Electricity Post-Privatization: Initial Lessons Learned in South East Europe

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Executive Summary

Introduction

The privatization of electricity distribution and generation companies in Bulgaria, Macedonia and Romania are valuable examples which demonstrate the challenges involved in moving from state to privately owned companies. The issues raised in this report underscore the importance of sector reforms and the consistent application of independent and effective regulations in countries with newly privatized electricity companies. In all three countries the regulatory framework takes on significant importance as electricity prices are balanced with service quality and continued investments.

The sale of thirteen electricity distribution companies to foreign strategic investors in these three countries for approximately 3.5 billion Euros has been a significant success story in the overall economic reform process. The subsequent investments in technical and commercial modernization and increased tax base continue to enhance the economic transformation.

The aim of this report is to examine issues involved in the privatization of distribution (and to a limited extent generation) companies and to suggest ways to mitigate problematic issues which emerge after privatization. In order to accomplish this, the time period before, during and after privatization is examined. This can help illuminate issues which were identified early on as important and those issues which were originally overlooked or under-appreciated in their importance. Assessment of the privatization process and post-privatization environment is based on 27 interviews conducted in five countries.

Post-Privatization Regulatory Issues

The privatization of distribution companies is seen as a way to modernize electricity distribution systems with significant investments into advanced technology and the application of international management expertise. Drawing from three case studies ten issues emerge which are important for efficient and effective privatization, which have considerable impact on the post-privatization regulatory and investment environment of each country. The ten issues are:

Due Diligence: The thorough accounting of the asset base is an essential first step for the privatization of energy companies and a basis for restructuring of the energy sector. The asset base does not only provide a value for which the company will be sold at, but is linked to the

tariff level that will be charged after privatization and the rate of return the investor will receive. A key lesson in assigning value to the asset base is financial advisors need to work with government and regulatory representatives in determining the type of valuation that will occur before privatization and a strategy to assess the value after privatization. There are three types of valuation to consider: 1) book value, considers depreciation value of assets; 2) fair value, the tariff that is assessed based on the costs of the firm with an agreeable profit; 3) replacement value, how much it would cost to replace specific assets. Methodologies using these values are used in deciding tariff levels. In particular, before privatization the assigned asset value methodology to be used after privatization should be clarified by the regulator to the investors for a predetermined number of regulatory periods.

Transaction advisors working on behalf of governments are also shown to be essential in bridging the assigned asset values with auction tendering procedures. However, advisors value in the privatization process is also shown to exist in ensuring a timely, transparent and successful transaction. It is clear from their participation in privatizing distribution companies in the three countries and their lack of involvement in generation privatization, that involvement of transactions advisers is essential.

Value and Depreciation of Assets: Low value assigned to assets impacts on the depreciation of these assets, along with the amount of investment that occurs and the end-user tariffs needed to fund investments. The rate of depreciation may be combined with a significant increase of asset values, reflecting investments, which may prompt regulators to soften the price increase by prolonging the depreciation time; this regulatory depreciation may interfere with investors being able to recoup their investments. Asset valuation, the period of time before devaluation and accounting methods need to be reconciled before the tendering process begins.

Asset Ownership: One of the most common problems occurring in all three countries was establishing ownership of distribution assets. In most cases these are local distribution lines or substations, and either the records of ownership are unclear from the time when the state owned everything to the period afterwards when privatization of (manufacturing) companies was widespread. In most cases distribution companies must maintain these assets, despite these not being accounted for in their operational expenses. An overall program should be legislated that allows the distribution company to buy distribution assets owned by third parties; or in their operational expenses enable the distribution companies to account for the maintenance and investments done to third party property .

Unpaid Past Receivables: One of the key reasons for privatization is to increase the rate of collection. The value of the company may be inflated because of a large number of unpaid

bills which can extend back years. There are three categories for customers with unpaid bills, those that tampered with the meters, illegal connections and simple nonpayment of bills. Estimation can be done in the first two instances. Macedonia is used as an example of how pursuing non-payment in the courts (with 400,000 claims) can be a very slow process. In this case, if a court case is not filed then consumer debts are to be forgiven after one to three years, depending on customer class. Privately owned EVN is still pursuing these cases, despite the slowness of clearing this backlog.[12] The privatization process needs to account for different accounting methods and a system for past unpaid receivables. The example of Macedonia indicates that a legislative or regulatory method needs to be in place before the privatization of the distribution company in order to take these into account.

Methodological Framework of Regulator: Creating the methodological framework for the rate of return and incentive based regulations, which stipulates how investments are accounted for, is an essential component of pre-privatization and post-privatization negotiations. Both the recovery of costs associated with capital expenses (Capex) and operational expenses (Opex) must be approved by regulators. Decisions based on a previously published methodology were a key issue for investors as the money invested needs to be recouped through the methodology. Calculations for Capex and Opex are based on forecasts; there is room then for discussion about the underlying basis of the forecasts. In addition, benchmarking of capital and operational expenses, which may include comparisons to other countries, can be used by the regulator to question the proposed expenses of companies. A written explanation is needed to justify the final regulatory decision.

In summary, the methodologies influencing investments must be clearly described, clarified and agreed upon at the time of privatization. All aspects from distribution codes, rule books and items included in the asset base and those assets accounted for in the operational expenses should be agreed upon before the privatization process is completed. This will ensure that there exist methodological frameworks that guide the regulator in decision making and help investors predict regulatory actions based on this.

Clear Investment Terms and Regulatory Continuity: It is clear that post-privatization disputes are linked to ambiguity or differing interpretations of how investments will be carried out and how these will be reimbursed for the investors. Greater clarification of investment projects and how these are recovered along with tariff methodologies (linked to asset base valuation and operational expenses, see above) needs to be done in order to prevent disagreements on the fulfillment of pre-privatization commitments. Essential to the fulfillment of these pre-privatization agreements is continuity in the regulatory environment. There is one common theme which emerges from each country examined here: ambiguity and altered interpretations of pre-privatization regulatory agreements lead to disputes. Adherence to these agreements post-privatization is essential for all parties.

Rate of Return and Partial Risk Guarantees: The case study of Romania shows the use of a Partial Risk Guarantee offered by the World Bank, can lower the agreed upon rate of return. The use of this guarantee should be seen as a tool to shore up the independence of the regulator. Changes to the agreed upon regulatory regime, if overly excessive to the detriment of investors, is ultimately paid for by the Government. Therefore the Government holds an interest in maintaining an independent predictable regulator which adheres to regulatory formula. Future privatizations should consider partial risk guarantees as a means to reduce the rate of return and provide policy and regulatory stability and continuity for investors.

Pre-Privatization Consultations with Regulator: There should be a series of meetings with investors and regulators to clarify the regulatory framework that will be applied. It should be stated, in the countries examined, these meetings were open and transparent with recordings made and results distributed to all bidders. In the case of Macedonia, management and national institutional meetings were organized in two rounds and with equal time slots given to each bidder. It is suggested that pre-privatization meetings are conducted and are viewed as a means to either refine the regulatory framework and/or to provide clarification for possible investors.

Quality of Service: Ideally, Quality of Service (QoS) criteria are implemented before privatization in order to enable sufficient amounts of data to be collected over a number of years to ensure sufficient levels of focused investment occurs after privatization. However, it is recognized this may be difficult under public ownership when reliable data may not be available. In either case it should noted that quality of service indicators require a sufficient amounts of data to be collected over a number of years for full implementation. There are two main quality of service indicators, SAIDI and SAIFI, that show a range of outage information. Application of these indicators requires reliable information collected for several years. Only after a good system of registration is in place, and data is collected for several years, a Regulator may apply quality of service as a tool to encourage investments. This, as the case study will show, was not fully in place, particularly in Bulgaria where there is now strong disagreement on all sides. This is an essential recommendation, as the case studies show this to be a key issue where other disputes emanate from.

Political Will and International Expectations: International expectations play an important role in a country's decision to privatize. Their stated expectations and established milestones for financial assistance or organizational membership play a key role in ensuring privatizations are successfully completed. However, it is also these expectations related to establishing market based economies which should not end with the conclusion of the privatization tender. Continuous political support is essential to the fulfillment of privatization agreements. Political will can be observed to weaken after privatization; it is

therefore essential that continued dialogue occurs between governments and international institutions to support the reform process.

Domestic political support is essential to ensure investments, post-privatization, are carried out. It is shown that the political support must exist to allow investments made by private companies to be recouped in the tariff structure. This support should be given in the form of support for the work of the independent regulator. The regulator is positioned well to continuously assess and apply methodologies to arrive at specific tariffs. It is shown that the involvement or expectations from international institutions can play a role in lending support to the Regulator.

CASE STUDIES

Bulgaria:

The purpose of privatization of the distribution companies was to first reduce commercial and technical losses and secondly bring effective management into the companies. One of the biggest concerns of potential investors was the regulatory methodology which would be used in Bulgaria to determine the rate of return, asset valuation and devaluation. The quality of service was expected to increase as a result of greater investment.

The regulatory framework that the distribution companies in Bulgaria operate within has become a point of contention between the companies and the commission. The inability for distribution companies to sufficiently raise tariffs, according to interviewees, impacts on the quality of service and subsequently the level of investment. The regulatory depreciation of the assets of these privatized firms in Bulgaria is not in-line with those of the investors, challenging the investment schedule wanted by investors to increase the quality of service in the country. The recognition by the Regulator of a lower than requested book value of assets and Capex in 2008 challenges the firms' expectations in recouping past investment costs. There are currently a number of court cases filed by investors against the Bulgarian Regulator in regards to tariff levels. The lack of earlier implementation of quality of service indicators has hampered efforts to more fully ensure investments can contribute to quality of service.

