households in Hungary. Earlier in 2015, the state bought out RWE from FOGAZ, making the gas sector almost fully state owned, only the distribution companies remained in private hands.

Politically, each move against the utilities was communicated by media advertisements and required the showing of 'energy savings' statements on bills. Seven utilities were fined HUF 56.5 million (EUR 185,000) by the National Consumer Protection Authority for not properly displaying on bills the financial savings (The Orange Files, 2016). After the first legal challenge in 2013 by the utilities and their initial court victory, the Fidesz political party began a nationwide petition that ultimately collected 2.3 million signatures, under the banner, 'Hungary Will Not Give In!' (Magyarország Nem Hagyja Magát!). This slogan referred to the court actions and the EU Commission's reservations on the utility cuts (The Orange Files, 2016). A nationwide billboard campaign was also launched during the 2014 election year, heralding the price reductions and a 'fight' against foreign utilities and the EU. As of 2016, every utility bill displays in an orange box the amount each consumer has 'saved' since the start of the utility cuts in 2013.

The actions of the Hungarian state since 2010 mark a dramatic shift from market based policies instituted in 1989, even before privatization and EU accession. End user price regulations existed under the previous communist regime. The dual actions of price regulation and taxes on foreign-owned utilities combined with state purchases in the energy sector demonstrate the reassertion of the state in the energy sector. A competitive electricity and gas market exists for the non-household sector with strong competition between traders. The lack of competition for households existed before 2010, as utilities did not compete against each other, and now with price controls, utilities cannot offer lower prices.

Some foreign-owned utilities can still extract profits from their operations while others continue to accumulate heavy debts each year. The political benefits of the utility cuts may dissipate over time as consumers acclimatize to their new rates. However, over the long term,

the cuts in funds to infrastructure investments may require the rates to increase or be subsidized through other means. The fact that the new universal service provider, including FOGAZ, are owned by the National Development Bank as a for-profit (and loss) entity may offer opportunities for losses to be absorbed by the bank which is then recapitalized by the government. State ownership and control of the Hungarian energy sector is far from the neoliberal economic policies which originally fueled privatization. Hungarian utilities were originally privatized to boost short term state income, rather than boosting taxes. Since 2010 utilities are taxed to boost short term state income. In summary, Hungarian utilities are budgetary tools rather than economic development entities.

4 Discussion: Regulatory independence to contested governance

The decision to gain additional one-time revenue for the state and the decision to modernize the energy system were the two primary motivating factors in bringing in private ownership. In Hungary and Bulgaria, these processes began during periods of significant budgetary shortfalls and the necessity to maintain and upgrade the energy system. However, the investment required increases in consumer prices, reflecting increasing domestic and international costs of energy during the 2000s. Loosening political control over end-user prices was necessary to create a technocratic form of governance with rates and oversight done by an independent institution. In both cases, consumer prices were raised to match the real cost of supplying electricity and gas. A rate setting formula was established before privatization and profit levels were defined. Additionally, both cases displayed strong transparency in the privatization process, lending credence to a technocratic approach. Nonetheless, the lessened political control existed only while market orientated political parties were in power.

4.1 Government to governance

The shift from government to governance describes the move from ministry level price setting to independent regulatory institutions. Within the EU, the energy sector is characterized by an attempt to infuse competitive market forces. EU energy directives all push forward the concept of a regulatory capitalist system (see EU Third Energy Package: Directives 2009/72/EC and 2009/73/EC European Parliament and European Council, 2009a, 2009b). This top down approach is an important explanation to account for the institutional staying power of energy regulators. In both Hungary and Bulgaria, the regulatory authority has been clipped or politically influenced, resulting in a dramatically different regulatory regime than outlined at the time of privatization.

