

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

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### [Abstract](#)

Modernization of the energy sector is based on continual investment. Integration of new low carbon technologies rests on investments cycles which continually upgrade the energy system. This article explores efforts to keep utility prices low in Bulgaria and Hungary. This article shows despite European Union efforts to roll-out independent regulatory institutions in these countries' the state maintains its traditional political role of delivering low cost electricity and gas, at the expense of system investments. The establishment of a technocratic regulatory structure, facilitating regulatory capitalism, was only temporary during and shortly after privatization. Technocratic norms are not embedded. Public riots in Bulgaria and rate cuts of 25% in Hungary indicate the death of technocratic procedures. Energy justice emerges as a rallying cry to tackle energy poverty – even if this prevents the long-term sustainability and development of the system. Energy regulators show symptoms of socio-political capture, not regulatory capture by the private sector. Political leadership in both countries seize price setting authority to deliver social benefits. Neoliberal policies characterized by independent regulation falter under political control intent on low energy prices and extracting additional rents for state budgets.

Key words: Neoliberal, electricity, regulatory capitalism, governance, risks

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## 1 Introduction

Modernization of the energy sector is based on continual investment. Integration of new low carbon technologies rests on investments cycles which continually upgrade the energy system. Bulgaria and Romania provide a case study of energy systems relying on both private and public ownership. Regulations and legislation control market operations, making state institutions fundamental for shaping renewal of the energy sector. Intense efforts are made in both countries to keep energy prices low, calling into question the ability of these countries to modernize and move to decarbonize their energy systems.

This article explores efforts to keep utility prices low in Bulgaria and Hungary. The political activities alter a positivist's dream of fair and technocratic rulemaking in the energy sector. Events run against assumption of a technocratic state and sectoral expertise in the energy sector. Instead, political decisions influence energy prices and profit levels thereby undermining assumptions of open and competitive energy markets. The state maintains its traditional political role of delivering low cost electricity and gas, at the expense of system investments. Examination of the relationship and regulatory environment for distribution companies indicate socio-political pressures in Bulgaria and Hungary shape legal certainty, independent regulatory making and profit making.

The article is empirically driven, but in the next section draws on literature assessing the EU technocratic regimes adopted by Member States (e.g. Andersen and Sitter, 2014; Knill and Lehmkuhl, 2002; Levi-Faur, 2011, 2009; Maggetti and Gilardi, 2011). In addition, risk governance literature is reviewed, enabling a deeper understanding of the pitfalls companies experience when they enter a market with shifting political agendas and an altered regulatory environment (Abdala, 2008; LaBelle, 2012; Wüstenhagen and Menichetti, 2012). The literature frames a discussion of the role of independent regulatory institutions, promoted by EU policies and the private sector. Neoliberal policies, in general, characterize the original intent for privatization and technocratic operation of the energy sector.

The theoretical framing enables these case studies to inform the ongoing discourse of EU governance and regulatory decision making in EU member states. The case studies show knowledge networks and sector expertise existing on the ground, but social and political realities foster a divisive quest for lower energy prices. This battle encumbers and alters the development of a modern energy system built for a twenty-first energy system containing significant renewable energy sources and smart demand management systems.

The two case studies involving Bulgaria and Hungary will specifically evaluate the causes of Bulgarian riots and the Hungarian government slashing utility rates by 25% in 2013 and 2014. First examined is the Bulgarian case study, this concentrates on the privatization process and the shifting regulatory environment for private generation and distribution owners. Significant losses sustained at state and privately owned companies, due to low utility rates and shifting

energy strategies, imperil the sector into perpetual loss making and under investments – based on current rates.

The second case study draws on the experience of Hungary of a sustained movement to a market based system in the energy sector since 1989. Privatization and EU membership have reshaped the sector previously fully state owned. However, starting in 2010 a legal and regulatory battle began to be waged as the new Hungarian government sought ways to extract extra taxes, buy-back utility assets and dramatically lower rates; culminating in 2015 with the establishment of a state owned utility that became de facto universal service provider across the whole country after years of significant losses at privately owned gas utilities.

Both case studies highlight the engrained political will to deliver lower energy prices in a nonconformist way running counter to technocratic regulatory methods. The actions indicate not regulatory capture by the private sector, but *socio-political capture* by political leadership to benefit short term prices over long term system stability. Neoliberal policies characterized by independent regulation falter under political control intent on low energy prices and extracting additional rents for state budgets.