Macedonia

The sale of Macedonia's electricity distribution company ESM to EVN of Austria in 2006 was for €224.5 million with an agreed investment amount of €96 million. At the time of privatization in 2006 losses had reached 26% and bankruptcy loomed.[3]

Since then, privatization issues have emerged that have strained relations between EVN and government institutions. Disputes center on the coherency and further development of legislation, regulations and rules. There are different interpretations of legislations and regulations connected to cost recovery, most notably in how to account for the purchasing cost of generation, losses and costs for recouping investments. Disagreement also exists in the conditions of the Energy Law. In particular, it is estimated that all losses amount to around 22%, but the question of commercial losses is not clarified, therefore EVN is not reimbursed in the tariff structure for the approximate 10% to 11% difference from commercial losses (and therefore unapproved losses). Also, before privatization around 80% of all the lands and properties used by ESM were not registered in its name.[4] Special legislation was passed giving ESM ownership, but there still exist issues over asset ownership. The release of the distribution code in July 2008 attempts to clarify some earlier disagreements.

Romania

To date Romania has privatized five of eight distribution companies. The new owners are Enel, CEZ and E.ON. The latter two benefitted from Enel's initial efforts in negotiations to buy two of the distributions companies. The fulfillment of privatization commitments by investors and regulators has contributed to a comparatively non-acrimonious post-privatization relationship. The focus in this case study is what has led, by all interviewee accounts, to a stable regulatory and investment climate in Romania.

In pre-privatization negotiations the type of asset valuation was a top issue. A valuation conducted during due diligence suggested to substantially raise the asset value over the original book value. The full replacement value was given for all assets; this was substantially higher than what was expected. The government and the regulator objected to this because the rate of return and tariffs would be linked to asset value, therefore a high tariff level would need to be in place. Through negotiations this amount was reduced. The rate of return was also negotiated with a final position of 14% being offered by Enel, the Regulator and Government countered with 12%. The solution was found when the World Bank provided a Partial Risk Guarantee that resulted in agreement among the parties on a 12% return. This would provide compensation to Enel for any loss of revenue resulting from changes to the agreed regulatory framework.[5] The new 2007 Energy Strategy presents new challenges for privately owned distribution and generation companies.

1. Introduction to Post-Privatization Issues

The privatization of electricity distribution and generation companies in Bulgaria, Macedonia and Romania serve as effective examples of the challenges involved in moving from state owned to privately owned companies. The importance of these companies lies in their broad impact on a country's economy. Privatizing a distribution company is more than the selling of industrial infrastructure; rather it represents the movement towards a market based economy where in-direct state support for heavy industries is reduced. For households, social support is shifted to specially designed programs sometimes involving the energy regulators. In all three countries it can be observed that the regulatory framework takes on significant importance in maintaining state involvement as quality of service and investments are balanced with electricity prices.

The aim of this report is to examine issues involved in the privatization of distribution and generation companies and to suggest ways to mitigate problematic issues which emerge after privatization. In order to accomplish this the time period before, during and after privatization needs to be examined. This can help to illuminate issues which were identified early on as important and those issues which were overlooked or under appreciated in their importance.

Assessment of the privatization process and post-privatization environment is based on 27 interviews conducted in five countries. Interviewees were either involved in the pre-privatization tendering process or are now working in relevant government or company positions. Further methodological considerations are discussed in the following section 1.1.

The examination of three countries allows identification of common themes which can aid future privatizations. Section 2 looks at ten issues which emerge from the post-privatization regulatory environments in the three countries. In section 2.1, the common rational for privatization are examined followed in section 2.2 by a brief review of regulatory issues that were expected and those which were unexpected. Drawing from this preliminary list, section 2.3 goes into greater detail in looking at these ten common regulatory issues and how they are addressed. Each listed item provides a recommendation for future privatizations.

The recommendations and the findings are drawn from the individual experiences of the three countries (sections 3, 4 and 5). The case studies analyze the procedures leading up to privatization, how the tendering process was conducted and the identification of post-privatization regulatory issues. Each case study captures a different aspect of privatization of distribution companies, and to an extent, generation companies. The Bulgarian case study exposes the challenges that emerge when trying to balance limited rate increases with

improving the quality of service. Macedonia provides an example of the impact from differing interpretations of regulations and legislation. Macedonia also demonstrates how the privatization processes itself including tendering and final bid submission is conducted. The examination of Romania highlights the role that an international institution can play in the privatization process over the long-term.

1.1. Methodology

The main source of information for this study comes from interviews with participants involved in the privatization of the distribution and generation companies of Bulgaria, Macedonia and Romania. Participants shared their perceptions and experience in interviews conducted in-person. All together there were 27 interviews conducted in five countries: Bulgaria, Hungary, Macedonia, Romania and the UK; there were 25 in-person interviews and two telephone interviews conducted. These were all conducted between May and July 2008. All interviewees were granted anonymity in order to facilitate a more open assessment of the privatization process. Each interviewee is identified by the sector they represent.

Every attempt was made to involve participants from a range of institutions from national regulators, state ministries and to the companies themselves. In most cases many participants were available, in some instances it was not possible to contact or to have an invitation accepted by all potential interviewees. Table 1 gives the breakdown of the different state institutions, agencies, type of companies or sectors involved in the interviews. Other sources such as studies, news reports and other documents were employed to gain a better understanding of the privatization process.

Table 1 Interview Sources

Interviewees from Institutions, Agencies, Sector or Companies	Number
Regulatory	7
Financial	3
Generation Companies	4
Distribution Companies	5
Trader	1
Other Government Agencies	5
International Institutions	2
Total	**27**

2. Emergence of Post-Privatization Regulatory Issues

2.1. Rationale for Privatization of Distribution

The privatization of distribution companies is seen as a way for each country to modernize its distribution system with significant investments and international management expertise. In understanding the reasons for privatization there are three themes which underlie the rational for changing ownership of the companies.

The first and most prominently cited rationale for privatization stems from the commercial and technical losses of the distribution system. As explored in the case studies below (sections 3, 4 and 5), in each country commercial losses were incurred heavily from state controlled industries, like metallurgy in Romania. The expectation was that with private owners these losses could more easily be reduced because the state would not be collecting fees from itself. This would expose actual losses from unprofitable state owned industries, which may also be privatized in the future. This can be seen as a first step in transitioning these industries to a market economy.

The reduction of technical losses called for significant investment into the infrastructure of each distribution company. As discussed below, investment stipulations in each case of privatization were conducted differently. For example, Macedonia stipulated in the privatization agreement the amount of investment, while Bulgaria left investment conditions to be decided through the regulatory framework. The expectation in each country was that the new owners would invest heavily to update infrastructure and reform management. The reality, as discussed in the case studies, is that there exist disputes over the level of investments and the amount that companies can recover through tariffs.

Tightly tied to investments and tariffs is the quality of service. Overall, investments meant to improve system stability are contentious for the simple fact that quality of service indicators have lagged behind in their full implementation and measurement, particularly when compared to the speed of privatization and returns expected for investments. This short-coming is often admitted to by both sides and to various extents is being addressed.

The second reason stated by participants to privatize distribution companies is that an efficient and stable distribution system can influence generation investment. If collection is high and losses are low, then investors can be more readily attracted to the region's aging power plants. There is an assurance that money from consumers will be there to pay for power and to upgrade the facilities. The price paid for a generation facility can increase after

a distribution company has been privatized and collection rates are raised. Greenfield investments can also be encouraged more easily.

The final reason, which was cited by participants in each country, is the involvement of the multilateral investment banks and donors. The institutions varied from country to country, but their influence, including the EU, has played an important role in having national leaders accept the need for privatization of their distribution companies. As the case studies make clear, this partially stems from the broader need to develop a market based economy and to implement EU requirements for competitive energy markets.

The reasons and expectations for privatization have resulted in some expected and unexpected regulatory and market challenges in each country. The following points seek to bring together those issues which were addressed before privatization and those issues which are causing significant challenges for regulators and investors after privatization.

2.2. Ten Anticipated and Unanticipated Privatization Issues

The challenges in privatization of the distribution companies stem largely from balancing the long-term interests of both investors and consumers. Therefore anticipating the longer term implications of decisions made before privatization is completed, requires both a thorough understanding of the process itself and issues which may present themselves after privatization. This section draws from the case studies to first give a brief list of what has emerged as anticipated and unanticipated challenges. These issues are then further broken down and specific examples are given.

a) Anticipated Challenges

The following are issues which were anticipated before privatization and as will be discussed the degree to which these issues were or were not adequately addressed.

- Due diligence
    - Value and depreciation of asset base
- Methodological framework for regulations
    - Clear investment terms and regulatory continuity
    - Rate of return and Partial Risk Guarantee (in Romania)
    - Pre-privatization negotiations

- Acknowledgment of investment in asset base

- Unpaid past receivables

b) Unanticipated Challenges

It is clear that in the pre-privatization period there was an under appreciation of the expectations of investors and how they would carry out the agreed upon investment and work within a given regulatory framework. More specifically, the following issues emerge as unanticipated challenges for both regulators and investors.

- Asset ownership
- Quality of service linked to investment
- Clear investment terms and independent regulatory continuity
- Long-term political commitment to privatization
- Impact of gaps or lack of clarity in regulatory framework

Each country had some variation of the general privatization process and experience with investments in the post-privatization period; these are analyzed in the case studies below. Commonality however can be found in ten key issues which involve these expected and unexpected challenges. The following section will address these common issues and provide a basis for understanding the regulatory and market challenges that have emerged in a post-privatization period.

2.3. Evaluation of Ten Post-Privatization Issues

2.3.1. Due Diligence

The thorough accounting of the asset base is an essential first step that is taken both in the privatization of energy companies and as a basis for restructuring of the energy sector. The examples provided by the three case studies show the involvement of international financial advisors is essential to provide the necessary financial knowledge necessary for the due diligence and tendering procedures. The preparation of an accurate valuation of the asset base provides a foundation for negotiations between the regulatory agency and other government institutions. It was observed that in each of the three countries, where international financial advisors were not involved in tendering procedures for generation, these failed due to irregularities.