Two additional reasons exist for establishing and maintaining regulatory institutions. The bottom-up approach is an attempt by reform minded political parties to put a price-setting beyond future political influence. This is an acknowledgement that price setting is a political affair and the backtracking of the institutional and pro-market decisions made at the time of privatization was possible. Horizontally, neighboring countries had, and were, establishing regulatory institutions, marking the regional movement away from centralized price controls to

a market based economy (Gilardi, 2005; Levi-Faur, 2005). These additional reasons explain the justification for maintaining energy regulators even if they exist only in institutional form, and not in functional form.

Despite labeling the movement from state to private ownership as a neoliberal process, it is important to emphasize the communist history of state ownership and investment. On one hand, centralized planning resulted in robust regional and national electricity networks that rivaled Western European countries. On the other hand, the cost of maintaining the system – in a transparent manner and with a long-term outlook, was beyond the Hungarian and Bulgarian authorities. The acceptance of a pro-market political philosophy can be seen as a reaction against full state ownership. Pumping limited state financial resources into a system where the private sector will pay for the privilege was seen as an unnecessary economic expense. Successive governments would not have the same view.

4.2 Socio-political regulatory capture

Pushing back against market (and profit) based reforms means taking back price setting authority from energy regulators. If regulatory capture describes the influence of private utilities over regulatory commissions, then ‘socio-political regulatory capture’ describes the process of political capture of the regulatory system for political ends. Maintaining low energy prices, over allowing profits for utilities, was a political decision attempting to address energy poverty. This is at odds with a market based system driven by market signals for investments. Energy poverty emerges as a topic all households struggle with, thereby negating the need to discern specific households living in energy poverty. Energy poverty, in terms expressed by politicians in Hungary and Bulgaria, is addressed by lowering prices for all households, rather than for those most vulnerable. The lack of profits by utilities acts as a system of wealth transfer, only between producers and consumers, rather than between consumers. The politicization of energy rates, places the regulatory system under pressure because of its obligation to oversee long-term investments. Alleviating energy poverty is prioritized over long-term investments.

Political control in a government-controlled energy system asserts political priorities over technocratic norms of rationalized investments and formulaic rates of returns. In Bulgaria, the fact that the companies never received the projected ROI agreed upon at the time of privatization, provides the foundation for the politicization of energy prices and the Bulgarian NRA. In both Bulgaria and Hungary, universal low energy prices were a political gift bestowed upon the broad electorate, rather than targeted assistance to the needs-based consumers. The political capture of the regulators for socio-political ends, rather than socio-economic necessity, results in a declining price path matched with declining levels of investments. Although, as shown in the case of Hungary, private shareholders of the loss making companies extract profits, rather than retain profits for further investments. Thus, the energy sector becomes drained by both owners and the state for short-term gain over long-term systemic growth.

The capture of the regulatory structure for socio-political means incentivizes private companies to withdraw further capital. Acknowledging the inability to extract future profits from sunk investments, utilities will hasten the decline by value extraction. Eventually, with so much extraction and little financial input, the energy sector declines, leading to system instability and costly emergency repairs or upgrades. A regulated zero-profit level, as in the case of a Hungarian gas utility, leaves owners with little incentive to inject financial resources. While regulation may be one tool to influence the extraction of money from a company, additional taxes on profits also serve the purpose of filling state coffers with the extracted value. Thus, a two-pronged squeeze on energy companies, (a) set end-user prices disconnected from system costs, and (b) taxes on profits, both act to subsidize ratepayers and redistribute profits back to taxpayers. The original intent of the regulatory approach in the utility sector was to utilize market efficiencies with governance oversight assisting long-term value creation. The result of socio-political capture is deferred investments and short-term value extraction.

4.3 Contested Governance

The legislative and regulatory changes that moved oversight of the energy sector from government control to governance oversight demonstrates an institutional shift. The politicization of energy prices and operation of energy companies has the political parties pushing back against private ownership and competition principles. There emerges a system of ‘contested governance’ that challenges the independence and market logic pushed by EU institutions. This approach is justified based on income disparities and the price of energy services stemming from the perceived universal levels of energy poverty in each country. Table 1, displays this system evolution.