## 2 Literature of neoliberal regulatory structures

Developing a framework to address the privatization of utilities in Hungary and Bulgaria requires three working assumptions:

First, operations of national energy markets in the EU are a technocratic project. EU Directives place *rate setting and long term investment planning in the hands of independent energy regulators*. This contrasts with previous Communist era state subsidized energy services working as economic and social policy.

Second, privatization brought in non-state owners expecting financial returns on their investments. Energy regulators balance promises made at the time of privatization with current political and social demands to maintain low energy prices. In a more abstract sense, privatization is a subset of 1990s neoliberalism which is now rejected: *Current political leadership rejects maintenance of neoliberal market reforms*. Sustaining a market for energy services is politically untenable; running counter to EU visions of a single energy market. Instead a process of socio-political regulatory capture occurs forcing the energy sector to adhere to price controls and a strict low/no profit business model.

Third, removal of the state from all facets of life in former communist countries creates imbalances between personal income and rising cost of energy. Significant energy intensity of households requires higher consumption rates than more advanced OECD countries, energy poverty and the right to energy services is tackled by reducing consumer energy prices, not through energy efficiency measures. Energy justice and equity, is defined in the academic literature (discussed below) in terms of access to energy services. However, as the case studies

of Hungary and Bulgaria show, *energy justice lives in a raw form, defined by consumers and governments as reducing or eliminating profits in the energy sector – particularly from foreign owned firms.*

These three assumptions: 1) regulatory independence; 2) rejection of neoliberal reforms; and 3) energy justice, integrate three energy eras in the history of Bulgaria and Hungary. From state owned (government), to privately owned and technocratically operated energy systems (governance), back towards large state ownership marked by political mediation of market forces (mixed government). These are the guiding themes of this chapter exposing conflicted territory in national energy sectors.

## 2.1 Independent market regulations?

Privatization of utilities holds both an ideological and market characteristic. Ideologically, privatization is wrapped in the Chicago School of Economics of free markets and global trade (Stigler, 1971). Utilities and even government oversight through an independent regulator are prone to regulatory capture. Utilities are vertically integrated monopolies which on the surface serve the public good, through long-term investments into infrastructure in return for a set rate of return (Hirsh, 2005, 1989). The creation of the public regulator is firmly an American invention instituted to balance competing political, economic and social interests providing a utility (like electricity or gas) as a public good. In the US widespread use of regulatory boards emerged during and after the Great Depression. With no competition, utilities (both private and government owned) concentrated on rolling universal access and building large scale generation, such as hydroelectric and nuclear power plants.

After 1989, privatization of utilities in former Communist countries relied on new independent regulatory institutions to play the mediating role. Regulators balanced political pressure for lower priced utilities and investor requirements for returns on their investments. Pricing formulas were often established ahead of privatizations so investors knew rates of return on capital invested. Often regulatory institutions were established and trained with the assistance of American and European energy regulators (Jankauskas and LaBelle, 2009; LaBelle, 2015; NARUC.org, 2002).

The term, 'regulatory governance' frames an institutionalized approach to independent regulatory agencies. This technocratic approach structures and approves investment conditions for both public and private utilities. The term, 'governance' signals the movement away from direct 'government' involvement and into an area where sector experts determine types and scale of investments into the energy system. Each country has a different structure for their energy system. Some areas are dominated by state ownership, such as Polish state ownership of electricity distribution compared to Hungarian private distribution companies. Electricity generation is often done in a competitive market with a mix of private and publicly owned companies. In either case, regulatory oversight is provided which influence/approve prices (distribution) or observe market participants (generation) (Hirsh, 1989; Stern, 2000; Stern and

Holder, 1999). In either case, a country's regulatory institutions, through governance methods, influence types of generation and the end price of energy.

In a concrete manner, the governance structure and the activities of institutions influence the market and profitability of market actors. In a regulatory advanced environment, regulators may want to promote renewable power integration. In contrast, a more conservative system special support may be given to old coal fired power plants. Regulators have significant influence on market forces which ultimately influences the final price consumer pay (and usually this price for households is set by the regulator). Energy supply transforms into an essential service that households and industry consume. Universal access to energy was rolled out during Communism, fueling economic growth in a state centric system, which now must be maintained in a market economy through governance measures. Access to energy services eliminated poverty, but with recent changes to the socio-political system, system developments do not align with political priorities, thereby contributing to energy poverty and access to affordable energy services.