One of the most important tasks of due diligence involves asset valuation. There are three types of valuation generally used: 1) book value: asset cost minus accumulated depreciation; 2) fair value: the value of an asset based on current transaction between willing parties; 3) replacement value: how much it would cost to replace current assets.

The asset base is linked to the tariff level that may be charged after privatization and the rate of return the investor will receive. In the case of Romania the values were initially assigned by the financial advisors based on the full replacement cost of the assets. However, as the case studies make clear, the accepted values were significantly lower and based on fair value. In the case of Bulgaria it was agreed that the value of the asset base would be kept artificially low, based on the book value, until the second regulatory period, after which it would be assessed at a value based on the cost of capital[6]. The cost of capital (equity and debt) would not be less than 12% for the second two regulatory periods (2008 through 2018).[7]

In both cases, the asset values accepted at the start of privatization were kept low, to keep prices lower than would be required if higher asset values, based on replacement value were given. The purpose of this was to prevent the doubling or quadrupling of electricity prices. As will be shown in the example of Macedonia transaction advisors working on behalf of governments are shown to be essential in bridging the assigned asset values with auction tendering procedures. They are able to create a standardized auction process which enables a transparent sale to take place thereby selling to the highest bidder.

A key lesson in assigning value to the asset base is financial advisors need to work with government and regulatory representatives in determining the type of valuation that will occur before privatization and a strategy to asses the value after privatization. Methodologies using these values are used in deciding tariff levels. In particular, before privatization the assigned asset value methodology to be used after privatization should be clarified by the regulator for a predetermined number of regulatory periods. Continued political recognition of these regulatory methodologies in the post-privatization period is also essential.

2.3.2. Value and Depreciation of Asset Base

The low value assigned to assets at the time of privatization impacts on the depreciation of assets, along with the level of investments and the tariffs to fund these investments. As examined, assets were kept at a lower value at the time of privatization, particularly in Bulgaria and Romania (and many CEE countries); as with high inflation the asset value was indexed by using an indexation factor, usually lower than the inflation factor. The rate of depreciation for rate setting is usually agreed on with the Regulator. Combined with the significant increase of asset values as investment occurs regulators attempt to soften the price increase by prolonging the depreciation time; this regulatory depreciation may interfere with

investors, as the case studies indicate, being able to recoup their investments in a planned manner.

Low asset value causes low depreciation cost (thus lower tariffs) and consequently insufficient or unreimbursed investments. Therefore there is a need to increase the value of assets, with the best option using the replacement value to guarantee the replacement of old and amortized assets. Generally speaking, revaluation of assets was performed in all CEE countries, in some cases the revaluation meant the increase of the asset value by 2-3 times or even more. There exist some tradeoffs between the real value of assets and government fears about higher tariffs. (a) *Asset valuation, (b) the period of time before revaluation and (c) the accounting method need to be reconciled before the tendering process begins.*

Revaluation of assets and thus higher tariffs before privatization can be a successful long-term policy if the decision is taken before privatization. Higher electric rates are then not associated with the investors which are reflecting the investment demands of the network thereby reducing public hostility towards investors (as it has happened in some other countries, e.g. Lithuania).

2.3.3. Asset Ownership

One of the most common problems occurring in all three countries was establishing ownership of the distribution assets. In most cases these are local distribution lines or substations, and either the records of ownership are unclear from a time when the state owned everything to the period afterwards when privatization of (manufacturing) companies was widespread. In each of the three countries at the time of privatization there was approximately 20% of distribution assets which were not directly owned by the distribution company, but rather owned by a third party. However, distribution companies must maintain these assets, despite these not being accounted for in their operational expenses.

In each country, legislation was passed that would help clarify to varying extents the right of the distribution company to gain ownership over these assets. This is the case in Bulgaria and Romania which have legislation allowing the distribution companies to buy distribution related assets from third parties for fair market value. Asset ownership issues need to be clarified during the due diligence procedure to the extent possible without delaying the privatization process. *An overall program should be legislated that allows the distribution company to either buy distribution assets owned by third parties or enable the distribution companies to account for the maintenance and investments done to third party property in their operational expenses.*

2.3.4. *Unpaid Past* Receivables

Unpaid past receivables can be a significant issue for distribution companies. One of the key reasons for privatization is to increase the rate of collection. The value of the company may be inflated because of a large number of unpaid bills. In post-Communist countries there may be different accounting practices. An example is Macedonia, which under state ownership, did not remove from their accounts after one year, unpaid bills, which international practice would stipulate. According to an interviewee, "ESM/EVN has kept over €200 million of receivables older than 12 months (some of them even 10 years old) which in 2005 were [divided] between ESM (becoming only distributor) and ELEM (the new generation company spun-off from ESM prior to final restructuring)….Now, ESM/EVN has an obligation to pay [approximately] half of what EVN collects from the old receivables to ELEM." [8]

ESM *before* privatization filed court cases against approximately 400,000 customers for unpaid bills. If a court case is not filed then consumer debts would need to be forgiven after one to three years, depending on customer class. Privately owned EVN is still pursuing these cases, despite the slowness of clearing this backlog.[9] *The privatization process needs to account for different accounting methods and a system for past unpaid receivables. The example of Macedonia indicates that a legislative or regulatory method needs to be in place before the privatization of the distribution company in order to take these into account.*

2.3.5. Methodological Framework of Regulator

Creating the methodological framework for the rate of return and incentive based regulations, which stipulates how investments are accounted for is an essential component of pre-privatization and post-privatization negotiations and/or clarifications. This suggestion is based on the following reason: The depreciation of assets, how Capex and Opex are handled and the inclusion of investments into the regulatory asset base have emerged as contentious issues. Capex, or capital expenditures, can be contentious in the area of electricity distribution, as they deal with how the company recoups its investments into fixed physical assets. The discussion of Bulgaria will provide an example. More specifically, how these assets are amortized or depreciated over the life of the asset, this may include both the number of years that it is depreciated and how much capital expenditure can be placed in any tariff increases. In the case of Opex these are the day-to-day operational expenses, such as administration, that are done to carry out the work of the company.

Both Capex and Opex must be approved by regulators. Their decisions are based on a previously published methodology and this is a key issue for investors as the money invested needs to be recouped through these formula and ultimately in prices. Calculations for Capex and Opex are based on forecasts; there is room then for discussion about the underlying basis

of the forecasts. In addition, benchmarking of capital and operational expenses, which may include comparisons to other countries, can be used by the regulator to question the proposed expenses of companies. A written explanation is needed to justify the final regulatory decision.

It can be summarized that formula guiding investments are agreed upon at the time of privatization and must be clearly spelled out and all aspects from distribution codes, rule books and items included in the asset base and those accounted for in the operational expenses should be agreed and/or clarified before the privatization process is completed. This will ensure that there exists a methodological framework that guides the regulator in their decisions and on which the actions of investors are based.

a) Clear Investment Terms and Regulatory Continuity

It is clear that disputes which have arisen in the post-privatization environment are linked to ambiguity or differing interpretations of how investments will be carried out and how these will be reimbursed for the investors. While this issue is fully addressed in the case studies, the transparent negotiations which occur before privatization should serve as a forum where these conditions and rules are finalized. Adherence to these agreements post-privatization is essential for all parties.

It can be stated that greater clarification of investment projects and how these are recovered along with tariff methodologies (linked to asset base valuation/devaluation and operational expenses, see above) need to be done in order to prevent disagreements on the fulfillment of pre-privatization commitments. Essential to the fulfillment of these pre-privatization agreements is continuity in the regulatory environment. There is one common theme which emerges from each country examined here: ambiguity and altered interpretations of pre-privatization regulatory agreements lead to disputes. Court cases in Bulgaria between privatized companies and the Regulator center on whether or not SEWRC allowed a sufficient rate increase for privatized companies to cover operational expenses and to meet investment needs in order to meet quality of service targets (discussed in the case study). In Macedonia there is a dispute over the amount of approved losses which can be included in operational expenses (discussed in case study).

In the case of Romania, both investors and regulators appear closer in terms of their common interpretation of pre-privatization agreements. While some disagreement exists, the follow through of regulatory decisions based on pre-defined regulatory periods, asset base valuations and rates of return have been viewed as sufficiently applied in Romania. This has resulted in few unexpected post-privatization regulatory issues indicating that effective follow through

of the pre-privatization agreements can mitigate (to an extent) contentious post-privatization disputes like in Bulgaria and Macedonia. However, as in most countries, there still exist disputes between the regulator and companies in Romania, but these disputes are not as extensive as in the other two countries.