Table 1 Government and governance characteristics

Characteristics	Government controlled	Governance system	Contested Governance
Financial	Ratepayers and taxpayers	Ratepayers	Ratepayers, taxpayers, and private companies
Ownership	State owned	Mix, private and state ownership	Mix private and state ownership
Pricing structure	Fixed end user prices	Cost based allowances, market price with regulatory oversight	Fixed end user prices
Financial losses	Internalized by state	Borne by private companies	Borne by private companies
Profits	Re-invested or state	Re-invested or	Taxed, shareholders

	treasury	shareholders	
Investment levels	Long-term perspective; large projects	Medium-long term perspective; medium sized and long-term	Short-term; reduced investment levels; no long-term projects with state support
Price setting	Government ministries	Energy regulator	Parliamentary committees
Impact on state budget	Neutral	Neutral	Positive, higher tax rate paid by private companies

Eliminating private ownership is a costly endeavor as the state needs to buy back assets. Hungary did buy back some assets (gas storage and transmission); other methods based on controlled prices and taxes (described above) may be profitable to the state and deliver the required end-user prices. Private ownership can be eliminated, but the debt burden would need to be carried by the state. The strategy of fixed prices and taxing profits would yield less and increase financial losses for the state. The case of NEK in Bulgaria highlights the financial losses that can occur when the state does not pass on the true cost of energy to the ratepayers. Taxpayers become ultimately responsible for losses under government ownership.

Table 1 provides a description of a contested governance system, where governance institutions and private companies still exist and operate – but with explicit contestation from political and social actors. Notable is the role of political price setting and increased private sector risks. Financial risk is mainly borne by ratepayers and private companies. Profits are either taxed at a high rate, taken from companies or are non-existent. Short-term thinking marks financial strategies. The end user price setting was previously within the government system under a ministry, while the governance system relied on an energy regulator taking into account generation and system costs.

5 Conclusion

Under the contested governance system, private utilities have prices set by parliamentary committees, making the political system central to energy management. The state budget also benefits under a contested governance approach. Taxpayers, under EU competition rules, are prevented from assisting ‘market-based’ actors, thus even state owned companies can rack up debts that somehow must be secured and paid back. Ministries, like in Bulgaria can bet big on projects that are later cancelled resulting in penalties for withdrawing. Mismanaged energy systems become expensive. In a perverse socio-political energy system, losses are acceptable for the private sector, while the state maintains control over market and non-market based

activities. By utilizing the pincer movement of controlled prices and taxes, sectoral rents are clawed back by the state, while private utility companies bleed out shareholder value. Long term energy poverty is addressed through price controls, but the modernization of the housing stock or energy infrastructure is neglected. An environmentally and financially sustainable energy system alludes policy makers. Financial subsidies to help the most vulnerable customers, in a contested governance approach, are extended to every household, adding to the future instability of the energy system – rather than through targeted programs to vulnerable consumers. Energy poverty is addressed in a system of political-economic regulatory capture by shifting financial losses onto the private and public sectors rather than developing targeted assistance projects.

If the success of privatization can be measured, it would extend beyond the first few years after ownership changes. Moving towards a more innovative and sustainable energy system is based on the interactions of the private sector with state institutions. The examples of Hungary and Bulgaria cast a grim light on establishing and building regulatory institutions as a foundation for a new energy system. Contested governance methods place private and political actors on opposite sides, fighting over the price of energy services.

Regardless of the political or ideological perspective, there are serious hurdles to building a stable, sustainable energy system in these political-economic environments. The case studies here demonstrate the failure of regulatory independence to become engrained within state institutions and respected by policy makers. In both countries, no chairman of the NRAs has fulfilled their full term in office. Politically managed energy systems have their own costs. Those costs in Bulgaria can be found in the cancelled energy projects, in Hungary they can be seen in the debt levels of private energy companies and the siphoned-off capital. Political involvement is not cost neutral. Contested governance is an expensive form of governance.

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