## 2.2 Sustaining neoliberal market reforms

The EU Third Energy Directive, which came into force in 2009, established independent energy regulators in each state, forced unbundling of sales and generation along with establishing independent Transmission System Operators. The attempt at market uniformity to assist the integration of national markets into a single EU wide energy market foresaw energy regulators and separation of generation and electricity/gas supply as core to this effort. In short, it was establishing a technocratic approach to national energy systems. Limits were placed on political involvement in the day-to-day operations.

Conceptually, the emergence of a politically independent energy regulator directing private energy companies establishes the basis for 'regulatory capitalism'. Neoliberal ideology infused with the need for market forces matches another perception of monopolies and system efficiencies in the energy sector. Therefore, market regulations are necessary to direct capital, mitigate and oversee monopolies; *regulatory capitalism* provides an overarching framework to understand the tense interaction of capital and market regulators (Gilardi, 2005; Levi-Faur, 2009).

State regulatory institutions are central for directing capital and protecting ratepayers from monopolistic abuses; they ensure long-term investments occur with companies incentivized to carry-out infrastructure upgrades. Regulatory institutions are created for a variety of reasons, ranging from 'bottom-up', 'top-down' and 'horizontal processes' (Gilardi, 2005; LaBelle, 2015; Levi-Faur, 2005). In many cases it is in the interest of local actors to establish institutions insulated from political interference and cement a particular economic structure (Gilardi, 2005; Levi-Faur, 2005).

The regulatory capital system becomes self-reinforcing through formal and informal networks (Eberlein and Grande, 2005; Levi-Faur, 2011, p. 20). The prominence of such an international order, and functional strength of institutions may signal greater stability and coherence to a set of international norms propagated in particular countries. However, as examined in this paper, there is fallacy in believing international institutional structures do not bend to local ingrained political orders.

Recent energy literature is now emphasizing the socio-political dynamics that interact with economic processes. Privatization is not a simple economic transaction fueled by neoliberal ideology of market economics. Rather, privatization reflects a time period when the state ebbed away and was unable to provide necessary investments to maintain and upgrade energy infrastructure. Socially, energy justice (Goldthau and Sovacool, 2012) places a heavier burden on the poor (Pachauri et al., 2012), which is more difficult to even out in a developing economy with limited regulatory experience and data on the most vulnerable homeowners.

### 2.3 Energy Justice

Energy equality and justice is defined by Sovacool et al, in the framework of affordability in OECD countries, while access in non-OECD countries is the issue (Sovacool et al., 2013). Energy poverty in CEE region is due to the deterioration of housing stock as identified by Buzar(2007). Under Communism, Bulgaria and Hungary benefited from significant energy infrastructure improvements. Hungary since the mid-1980s has rolled out an extensive gas system, which was later privatized. Bulgaria embarked on privatization in the mid-1990s to fund investments into the underfunded energy sector. In both countries, energy poverty is linked to maintaining both the infrastructure and household affordability.

Further refinement of energy poverty, reveals it is the energy intensity of households who 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). The return to energy services and the 'right' to access a service that provides foundational human rights for our modern society (Sovacool et al., 2013), alters 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, nor is it acknowledged by the state 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 removes the safety net built in the previous economic system, ensuring affordable access to energy services. Energy poverty emerges in these OECD countries due to shifting politics but without an adequate alternative built 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. Energy justice is addressed here as an intangible normative *feeling* of unfairness, often stoked by private ownership compounded with a low national income level and the ability of households to pay energy bills. Additional research needs to be done to identify components of energy justice and how they interact and are part of different political-economic systems. As will be described in the case studies, both Bulgaria and Hungary have experienced political and social mobilization against energy injustice.

Expansion of the EU into Central Eastern Europe reinforces regulatory governance stemming from neoliberal policies. Utility privatizations and regulatory institutions existed beforehand (LaBelle, 2009), it was membership into 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. Conflict quickly arose over regulatory and political culture rooted in historical distribution of power over the energy sector (Bohne, 2011; Gonzalez et al., 2008), and cross-subsidization of energy resources and services. Differences in regulatory institutions and powers, including respect for independence, results in different approaches in member states.