These examples, as the case studies make clear, stem from early ambiguity or differing interpretations of regulations and legislation. These examples underscore how investments and budgets can be affected by these differing interpretations. The results that can be observed are delayed investments and lengthy legal disputes.

b) Rate of Return and Partial Risk Guarantees

A notable factor in bridging negotiation positions in Romania was offered by the World Bank. In an attempt to lower the 14%-16% rate of return demanded by Enel in pre-privatization negotiations, the World Bank offered a Partial Risk Guarantee that would see the rate of return set at 12%, with the 2% difference being covered by the guarantee and invoked if the Regulator or Government did not apply the agreed upon regulatory framework. The guarantee if invoked is paid for by the government to the World Bank. While it can be stated that each country is different in terms of how it applies regulations and the political structures, making comparisons difficult to provide, it should be noted, and considered for future privatizations, that this World Bank guarantee was successful in reducing the investment risk level for the investors and offering the country a lower rate of return thereby benefiting the consumers. In the case of Romania, this may be an important factor which has mitigated disputes. *The use of the Partial Risk Guarantee should be seen as a tool to shore up the independence of the regulator. Changes to the regulatory regime, if overly excessive to the detriment of investors, is ultimately paid for by the Government. Therefore the Government holds an interest in maintaining an independent regulator which adheres to regulatory formula. Future privatizations should consider partial risk guarantees as a means to reduce the rate of return.*

c) Pre-Privatization Consultations with Regulator

In each of the countries examined there was a series of meetings with the regulators in order for the investors to understand the regulatory framework that would be applied. It should be stated that these meetings were usually arranged by the Transaction Advisor, which were open and transparent with recordings made, with the results being distributed to all bidders. In the case of Bulgaria and Macedonia, management and regulatory meetings were organized with equal time slots given to each bidder. There were at least two rounds of meetings for each bidder and each meeting was recorded and minutes distributed to all bidders. These

meetings were deemed by all interviewees as essential in privatizing the distribution companies. This turned out to be beneficial for the regulators also. According to interviews with different regulators, this series of meetings allowed the regulatory agencies if not to refine methodologies, then to at least clarify the application of methodologies and as such the regulatory periods, methodologies for technical and commercial losses and how these would be accounted for in the tariff structure, in addition to setting the rate of return for selected regulatory periods. *Well structured pre-privatization meetings managed by the transaction advisor are viewed as a means to either refine the regulatory framework and/or to provide clarification for investors.*

d) Quality of Service and Investment

One of the key tools used by the regulator to ensure investment for the modernization of the distribution grids is quality of service indictors. The development of these in all three countries before and after privatization was seen as an essential tool to ensure sufficient investment was conducted. The importance is shown in Bulgaria, where there were no preset conditions for investment, instead it was envisioned that quality of service indicators would be used to direct and assess the investment that would occur.

In all three countries the quality of service is below the expectations of regulators and investors. It is acknowledged that in Romania and Bulgaria the regulators have not been able to institute the criteria and data collection methodology early enough. This prevents an effective assessments and focus for investments. The quality of service, the criteria and collection of a sufficient amount of data appears to be a significant issue for all three countries. *Therefore it is recommended that the agreed upon quality of service standards provide the basis to ensure appropriate levels of focused investment occur after privatization. It is also recommended, where possible, that quality of service criteria be established before privatization. However, it is recognized this may be difficult under public ownership when reliable data may not be available. In either case it should noted that quality of service indicators require a sufficient amounts of data to be collected over a number of years for full implementation.*

2.3.6. Political Will and International Expectations

The decision and process to restructure and privatize a country's energy industry takes considerable political perseverance and will. This must be matched with commitment to the process which can move both the management of the companies to act and to unite the broader political and economic interests. In each of the three countries momentum for privatization was spurred on by domestic and international considerations. Domestically,

consideration was driven by the faltering infrastructure which required considerable investment and management expertise. International expectations were also significant in moving governments to consider privatizing their energy companies. Privatization of the distribution companies acted as a signal that represented each country's movement towards a market based economy and its ability to meet the expectations of the EU. *International expectations play an important role in a country's decision to privatize.*

It should not be assumed that newly privatized companies will be operating in a market based and independent regulatory environment. Continuous political support is essential to the fulfillment of privatization agreements, including investment levels. In the case studies, political will can be observed to weaken after privatization; it is therefore essential that *continued dialogue occurs between governments and international institutions in order to support the reform process.*

Domestic political support is essential to ensure investments are carried out on the privatized companies' assets. It is shown that the political support must be there to allow the investments made by private companies to be recouped in the tariff levels. This support should be given in the form of support for the work of the independent regulator. The regulator is positioned well to continuously assess and apply methodologies to arrive at specific tariffs. It is shown that the involvement or expectations from international institutions can play a role in lending support to an independent Regulator.

The nine issues described above all involve a political component. *The role of international institutions and their stated expectations about market based economies should also not end with the conclusion of the privatization tender. Fulfillment of pre-privatization agreements must have continuous political and institutional support.*

2.3.7. Concluding the Ten Key Issues for Privatization

The ten issues described above highlight the key areas where issues have emerged from each of the components that make up the privatization process of distribution companies, and in some cases generation. It can be seen that when there is sufficient consultation between regulators, other government agencies and investors, privatization can be effectively done. However, longer term progress for implementing needed investments and reimbursement for this investment can cause significant tension between regulators and investors. The emergence of unexpected challenges, like asset ownership and the return on investments sets up longer-term challenges which all parties, through effective regulations and a coordinated energy law, must address. As detailed next in the case studies, some countries have been able

to implement and address specific issues differently in order to avoid problems experienced by other countries.

Case Studies

3. Bulgaria

3.1. Introduction

The push for privatization of the electricity distribution companies in Bulgaria came in the latter stages of a larger privatization program in Bulgaria. The earlier experiences gained by privatizing other industries and even some small hydropower plants influenced how privatization of the larger distribution companies would be carried out. Efforts were taken to develop a regulatory framework which would oversee investments on a yearly basis with pre-approval and post-examination of performed investments. This approach as will be shown was also conducted with agreed upon rates of return and set regulatory periods. However, in recent years these agreed upon terms have been a source of friction as the country's economic and political environment has changed.

3.1.1. Key Events in Bulgarian Distribution Privatization

In 2004 seven distribution companies were privatized and are now operated by three companies (Figure 1).[10] Starting in 2002 legislation was passed that would raise electricity rates closer to what would be sustainable market rates for private investors (related to IMF and World Bank requirements). In 2002 rates were increased 20%, then 15% in 2003 and finally 10% in 2004, this was under the authority of the Council of Ministers with the Regulatory Commission (SERC) preparing and issuing tariff methodologies.[11] The new Energy Law was passed and the Privatization Strategy of Distribution Companies was adopted in 2003 . This law maintained the regulatory authority that the Bulgarian regulatory agency, SERC, had over energy companies since 1999. In 2005 SEWRC (previously SERC) began to apply its rate setting methodology, which was earlier presented to potential investors.

Figure 1 2004 Bulgarian Privatized Distribution Companies

CEZ acquired the largest of the three disco packages, paying €281 million for the western distributors, comprising **Elektrorazpredelenie Stolichno**, which serves the city of Sofia, **Elektrorazpredelenie Sofia Oblast** and **Elektrorazpredelenie Pleven**, with just under 1.9 mil customers.

EVN paid €271 million for majority control of the second largest of the three packages -- the southeastern package of **Plovdiv** and **Stara Zagora**, serving 1.5 million customers –

E.ON paid €140.7 million for access to 1.14-mil customers in the northeastern regions of **Varna** and **Gorna Oryahovitsa**.

Source: Austrian Energy Agency

3.2. Privatization Process

The privatization of the distribution companies in Bulgaria was deemed a success by all participants involved. The Bulgarian Privatization Agency and Energy Ministry were deemed by interviewees to have conducted the process in an open and transparent manner with BNP Paribas as the Transaction Advisor. The fact that there were not any appeals against the process is deemed by participants to indicate the high level of preparation and transparency of the tender process. This perceived success can be broken down into three categories: 1) Effective due-diligence, 2) clear methodological framework developed by regulator, and 3) political commitment.

The purpose of privatization of the distribution companies was to first attract investments mainly to reduce commercial and technical losses and secondly bring effective management into the companies. Selling the distribution companies to international electric companies, with experience in liberalized markets, was viewed as a way to meet these goals. Losses were cited as an important factor in the decision to privatize; Sofia Oblast had the highest losses in the upper 20% range while many other regions had around a 20% loss rate.[12] As one interviewee involved in the financial sector stated, the losses which were significant needed to be reduced. "This needed to be handled somehow and this would have been difficult for a state owned firm to do. [If there were] less than 10% of losses we should have probably looked elsewhere" like generation to privatize first.[13] Further, another interviewee stated that if investment could occur in the distribution companies, this would first help to stabilize the

electricity sector, second reduce the losses and third demonstrate that it is possible for outside investors to become involved in Bulgaria.[14]

3.2.1. Preparation and Due-Diligence

In 2000 NEK, which had owned all distribution in the country, was restructured so that by 2002 its other functions were separated and seven distribution companies were formed. It was these seven distribution companies which would be grouped into three privately owned distribution companies and each would contain a minimum of 500,000 customers; this was viewed as a sufficient number to attract the interest of investors. After further discussion, it was also viewed that at least five bidding companies could be attracted to the auction of the seven units, which would result in a competitive auction.[15] The bidding companies would bid on three packages containing the different companies. Thus in the end, there needed to be three large distribution companies which would then unbundle their functions of distribution and supply.

However, one of the issues that was not fully appreciated by the investors was that around 20% of the distribution assets were not owned by the distribution companies, but by third parties. These third parties usually owned them through the privatization of other state owned firms, like manufacturers. The Law on Energy requires the distribution companies to purchase these assets over a period of time (this is further discussed below).

3.2.2. Regulatory Depreciation

One of the biggest concerns of the potential investors was regulatory depreciation which influences the determination of asset valuation, recognition of Capex and the rate of return. In addition, to address other concerns the SERC adopted a 13 year regulatory time frame where the same methodologies would be applied.

The regulatory methodology was presented by the SERC in pre-privatization meetings with potential investors. Investors and the SERC dealt with each other in good faith; it was expected that the formula presented would be implemented and applied to the newly privatized firms. Clarification appears to be an essential key which contributed to the transparent success of the privatization of the distribution companies.

> The investors wanted to know what the regulatory framework would be. [They] asked for clarifications, and on clarification of the formula to be applied; how calculations would be done. Investors wanted to be very clear about price and regulations.[16]

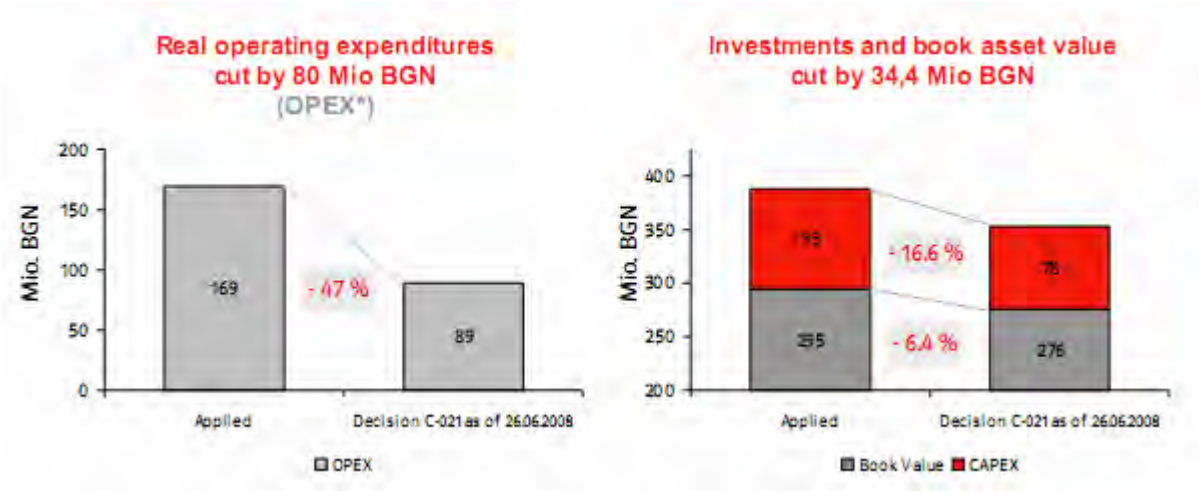
The other key regulatory area that was of concern for investors was the rate of return. The risks for the country were deemed high because of its political, economic, legislative (the new

law was still in preparation) and non-payment issues (mostly state and municipally owned companies). This would affect the rate of return that investors were seeking. It was agreed that the first regulatory period would last three years, and would have a rate of return of 16%. Or more specifically, the cost of capital would be based on the risk and return on equity for investors of similar-sized companies in similar economic conditions and it should reflect the expected interest rates on loans given the company's financial conditions. The cost of capital (equity and debt) would not be less than 12% for the two regulatory periods from 2008 through 2018.[17] This process was meant to assure the investors predictability and provide transparency for the future.[18]

It was also recognized that there was the immediate need for investment to occur within this first regulatory period. The Commission created the ability for the distribution companies to capitalize on their investments. It was decided that investments made during the first year, would be added 100% to the evaluated asset base, with the second and third year only one half and one third could be reclaimed. This was done to encourage up front investments in order shore up the system and to reduce technical and commercial losses.[19] The investments would also have to go through a pre-approval and a post-approval process. This was meant to ensure that investments were done and verified. These investments would then alter the regulated asset value and affect the tariff level. However, the implementation of this procedure, by one company executive, was viewed as flawed. He stated his company has not been able to recoup their past investments because the value of their assets has been cut by 60%.[20]

Utility executives view recent action by SEWRC as impacting their ability to conduct and recoup investments. An example of this complaint is the announcement made by SEWRC on July 1, 2008 that electricity rates would increase by an average of 14%. The distribution of the rate increase would go to the largely state owned firm NEK. Because of this the three private firms in Bulgaria are now filing suit in Bulgarian courts and at the European Union level. For E.ON Bulgaria the price increase would yield a 1% increase for the company out of a total price increase of 17% in their distribution region. According to a company official this would mean that "E.ON would not be able to cover its investment commitments toward maintenance and improving the quality of services it offers, while operational costs would decrease by 80 million leva."[21] Figure 2, presented by E.ON Bulgaria shows the difference between the company's applied Opex and Capex and those granted by SEWRC on June 26, 2008.

Figure 2 Applied and Granted OPEX and CAPEX Costs for E.ON Bulgaria



Source: E.ON Bulgaria 2008[22]

CEZ will also file three lawsuits stemming from SEWRC's 2008 decision. The CEZ complaint centers on the decision by SEWRC to decline the full costs requested by CEZ which, according to the company, would prevent it from fulfilling planned investments. It would also impact, according to the complaint, CEZ's ability to meet it's commitments to labor unions for salary increases.[23] Also, in the case of CEZ's Varna Power plant the complaint centers on two issues - regulated segment market quota and the price on the regulated segment, which, according to CEZ, is set lower than production costs.[24] CEZ Varna states that it needs over Lev 77/MWh, to be at cost, while the approved rate from SEWRC is under Lev 72/MWh.[25] EVN distribution is also filing suit based on the same reasoning as E.ON and CEZ.

The lack of tariff increases for the distribution companies are viewed by the companies as seriously affecting their long-term business investment plans. As one representative stated,[26] his existing investments have been cut by 20%, but since there are mandatory investments cutting 20% will be extremely difficult. In addition, the representative stated the Opex and Capex were cut 50%, so now, according to his calculations the Opex are not enough to cover operational expenses.[27]

Overall, the recent regulatory decisions made in 2008 by SEWRC demonstrate the type of differences that can emerge after privatization. For the Regulator the increase of 14% is substantial, however, how this is split between the different companies involved in the provision of electrical services can be complex and can lead to disputes. There can be difficulty in how companies and the Regulator balance the needs for investments along with the accounting and technical conditions that companies derive both their profits and

operating expenses from. The next section looks more closely at the expectations of what privatization was expected to bring Bulgaria's electricity infrastructure.

3.2.3. Post-Privatization Expectations

The regulatory framework that the distribution companies in Bulgaria operate within has become a point of contention between the companies and the commission. There are three areas, as identified above, which were expected to improve under private ownership. The first is that the quality of service was expected to increase as a result of greater investment. Secondly, through these investments there would be a reduction of technical losses. The third important improvement would be an increase of the rate of collection (commercial losses). To ensure progress was made in these areas investments and improvements would be monitored and directed through the regulatory framework.

The quality of service has become a substantial issue which also incorporates two issues discussed further below relating to losses and ownership. It is viewed by interviewees that the quality of service has not met the expectations originally envisioned before privatization. From the regulatory perspective this is viewed as a result of the lack of investment[28] while from the utility side it is a lack of sufficient funding from tariff increases to allow adequate investment to occur in order to meet quality of service obligations (as discussed above).[29] The 2008 tariff increase by SEWRC, as seen from the perspective of the utilities, is an example of not receiving an adequate amount for recoverable approved costs for infrastructure investments. The tool to help track investments and quality, (i.e. service quality standards) were viewed even by the Regulator, as introduced too quickly and without sufficient data and without experience working with the data.

In particularly quality standards were not implemented in a transparent manner which held clear financial penalties. Cuts in investment funds, by either the regulator or the companies, hold the possibility to reduce network reliability. In the past, proposed investments were cut by the Regulator while the utilities accordingly reduced their operational and management costs. In many countries, deciding on the 'right' investment amounts requires discussions between the regulator and companies. Past, present and future quality standards can be used as a guide for these discussions.

In Bulgaria, as pointed out by interviewees, the relation between available investment funds and quality is connected. A former regulator perceived a decrease in quality which "after the implementation of the revenue cap, the standards and the quality were decreased. And [then] the Regulator started to negotiate with the companies to find incentives to increase the quality of supply."[30] For a distribution company representative they are also aware of this

connection between price and quality, but as he stated, his company does have to improve the quality but they need sufficient funds to do this. This lack of funding for improving the quality is considered by some interviewees as a result of the Regulatory Commission not following the established methodology for investment and tariff levels.[31] For one former regulator, the balance that is perceived to have been struck by the Regulator is an attempt to keep electricity prices low during the first regulatory period.[32]

The pre-approval and post-assessment of investment, according to one company executive, is not an effective way of improving quality. For him there should be incentive regulations which allow the utility to make investment decisions with the Regulator only ruling on end price and inflation.[33] It can be seen that the lack of information inhibits both SEWRC and the companies from a less cumbersome investment approval process. The 2008 court cases against SEWRC and the failure to institute quality of service standards earlier, serve as an example that the possibility exists that a high quality information database may reduce differing interpretations and investment strategies.

However, one of the interviewees has taken a middle of the road approach which may reflect the early expectations with the current conditions of the country today.

> Maybe the regulator wasn't living up to the promises one-for-one. At the same time things changed so much for the better in terms of development of the country; in terms of equity the cost was much lower, in terms of what initially was envisioned…when you were buying the assets….the second thing is when the regulatory framework was set up, it gave high losses in 2003, which in hindsight the losses went into such a curve [losses increased prior to privatization], and the regulatory period took the peak. When the companies were buying the assets the losses were already going down…. Then all you have to do is invest in meters.[34]

By all accounts, commercial and technical losses have been cut.[35] During the original clarification meetings dealing with the regulations, the Regulator made the decision that losses would be accounted for by what was already in the retail rates on July 1, 2003. The second regulatory period would be approved at the lower end of the loss level that was approved in the first regulatory period minus 3%, or what were the actual total losses for a distribution company were in 2006. The third regulatory period, the approved loss level would be the midpoint between the approved losses for the second regulatory period and 12%.[36]

The reduction of these losses can be attributed to investments made by the companies into the network and metering facilities, along with debt collection. Even the 2008 approved budget did not reduce the amount available for replacement of meters or the buying back of assets.[37] After privatization the electric meters belonged to most consumers, which meant

that they needed to be changed. In the case of one company over 50% have been changed to date.

Further investment has occurred in the area of substations, transmission and distribution networks. In this area, according to an interviewee,[38] the law was not as precise as it should have been. As discussed above, ownership issues over substations and wires were not as detailed due to a lack of documentation from the Communist era and subsequent privatization of facilities with their electric infrastructure that served more then one customer and by definition should be part of the distribution grid, it is estimated that between 20% and 30% of the low and medium voltage lines were not owned by the distribution companies. One company had over 1,000 transformer stations with questionable ownership. Under Bulgarian law, the distribution companies must buy these assets by 2011, with the value of the assets decided by an independent evaluator.[39] However, at the time of privatization it was planned that each distribution company would spend between 50 and 60 million Lev on buying these assets. However, as time has gone by and the assets have not been bought, their price has increased. According to one interviewee investors did not take action or pay sufficient attention to this issue.[40] In addition, maintenance and investment still must occur because of system stability on some of these assets; some these are not included in the asset base of the distribution companies. However, it is expected that these issues will be addressed in future legislation.