## 2.4 Transition towards sustainable energy systems

Energy transitions necessitate effective regulatory governance, moving consumers from burning wood and coal to grid connections or solar PV and biomass plants. The chosen technologies must fit according to local socio-economic conditions influenced by economic, political and social actors (LaBelle and Goldthau, 2013). Rethinking systemic design of national energy systems re-conceptualizes the social into the regulatory structure (Millet et al 2015). Rather than regulatory institutions balancing private and political interests, consideration is given to *regulatory capture by social causes*. One of these can be the price of energy consumers pay, or it can include societies desire to become more sustainable by fostering more renewable energy. In either case, private interests - assumed to be protected - in a regulatory regime are threatened by pressures to satisfy social or political pressure to deliver social goods.

“Centralized energy systems can reinforce authoritarian power structures” (Sovacool et al., 2013, p. 116) maintaining power disparity, and reducing equality in decision making. Low priced electricity delivered through political egress requires payment in political support. Energy justice defines universal access, but also affordability. Therefore, the definition of the public good shifts to one of *short term affordability rather than long term investments that technically*

*advance (distributed)energy system.* Maintenance of a centralized political order also maintains a centralized energy system, where prices are tightly controlled, rather than households knowing what their true costs are.

Underlining a centralized system, is the regulatory system supposedly providing for the public good, through energy equality. However, regulatory capture and regulatory capitalism dwell in a technocratic world of governance through regulations. Neoliberal institutions of independent regulatory agencies are dependent on broader institutional interactions (Eberlein and Grande, 2005; Levi-Faur, 2011). In some countries, clipped authority and political management of regulatory bodies usurps norms of regulatory independence observed in Western Europe and North America. Government sits firmly within governance, allowing regulatory formal and informal networks to exist (Eberlein and Grande, 2005). Private utilities are afforded a formula for Return on Investments (ROI), but to politically deliver energy justice, the result may be losses on the balance sheets for private companies.

*Socio-political regulatory capture* is the bastardized version of neoliberal regulatory capitalism. Neoliberal regulatory capitalism, tilts to serving the long-term economic interest of private capital, ratepayers and a weakened – and even corrupt – state. However, dependent on political winds, socio-political interests are served by state influence and ownership over energy prices. Below are two stories of socio-political regulatory capture where shorter term political and social interests are served by price controls and slashing long-term investments in energy infrastructure. Over the long term, this socio-political regulatory capture, may undermine the centralized energy system’s viability and sustainability targets.

### 3 Bulgaria: Sustained losses and sustained low prices

Bulgaria’s energy sector privatization began almost a decade before the country’s accession to the European Union. The government of the United Democratic Forces, which took power right after the big financial crisis in Bulgaria in the beginning of 1997, was the first one to finish its full 4-year term and started some of the reforms in the electricity sector. 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 has sent missions to work with the government on reforms, including in the energy sector (World Bank, 1997).

There were several main goals of the 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 related corruption practices. One of the most important steps of that government was to set up in 1999 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, after the new law for the 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 7 regional distribution companies, as well as the largest generating capacities (NPP Kozloduy, TPP Maritsa East 2, TPP Ruse, etc.) were taken out of the capital of NEK and established as separate 100% state-owned companies. Even then, 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 by the plan that it had negotiated with the international financial institutions. The next step was the privatization of smaller generating capacities, as well as the preparation of two large PPA contracts 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.

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, which was valid until 2011. Its main steps in the energy sector included the privatization of 67% stakes in the electric distribution companies in 2004 (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), as well as the restart of the 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 next 3-party government, led by the socialist party (2005-2009) in coalition with the two parties from the previous government, had a different approach to the energy sector. Even after the accession of Bulgaria to the EU in 2007, the state did not do much to accelerate the liberalization of the electricity and gas sectors, but rather seemed to want to keep control on them through two channels – control over the national regulatory authority *and* through the 100% state ownership of the power plants, generating more than 60% of the electricity in the country.

It did not build on the previous experience of privatization and instead focused on large energy projects with Russian participation. 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 (with HPPs for over 2700 MW, the only PSHPPs with capacity of 940 MW, and the whole transmission network and TSO under its subsidiary company ESO EAD), 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).