Related to the early lack of clarification on ownership of these types of assets, the division between the size of transmission and distribution lines was not clearly defined. Thus, according to interviewees, the responsibilities that lie either with NEK or the distribution companies are not always sufficiently clear. In particular, the Energy Law did not contain a clear definition of transmission and distribution grids. Therefore about 70% of 110/20 kV transformer stations belong to NEK and the rest to distribution companies. The result has been that large consumers on the 20 kV grid want to pay NEK (for transmission) only and do not want to pay the distribution charge.

Reconciling pre-privatization agreements with the current economic and political state of a country can be seen as an important point. The economic growth of a country, inflationary pressures and political needs may emerge as considerations and pressures on regulatory institutions. In turn, utilities may also benefit and/or feel the pressure from higher than predicted levels of sustained economic growth and wider political and societal changes. However, investment levels must still be sustained in order to modernize the infrastructure. It can be stated that the historical record of quality of service indicators and a common understanding of pre-privatization agreements need to be addressed in future privatizations.

3.3. Conclusion

The privatization of the distribution companies in Bulgaria was the outcome of a transparent and fair process according to accounts from all stakeholders involved. There appears two key factors that contributed to this success. First, there is the appropriate financial assessment of the assets and losses before privatization. Second, the role of SERC and its ability to clarify questions submitted in an open and transparent manner allowed the investors to know what the regulatory conditions would be over a longer time horizon; this added stability to an environment which, by investor standards, was unstable. As the last section shows, the emergence of post-privatization issues such as the lack of a clear distinction between transmission and distribution, the implementation of a less than effective quality of service program and the many court cases underscore the difficulties with differing interpretations of pre-privatization agreements and the need to have an analytical base of indictors (service quality) to move forward in a coherent and cooperative manner.

4. Macedonia

4.1. Introduction

The sale of Macedonia's electricity distribution company ESM to EVN of Austria occurred in 2006 for €224.5 million with an agreed investment amount of €96 million. The price paid was one of the highest for a distribution company based on the customer base. The post-privatization period has seen a significant amount of investment by EVN and a reduction of technical and commercial losses. The period has however been marked by disputes over different interpretations of regulations and legislation, such as the Tariff Rule Book and the lack of a distribution code (implemented in the summer of 2008), and the continued lack of market rules.

4.2. Key Events in Macedonian Privatization Process

In April 2000 ESM was partially unbundled; previously it was a fully integrated utility which had responsibility over generation, transmission and distribution. In 2001, before establishing a regulatory framework or body, the government selected a financial advisor to conduct the due diligence and to guide the privatization process. Meinl Capital Advisors and Crimson Capital Group were selected as a consortium which would conduct the privatization of the selected divisions of ESM. The due diligence was finished in May of 2002 however the privatization was stalled due to elections and the lack of preparation for the privatization. The process did not begin again until May 2003 when a new government was in place. In 2003 a restructuring strategy was created which included separating the Transmission System

Operator from ESM. The new TSO, called MEPSO would become an independent entity at the end of 2004 under government ownership. In addition, the Energy Regulatory Commission was established in July 2003. In 2005 the Government of Macedonia decided to split generation from distribution into two separate state owned companies. The decision was also made to privatize distribution first with the process beginning in the second half of 2005. The tender for ESM was announced on December 6, 2005 and after a series of meetings with investors the bids were submitted on March 15, 2006 with the winning bidder being announced on March 16, 2006. EVN of Austria was the winner with a bid of €224.5 million and the transaction concluding on April 7, 2006.

4.3. Privatization Process

In Macedonia, as in the other countries, one of the key underlining reasons for privatization was to reduce network losses. A further underlying reason to privatize was to move towards a more independent distribution company that could collect from state owned industries and non-paying residential customers.

At the time of privatization in 2006 losses had reached around 30%. When the due diligence was completed in March 2005 the financial advisors stated that the company could not sustain these high losses for not more than two years. There was also a lack of maintenance and the collection rate was not enough to contribute to funding for future investment. In fact, the technical losses were comparable to Macedonia's output from its hydropower plants which provide up to 25% of the country's generation mix, or 1 TWh of electricity.[41] At this point the EBRD extended a pre-privatization financial facility to the Macedonian government totaling €45 million. The conditions of this facility played an important role in setting up the legislative and regulatory environment for the privatization of ESM and operations of the broader electricity sector.

The disbursement of the funds under facility provided by EBRD were related directly to achieving milestones in the privatization process, which included: engaging a privatization consultant, passing certain primary and secondary legislation (including tariff methodology, unbundling, setting up a Regulator, market rules, etc), and then the procedures for the privatization process itself, such as acceptable short listing criteria and a transparent process.[42]

The privatization of the distribution follows the reasoning used in Bulgaria and Romania: if there is a strong distributor that has sufficient collection rates and an efficient distribution network then the price for the generation assets, if they are privatized, can be increased.[43] Privatization is seen as implementing a stable revenue stream to fund generation investment.

In December of 2005 the tender for ESM was publicly announced. In the tender there were some conditions for bidders, with the main criterion being that the bidding company was at least as large as ESM.[1] More specifically, the bidders needed to have the following over three years:

- Total asset volume exceeding EUR 1,000 million
- Equity capital exceeding EUR 500 million
- Profits exceeding EUR 50 million
- Customer base of at least 700,000
- Internationally active and functioning in a partially competitive market

An open and transparent selection process was held and four companies were chosen: CEZ, Enel, EVN and RWE. An example of a company that could not participate is AES which had a loss in one year, thereby preventing it from bidding. Also, RWE did not put a final bid in for ESM. Overall the whole privatization process was viewed as a competitive and transparent tendering process by observers and those involved in the bidding process.[44] The final decisions were made on the price paid for ESM and the amount of money that would be invested into the company. All bids were opened in front of the public with the stated bid amounts known instantly, and thus who would be the winner (discussed further below).

The decisions concerning ESM's asset base were part of the due diligence procedure that was completed each year since the initial procedure in 2002. Before then the cadastral records of ownership of the distribution network including its substations had not been properly recorded over time by the authorities. This would lead to issues in a post-privatization environment (discussed below).

There was awareness, by the privatization consultants that not all asset information was clarified before the final bidding. There was a difference between the procedures practiced in Macedonia and international accepted practices concerning the write off of cost receivables. By international practices, write-offs would occur after 12 months, but in Macedonia these write-offs would never occur for political reasons, and this gave ESM an inflated value.[45] By the time the bidding process was started the audit of the financial statements for that year were not complete. This was acknowledged before the bidding and a financial mechanism

[1] The tender for ESM was a public invitation and it was advertised internationally.

was included in the tender which would kick in after a full audit. It stipulated that if the difference in the net worth of the company was found to be larger than 5% then the mechanism would be implemented. In the end, EVN was given back the maximum amount of 10%, or €22.5 million.[46]

4.4. Key Issues of Distribution Privatization

Among the key issues discussed below are the following that were incomplete or subject to conflicting interpretations: (a) the treatment and definition of losses with respect to being technical or commercial; (b) the absence of an adequate distribution code; (c) the lack of clarity of the Market Model and rules particularly regarding EVN replacement power for losses; (d) the definition and treatment of old debt; and (e) the need for clarification of land and property ownership.

One of the key issues involved in distribution is the cross-subsidization of state owned consumers through non-payment. For privatization to be successful this would have to be eliminated to ensure the collection rate increased for the privately owned EVN. Privatization of the distribution company also meant that market principles would have to be applied and respected through legislation and regulations. Key issues in the post-privatization period involve disputes over the correct interpretation of legislation and regulation and also the maintenance and continued investment in generation.

The expected change to EVN following privatization was an infusion of money and management into infrastructure and collection methods to reduce commercial and technical losses along with investment to meet future growth. Part of the privatization tender involved agreeing to a certain level of investment. EVN agreed to €96 million investment, this was higher than the second highest bidder, CEZ which put forward €60 million for investment.[47] By the end of the second year, according to EVN there was approximately €75 million invested into the company. Collection rates were also boosted, with some government institutions being cut-off.[48]

The investment has mainly occurred without a distribution code which was released in the summer of 2008. Despite this there is a dispute over the legislation and regulation connected to cost recovery for EVN, resulting in tension between the government and EVN management. This is related to whether there is full cost recovery for investment involved in loss reduction. There is disagreement about the ability to pass along to consumers the purchasing cost of generation in connection with network losses. The rule book allows for up to 11% of technical losses to be reimbursed. There is no accounting for commercial losses, thus all losses are treated under technical losses, since there is a lack of a definition between

commercial and technical. While EVN has a loss reduction program in place it still must financially cover losses above 11%. The regulatory expectation, from one perspective, sees EVN as needing to reduce losses more in order to narrow this difference.[49]

It is estimated that all losses amount to around 22%, but the question of commercial losses is not clarified, therefore EVN is not reimbursed in the tariff structure for the approximate 10% to 11% difference from commercial losses (and therefore unapproved losses). There was no further clarification of this rule when the revised Energy Law was passed in September 2008, although it was under consideration since late 2007. From the perspective of EVN, the change means that unapproved losses (which may amount to around 10% of losses), must be bought on the open wholesale market. Electricity for technical losses can be bought on the regulated market for a lower price. However, EVN under the new law must purchase electricity at a price of approximately two to three times higher than on the regulated market (70 - 100 EUR/MWh on the wholesale market compared to 21 - 30 EUR/MWh on the regulated market). [50] For EVN the expected result is that since this amount is not included in EVNs' cost base, it will impact the company's budget. [51] Due to the different expectations of how losses should be handled there is disagreement between EVN and the Macedonian government.