The rightist government in the period 2009-2013 did not do much to change the situation in the market. Moreover, some of its actions to keep prices low have been counter-productive in terms of improving the investment environment. With the small amount of deals on the liberalized market (only between a handful of producers, traders, and consumers), in the period until the end of 2013 most of the electricity produced (up to 80%) was funneled through the “regulated” segment of the electricity market, with a key role of the NRA in defining production quotas for the regulated producers, as well as regulated prices not only for grid services (at TSO and DSO level), but also for every level of re-sale of electricity. The production quotas are defined in an arbitrary way and the main purpose is to include more energy from “cheap” power plants (mainly the state-owned NPP Kozloduy and TPP Maritsa East 2, but also some IPPs) in 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).

The private investors 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 and had to witness the negative results of the political promise for low energy prices. As the DSOs have unbundled after 2005, their end supplier companies were squeezed between two regulated prices – the purchasing of electricity from the wholesale incumbent NEK EAD and the sale to end customers at regulated prices. This has led to the first arbitration procedures against Bulgaria from electricity distribution companies (Prodhan, 2013). Even though the privatization contracts have promised 16% ROI p.a. for the initial 3-year regulatory period after the privatization and 12% p.a. for the next 5-year regulatory period, the companies witnessed 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 in 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.

The Bulgarian electricity market has been also suffering from a poorly-structured supporting scheme for renewable energy and 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) and to the construction of about 2 GW of RES capacities until 2012.

In addition to the PPAs of the incumbent NEK with lignite plants, it also is the center player in the RES and cogeneration feed-in tariffs 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 lower has led to under-compensation of the private companies in 2013 and they still have not received a repayment as of the beginning of 2015.

When the business customers finally were allowed to participate in the liberalized segment of the market, a new challenge occurred – now the regulated segment of the market, which includes PPAs, long-term contracts with RES, and electricity from cogeneration has to supply predominantly vulnerable customers and the only energy left for this consumer segment is the most expensive one. The rise in prices during 2012, as well as some uneven metering periods in the winter, finally resulted in organized protests in Sofia's streets and to the resignation of the government 6 months before the end of the term in February 2013.

The sense of a strong political dependence of the NRA is supported by several suggestions by different energy ministers that prices should be lowered with a given number (e.g. 5%), strictly followed by the respective regulatory decisions throughout 2013 (Bulgarian Ministry of Economy and Energy, 2013). The end prices of power utilities have been diminished three times – in March, August, and in late December. There have been also 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 decisions) and the Constitutional Court – for the law proposing 20% tax on all RES-producers revenues.

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

The price-cutting trend has been abruptly stopped by the regulatory commission in June 2014, when it confessed, that the current pricing model has actually led to a deficit in the regulated activities of NEK for about 767 million EUR in the last 4 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).

As an additional sign of the regulatory independence status in Bulgaria, there were 5 resignations of the SEWRC's Chairmen in only one year – 2013, followed by a unanimous resignation of the 6 other members in 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 underline, that the regulatory commission members could not be “replaced” by the appointing body (the Council of ministers), so all the resignations were explained with personal reasons. In general, the 7-member regulatory board had 17 different members during 2013 and 6 of them 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 high quality staff that is demanded to carry out its legal tasks (European Commission, 2014).

#### 4 Hungary: Privatization and political capture

Hungary’s privatization of electricity distribution companies was not facilitated by joining the EU in 2004. Rather, financing the state’s day-to-day operations facilitated privatization in 1994. The election of the political party Fidesz in 2010 swept out acceptance of market forces and regulatory authorities as means to guide the electricity and gas sector. Instead, sector profits were viewed as ill-gotten gains against the Hungarian consumers. Utilities were forced to adjust to perpetual losses in the gas sector and readjust investments levels. In 2015, the state set up a universal service provider for gas targeting households.

Privatization of Hungary’s energy assets began in 1989. Eight generation and six regional distribution and supply companies were created. The Hungarian TSO was also established. 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 MVM remained the ‘middleman’ buying power from generators and reselling to distribution companies, it continues this role today. The original purpose was to balance out expensive generation with lower cost generation for consumers.