Unpaid consumer bills, mainly from the period *before* privatization, are a significant issue. EVN is pursuing lawsuits against 400,000 customers for non-payment, 80% to 90% of these cases stem from the pre-privatization period. This is down from a high of 450,000. The reason for so many court cases is that non-payment debts are only collectable for the previous 3 years for large consumers with residential being limited to 1 year, if a court case is not filed. If a court case is filed then there is no time limit on collection. However, the court cases have moved slowly, possibly because of the high volume of cases as there is no administrative court system designed to deal specifically with these complaints. These commercial losses can be seen to stem from three categories, customers tampering with meters, illegal connections and nonpayment of bills. Estimation for payment can be done in the first two instances depending on the customer class. The amount owed from this period was included in the company's asset base.

Overall losses have been reduced consistently from a high of around 30% in 2006 to around 22% in 2008. However, it should be noted that the interpretation of losses, possibly stemming from different methods of calculations originally ranged from 24% to 30%. It also should be noted that pre-privatization debt collected is divided between privately owned EVN and state owned ELEM. This division is also a point of contention between the two parties, as it was incurred when the company was bundled.

The final issue which needs to be addressed relates to asset ownership. Around 80% of all the lands and properties used by ESM were not registered with the Cadastral authorities before privatization.[52] Prior to launching the tendering process special legislation was passed that stated all land and other property owned by the state and used by ESM will be registered as the personal property of ESM.[53] This was an attempt to clarify the ownership of assets and to reassure investors as to the status of these properties. However, EVN still must deal with third parties which own distribution assets like substations and which EVN must maintain although they do not own it. Thus further clarification is needed in this area.

4.5. Privatization Issues for Generation

The distribution company was not the only company that the Macedonian government decided to privatize. The heavy fuel oil plant, Negotino was split from the other power plants with the aim to eventually privatize it. Prior to 2008 there were limited attempts to sell it with the most recent in 2007. The aim of privatization was to have the buyer either convert or replace it with a gas fired power plant.

In contrast to the successful privatization of the distribution company, which had an international transaction adviser, the multiple attempts at privatizing Negotino were marked by the lack of outside transaction advisors. Taking into consideration other failed generation privatizations in Bulgaria, which also did not have transaction advisers, it can be stated that the role of an international transactions advisor is essential for a successful privatization.

More widely, there have been limited attempts to attract outside investment into Macedonia's generation sector, controlled by ELEM. In particular, the company is suffering what the distribution company earlier suffered from, a lack of capital for maintenance and investment.[54] The company has not previously asked for a rate increase for a number of years, which would fund routine maintenance and future investment.[55] As one interviewee stated, how do you give a state owned company a rate increase if they do not ask for one?[56] However, in September of 2008, ELEM filed a request to the Macedonian regulator to increase rates 40%.

4.6. Conclusion

The privatization of the ESM distribution company in Macedonia is by all accounts an example of a successful and transparent tendering process but done with several regulatory, legislative and market issues which were not clarified or implemented early in the process thereby having significant post-privatization implications. It should be stated that despite extensive due diligence, it is apparent from all the case studies there may be disagreement

over issues which due to time constraints means a successful resolution is not possible until after privatization.

There are some key examples which can be drawn from this process which can inform the time period before and after privatization. First it is important that existing laws and regulations provide clear guidance and are in harmony with each other. This is particularly relevant in the area of asset definitions and ownership. Following this it can be stated that codes, such as the distribution code should be completed beforehand in order to provide greater clarification. These contradictions may result in unnecessary disputes later between the various actors. Second, special attention should be paid to cost recovery of investments and the definition of losses. Finally the resolution of billing disputes, stemming from before privatization and afterwards should be well defined and an effective resolution process should be established.

5. Romania

5.1. Introduction

The privatization of Romania's distribution companies is marked by a rapid learning curve, internal and external pressure to modernize along with the introduction of a market economy. Most pointedly though, is the lack of significant regulatory disputes between the Regulator, ANRE and the distribution companies. This may be due partially to the very long pre-privatization negotiation period with Enel beginning in late 2003 and ending in 2005. The focus of this case study centers on the country's pre-privatization negotiations and its efforts in both distribution and generation.

To date Romania has privatized five of eight distribution companies with Enel, CEZ and E.ON becoming owners. The latter two benefitted from Enel's initial efforts in negotiations to buy two of the distributions companies which were sold first. Restructuring of the generation sector also occurred in line with an assumption that generation would also one day be privatized. However, to date there has been a lack of privatization of sizable generation assets. Overall, as will be explored, the fulfillment of privatization commitments by investors and the regulator has contributed to a relatively non-acrimonious post-privatization relationship. The focus therefore in this section is what has led, by all interviewee accounts, to a stable regulatory and investment climate in Romania.

5.1.1. Key Events in Romanian Privatization Process

Five distribution companies were privatized in Romania. It was envisioned that the remaining three distribution companies owned by Electrica, would also be privatized. This

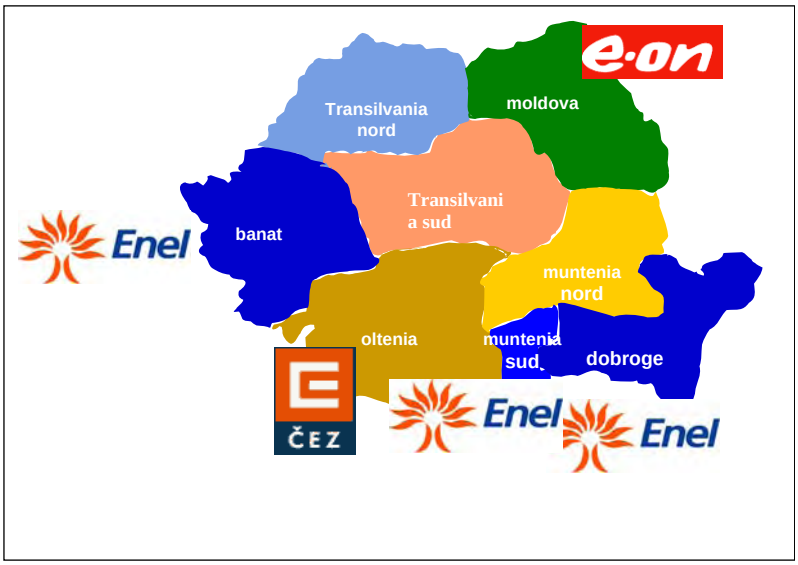
changed with the publication of the 2007 Energy Strategy by the Romanian Government which called for these distribution companies to be incorporated into a 'National Champion' also containing generation. The first Energy Strategy laying out the decision to privatize was published in 2000 with the full reorganization of state owned companies finishing in 2002. Subsequently, the privatization process was started in 2003, negotiations were carried out with Enel, the sole remaining bidder for two distribution companies. The privatization of four distribution companies was concluded in 2005, with the purchase of the fifth distribution company being completed in 2006 by Enel.

Table 2 Romanian Distribution Company Owners

Oltenia- CEZ	**Dobrogea - Enel**	**Transilvania Nord – Electrica**
Moldova- E.ON	**Banat – Enel**	**Transilvania Sud – Electrica**
	Muntenia Sud – Enel	**Muntenia Nord - Electrica**

Source: REKK

Figure 3 Electricity Distribution Companies in Romania



Source: Enel, viewed 2008

Figure 4 Privatization of Romania's distribution companies, year and amount

2005 **Electrica Oltenia** acquired by **CEZ**, paid €47 Million 51% of company*

2005 **Electrica Moldova** acquired by **E.ON**, paid more than €100 Million for 51% of company*

2005 **Electrica Dobrogea** and **Electrica Banat**, acquired by **Enel**, paid €112 Million for 51% of company

2006 **Electrica Muntenia Sud S.A** acquired by **Enel**, paid €820 Million for 67.5%

Electrica Transilvania Nord, **Electrica Transilvania Sud** and **Electrica Muntenia Nord** are owned by **Electrica** a state owned company

*after share increase

Source: Austrian Energy Agency

5.2. Privatization Process

The move to privatize electricity distribution in Romania stemmed from both internal and external influences. The movement towards a market economy for the country meant that the energy sector would have to embrace private capital. Investment was also needed to stabilize and reduce commercial and technical losses which then would allow further investment into generation assets.[57]

In Romania, one of the biggest challenges early on was the commercial losses from industrial users, with much smaller losses due to residential customers. The biggest non-paying customers were state owned industrial companies, such as metallurgy and the railroad. To date, according to interviewees, these large state owned companies still have trouble meeting their payment obligations.[58]

Privatization also had a lot to do with timing. In 2002 Romania split its generation and distribution into separate companies, with the intent to privatize both. After delaying privatization and with Romania actively pursuing EU accession, it was made clear from international institutions that moving towards a market economy also involved the privatization of energy companies.[59] Distribution companies were privatized first as necessary legislation was already in place compared to generation which still needed complex legislation enacted.

5.2.1. Key issues of distribution privatization

In 2005 the Romanian Privatization Agency, AVAS sold an initial stake of 51% of two electricity distribution companies Banat and Dobrogea to Enel. The process took almost two years with substantial negotiations over asset valuation, rate of return and the regulatory framework, with intensive negotiations occurring the last six months. As will be discussed the World Bank became involved to offer a risk guarantee to ensure the deal was completed.

One of the first obstacles for the Romanian government to privatize the first two distribution companies was a failure to attract a sufficient amount of bidders. This was put down to the investment risk which was perceived to be high for companies coming into the country. This was related to what investors viewed as a lack of transparency in the country's regulatory or legislative frameworks. Originally, there were 3 to 4 companies expressing interest, but only Enel went forward with its bid.[60] Interestingly, the existence of many Italian manufacturing businesses in Western Romania[61] could be seen as giving Enel some extra knowledge and lowering the perceived investment risks for Enel. It should be noted that the process itself was being steered by professional transaction advisors.