In 1995, the 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 is 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 produced by the Paks Nuclear Power Plant in 2014. Thus generation - and the amount the end user pays - is tightly connected with prices in neighboring countries and cross-border capacities facilitating trading. The Hungarian electricity market is now coupled to the Czech, Slovak and Romanian markets traders are active. Hungarian industrial and business consumers have a competitive market to purchase power.

Competition for Hungarian households does not exist. EU rules in the Third Energy Package were transposed and consumers were given the right to choose their supplier in 2009. Nonetheless, only Magyar Telecom began to offer electricity services, with the established foreign own suppliers not competing for consumers (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 European Commission rules. In Hungary, these were conceived to entice investors to spend money modernizing the privatized generation sector. Despite protest from some of the companies the final result were 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 with Parliamentary elections in 2010. Fidesz-KDNP won elections with a two-thirds majority and systematically altered every state institution. 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).

Hungary in 2010 removed the price setting authority from the Hungarian Energy Office (HEO) and placed this responsibility with the National Development Ministry. However, a parliamentary committee tightly coordinates the set price. Legislation enables the committee to place a price cap on gas and electricity, after consultation with the HEO (Gulyas 2010). In 2011, 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). From January 2013, Parliament passed a law stipulating household consumer 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 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 same time of the creation of the new Hungarian Energy and Public Utility Regulatory Authority (MEKH) Parliament began discussion on a further 11% cut in utility prices. In 2013 both the 10% cut was passed and a second cut of 11%, was instituted in October 2013. A third cut of 5.7% in electricity and 6.5% was passed early in 2014. Each price cut took place just before national elections (April 2014) and local (September 2014) elections. Altogether electricity prices have 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, implemented by the previous Socialist government of 11% on profits was increased to 31%. In addition corporate income tax stood at 19%. Making the total tax on

50% at the end of 2013 (US Department Of State, 2013). In 2010, the so called “Crisis tax” was introduced that set a 1.05% tax on energy companies' taxable revenue. 3) This Crisis tax was replaced in 2013 with a tax on public utilities networks, such as, water, natural gas, telecoms, electricity, this was set at HUF 125 (EUR .44) per meter (Schonherr Legal Insights, 2013).

Nonetheless, it is clear the firms adapted to these tax changes. The average level of corporate tax paid by foreign energy firms in 2010 was HUF 719 million, in 2013 this dropped to HUF 443 million (Felsmann, 2014). However, restructuring of tax liabilities within firms may also play a role in the overall decline (personal communication Felsmann 2015). Operating profits of the utility sector as a whole inverted from a profit of HUF 224 billion in 2009 to 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); 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 [get full year 2013]. Private utilities adjusted to the dual squeeze of price cuts and extra taxes by withdrawing funds slashing investments. Overall, while the utilities as a whole (some are losing money and others are still making money), the sector can be characterized as unbalanced for long-term investments.

Further changes are planned by the Hungarian state. Originally, a non-profit universal service provider was to be set up for households. Thus selling electricity and gas would be taken over by the government while private electric and gas distribution companies would remain owners of the local networks. In 2015, all privately owned gas distribution companies returned their household service licenses, while MEKH (the new Hungarian utility regulator) approved 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, just the distribution companies remained in private hands.

Politically, each move against the utilities was communicated in media advertisements and required ‘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 (“Government Public Utility Fee Cuts,” n.d.). 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!]. Referring to the court actions and the EU Commissions reservations on the utility cuts (“Government Public Utility Fee Cuts,” n.d.). A nationwide billboard campaign was also launched during the 2014 election year heralding the price reductions and the ‘fight’ against foreign utilities and the European Union. In 2015, every

utility bill summarizes 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 some 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 household 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 to infrastructure investments may result in the necessity of 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. Hungarian utilities are budgetary tools rather than economic development entities.

## 5 Discussion: Regulatory Independence and Political Capture

The decision to gain additional one time revenue for the state and to modernize the energy system were the two main factors to bringing in private ownership. In Hungary and Bulgaria these processes began during significant budgetary shortfalls and the recognition of the need to attract manufacturing industry, by supplying reliable sources of electricity and gas.

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. In both cases there was 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.