After the handful of bidders pulled out of the privatization process only Enel remained to bid for the two companies, after which the government decided to enter into negotiations. The valuation of the assets was a top issue. A valuation conducted by PricewaterhouseCoopers raised the asset value by three to seven times the original book value, essentially giving the replacement value for all assets. There were a number of objections to this on the part of the Romanian Government, including the Regulator as the rate of return and prices would be linked to asset value, thereby substantially raising rates. In the end, the Regulator, ANRE, based the initial tariff levels on the final price paid by Enel and the other investors.

The rate of return was proposed by Enel at an initial figure of 16% to 18% during the initial negotiations. The influence of the Bulgarian privatization was evident for one regulator which felt that Bulgaria's agreement for the rate of return at 16% would force Romania to allow a rate of return near this percentage.[62] Instead a 12% rate of return was offered by the Regulator and Government. The solution was found when the World Bank stepped in with a Partial Risk Guarantee (PRG); this would compensate to Enel (and later other distribution companies) any loss of revenue resulting from a change or repeal by the Government or ANRE of the previously agreed regulatory framework.[63] More specifically, the PRG covers the distribution tariff formula and the pass-through of the electricity costs which might result in a lost of revenue to the ENEL distribution companies.

> The importance of the PRG project is two-fold: it supports Romania's privatization program in the energy sector and assists the Government and ANRE in the implementation of the regulatory framework. The

> risk mitigation through the PRG also yielded an additional benefit: it resulted in Enel's agreement to reduce its return on investment requirement by 2% per annum, translated into a positive impact on the final tariffs.[64]

In addition, this facility was applied to the later privatizations with CEZ and E.ON and was good for seven years starting from 2005. By interviewee accounts these difficult negotiations with Enel, including with the representatives from the World Bank, smoothed the way for the subsequent privatization of the three other distribution companies. It was felt by a number of interviewees that the privatization process involving CEZ and E.ON in 2005 went much smoother than with the initial two distribution companies with Enel.[65] The negotiations with Enel established the precedent of how asset valuation and the rate of return would occur for the subsequent distribution privatizations. However, the post-privatization period still has been marked by a dispute concerning asset valuation and approved tariff methodology within government institutions.

5.3. Post-Privatization Distribution Issues

There are two issues which have emerged in the post-privatization period that can be identified as maintaining a strong presence of state ownership in the distribution system. The first is the ownership stake that the state owned distribution company Electrica holds in the privatized distribution companies. It was remarked on by many interviewees that there is a conflict of interest as Electrica has members sitting on the boards of the other distribution companies and has access to confidential information. [66] In addition, on the open market these companies are competitors in their supply activities (but not their networks). However, it is planned that the ownership stake of Electrica will be gradually bought out over the next few years by the private companies.

The second issue rests on the political development of a strategic energy plan. In 2007 the Romanian Energy Strategy called for the formation of a 'national champion'. The change in governing parties at the end of 2008, has altered this initial strategy. However, it remains under discussion as to whether the three remaining Electrica distribution companies will be privatized or remain state owned. This is significant as CEZ and E.ON both own only one distribution company each, the chance to own additional distribution companies, as they have in other countries, would enable them to benefit from greater economies of scale. The stopping or delay of these privatizations can be seen as impacting their initial assumptions and strategy when they entered the Romanian market. The 2007 Energy Strategy, as will be discussed below, has also impacted the generation market where all the private distribution companies, Enel, E.On and CEZ have made recent efforts to own new or refurbished generation capacity.

5.4. Unbundling and Privatization of Generation

The preparation for the privatization of Romania's energy assets in 2002 also meant the breaking up of its generation. In Romania the decision was taken to separate generation assets based on the fuel type. Thus Hydroelectrica, Nuclearelectrica and originally Termoelectrica represented the key generation companies, which could later be privatized. The privatization of these companies and their power stations has not been carried through resulting in a market place which interviewees viewed as unbalanced.

In terms of a regulatory and market perspective, the ability to foster competition between generators and to induce investment is made more difficult because of this division of fuel source. The market distortion rests in the fact that electricity from hydropower and nuclear power is the lowest priced and is concentrated in two companies. This has resulted in limited development of competition between generation companies[67] and has affected the market's future competitiveness.

The movement to move forward with Termoelectrica's privatization and modernization to create profitable, privately operated generation facilities stalled in 2008 as the Government developed its plan to create a 'National Champion' based on the state owned generation, transmission and distribution assets. What is not included in the development of a 'National Champion' are most of the lignite power plants and mines owned by Termoelectrica. As one interviewee remarked, "they are looking to take the meat, not the bones."[68] In this current strategy for Termoelectrica, the State retains an interest of around 25% based on its ownership of the land and existing infrastructure like water filtration systems.[69] They also are seeking to bundle the power plants with the lignite mines, which are all in need of large investments. In 2007 and 2008, CEZ submitted proposals to participate in this arrangement, but the effort appears stalled in 2008 since the new energy strategy was floated.[70]

For generation there is a shift in how they are now privatized over past procedures. For Termoelectrica there is an emphasis on achieving commercially viable power plants that do not need state support. A power company official used the example of Braila, which had over $100 million spent on modernizing its 220 MW units, but are now operating over cost.[71] For this company official these are viewed more as "pushed projects which are not feasible" in the long run.[72]

Termoelectrica is now pursuing a strategy of privatization that will sell only the assets of the companies, such as land and infrastructure, but not its larger financial liabilities incurred earlier by the company. "You need to sell the projects, you need to make projects and sell the projects, because 75% is almost at the end" of their current functional plant life.[73] The most recent trial of this privatization strategy came with E.ON and Enel partnered with

Termoelectrica to build an 800 MW combined-cycle power plant at Barila, which would be a €900 million investment. Thus the land and the existing infrastructure from the older Barila power plant are utilized for the new power plant.

The movement to private ownership of the lignite power plants and possibly the mines may rebalance the pricing structure of thermo power plants and reduce political pressure for artificially low prices. Or as one interviewee recounted a past dilemma,

> I remember one time the Minister of Energy was pushing me to keep my prices low, and creating [financial] losses, while the Minister of Finance was pushing me and calling me a very very bad manager because I'm creating losses. And I said, 'Please discuss with your colleague, discuss with your colleague in the party.[74]

5.5. Conclusion

The involvement of the owners of Romania's private distribution companies in the country's generation market indicates the early privatization strategy of distribution before generation may be paying off. It is apparent that interest exists for the mother companies to secure generation. Both investments in new and rehabilitated power plants are seen occurring which can lead to the long term stability in Romania's generation market. This interest underscores the deeper stability that has emerged in Romania's power market. In terms of the operation of the distribution companies, it indicates a strategy of the mother companies to secure generation and to move away from state owned generation. The publication of the 2007 Energy Strategy, by one account, may have prompted these companies to secure their own generation and reduce their exposure to state owned power producer pricing.[75]

In summary, the privatization of distribution companies has been limited to the five distribution companies which Enel, CEZ and E.On bought in 2005 and 2006. Significantly, the privatization of these companies relied on Enel entering lengthy and difficult negotiations with ANRE and the Government over asset values and the rate of return. In the end with the participation of the World Bank, a Partial Risk Guarantee was provided which has not been called to date. The lack of mentionable post-privatization regulatory issues indicates that this facility may have played a role in reducing disputes between distributors and regulators. More recently, the decision not to privatize the remaining distribution companies, does impact the initial strategies that the investors initially held for the Romanian market.

6. Report Conclusion

The privatization of distribution companies in Bulgaria, Macedonia and Romania demonstrates a common need to reduce losses and modernize the infrastructure. How they have set about tackling this reflects the particular characteristics of each country and their previous experience with privatization. Analyzing the post-privatization experience of these countries has required examining the privatization process itself, negotiations leading up to it and the dispute afterwards.

Each country can be seen as holding different experiences with similar approaches to privatization, resulting in the emergence of common issues. The ten key issues involved in privatization point towards a common route. In all three cases, efforts were made in each country to develop the regulatory/investment framework and clarify issues, such as regulations and asset values with potential investors before the bidding phase. The degree to which this was achieved varied. The most challenging issues emerge after privatization with these centering on the fulfillment of regulatory and investment commitments. Problematic issues emerging afterwards include gaps in the regulatory framework, differing interpretations of existing requirements and changed market arrangements. In addition, it may be that regulatory and government decisions post-privatization may not have adhered to regulatory agreements and requirements. Whether or not this is the case will be determined by the court cases in Bulgaria and dispute resolution in Macedonia. It is these issues which need the most attention to avoid tensions between investors, regulators and other government institutions. Romania provides a good example of effective follow through of initial commitments.

The case studies provide insight into how each country tackled the issue of privatization, why they did it, how they did it and the emergence of post-privatization issues. For Bulgaria it is the need to balance the investment requirements with socially acceptable pricing and quality of service. Macedonia has experienced a similar dilemma with having EVN implement all its investment requirements while allowing these investments to be financed through tariff increases. Differing legislative and regulatory interpretation and lack of market rules compounds the challenges in the post-privatization period. Romania demonstrates the initial difficulties involved in privatization. The two year negotiations leading up to privatization may have been long and slow, but it did allow an effective regulatory framework to be developed. The involvement of the World Bank, also underscores how an international institution can remain involved in privatization after the papers are signed.

The result of distribution privatization is a boost for efforts to modernize generation. Attempts in all three countries to privatize, or involve private capital in generation, is occurring and is now benefiting from stable collection systems and network loss reduction.

The overall privatization of distribution and generation companies can lead to greater stability throughout a country's economic system and signal a shift towards a market based economy. The continued development of regulations and service quality indicators will help accomplish the initial reason to privatize: the modernization of the energy infrastructure.

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