### 5.1 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). This top down approach is an important explanation to account for the institutional staying power of energy regulators. In both Hungary and Bulgaria 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 within a politically riposte sector. The bottom-up approach is an attempt by reform minded political parties to put price-setting beyond future political influence. This is an acknowledgement that price setting is a political affair and 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; LaBelle, 2015; 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 labelling the movement from state to private ownership as ‘neoliberal regulatory capitalism’ 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, were beyond the Hungarian and Bulgarian authorities. International investment in manufacturing was necessary and so was a stable energy system. 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 an unnecessary economic expense. Later governments would not have the same view.

## 5.2 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. The perception of energy justice drives political reforms to reclaim price setting authority. 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 Justice, in terms expressed by politicians in Hungary and Bulgaria, is justice for all households at the exclusion of company profits. Technocratic institutions, whilst viewed as undemocratic (Eberlein and Grande, 2005), function to oversee the long-term

development of the system but require more robust policies to alleviate energy poverty, rather than across-the-board price reductions.

Political control in a government controlled energy system asserts political priorities over technocratic norms of rationalized investments and formulaic rates of returns. Political priorities of elections and economic growth prioritize low prices over long-term system investments. This is the very reason for the creation of regulatory institutions in the US, to balance competing demands against the rationalized long-term investment of the capital intensive energy sector (Hirsh, 1989). In both Bulgaria and Hungary, universal low energy prices were a political gift bestowed upon the broad electorate, rather than targeted assistance to 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 little incentive to inject financial resources. While regulation may be one tool to influence extraction of money from a company, additional taxes on profits also serve the purpose 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 a technocratic regulatory approach 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.

### 5.3 Government, Governance and Government

The shift from government to governance matching the obvious political-economic movement from Communism to Capitalism. Identifying the most recent switch from a technocratic market based energy system to one infused with political regulations is more subtle. There is now a shift towards 'mixed government' and away from a pure Governance system. Table 1, displays this system evolution.

Table 1 Government and Governance Characteristics

Characteristics	Government controlled	Governance system	Mixed Government
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	Born by private companies	Born by private companies
Profits	Re-invested or State treasury	Re-invested or shareholders	Taxed, 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, 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 ratepayers. Taxpayers are ultimately responsible for losses under government ownership.

Table 1, provides a description of a mixed government system, where governance institutions and private companies still exist and operate. Notable is the role of political price setting and increased private sector risks. Financial risk is mainly born by ratepayers and private companies. Profits are either taxed at a high rate, pulled out from the companies or are non-existent, short-termism marks financial strategies. End user price setting was previously in the government system in a ministry, while the governance system relied on an energy regulator taking into account generation and system costs.

Under the mixed government system, private utilities have prices set by parliamentary committees, making the political system central to energy management. The state budget also benefits under a mixed government approach. Taxpayers, under EU competition rules, are prevented from assisting 'marketbased' 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 technocratic 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 in the name of short term energy justice through price controls, modernization of the housing stock or energy infrastructure is neglected thereby not building a sustainable energy system. Subsidies to help the most vulnerable customers, in a mixed government approach, are rolled out to every household, adding to the future instability of the energy system – rather than through targeted programs to vulnerable consumers. Energy justice, in a system of political-economic regulatory capture, is the collectivization of energy losses rather than targeted price controls for the poor.

## 6 Conclusion

If success of privatization can be measured it would extend beyond the first few years after changing ownership. Moving towards a more innovative and sustainable energy system is based on interactions of the private sector with state institutions. The two examples of Hungary and Bulgaria provide a grim light on establishing and building a foundation for a new energy system. Regardless of the political or ideological perspective taken, there are serious hurdles to building a stable sustainable energy system in these political-economic environments. Neoliberalism is market based, while regulatory capitalism rests on technocratic guidance of upgrading and deploying new technologies. The case studies here demonstrate the failure of regulatory independence to be sustained beyond the enacting political parties. The energy regulators in both country have never seen a chairman fulfill 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 capital. Political involvement is not cost neutral.

The question that needs to be asked is how to rectify for the long-term, the interaction of state and capital in the energy sector. This question needs to be asked in the context of how a renewal and upgrading to a more sustainable energy system should happen over generations. Removal of profit incentives and forced losses on companies cannot be the solution to finance a sustainable energy system. Peace must be found that enables state involvement – to protect consumers – and to incentives the private sector to roll-out new technologies. This intent of this article is only to highlight the shifting sand below any foundation.

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