The electricity sector and the development of the regulatory state in India

*The ‘power’ of World Bank reform policies*

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List of abbreviations

CEA Central Electricity Authority
CERC Central Electricity Regulatory Commission
EA-2003 Electricity Act 2003
ERC-1998 Electricity Regulatory Commissions Act 1998
ESA-1948 Electricity Supply Act 1948
GCI Global Competitiveness Index
IE-1910 Indian Electricity Act 1910
IPP Independent Power Producer
IR International Relations
LDC Late Developing Country
NEP National Electricity Policy
NHPC National Hydroelectric Power Corporation
NTPC National Thermal Power Corporation
OERC Orissa Electricity Regulatory Commission
OSEB Orissa State Electricity Board
SEB State Electricity Board
SERC State Electricity Regulatory Commission
WB World Bank
1. India’s electricity sector & the World Bank

1.1 Introduction
On July 30, 2012, the lights turn off in the Northern part of India, leaving roughly 10 per cent of the world’s population in the dark (Yardley & Harris, 2012). While the region is used to the regular power cuts, this blackout will turn out to be the largest electrical blackout in the history of India. India has been struggling for a reliable power network for decades, and still seems to lack essential infrastructural and institutional requirements in order to secure this. However, the situation is getting more pressing from day to day as the country needs to maintain its international competitiveness and prove to the world that it is capable of running one of the most promising economies of the last twenty years.

International donors such as the World Bank (WB) have had a large role in trying to improve the performance of the electricity sector in developing countries such as India. While first simply supporting the state-run electricity companies, over the years its policy shifted towards improving the institutional structure of the country, as it appears that this is the most structural problem. In 1993, the WB developed an electricity sector policy paper, in which the organization explicitly calls for the establishment of transparent and accountable legal frameworks and regulatory processes. In fact, this is regarded a prerequisite for any further financial support.

This thesis assesses the development of the Indian electricity sector and the Indian state after this 1993 World Bank Policy Paper. As stated in the WB documents, India has to move towards a form of governance that places regulation over direct provision of services. It is therefore interesting to assess this subject by applying the theory of the regulatory state. This concept revolves around the idea that the role of the state is changing; its main responsibilities are shifting from direct service provision to regulation, leaving the execution to regulatory institutions and/or other actors. This has often been connected to the rise of liberalization and privatization policies in the 1990s.

This introduction will firstly offer an assessment of the policy shift of the WB with regard to economic affairs and good governance in general. Secondly, the electricity sector in India and the position of the WB regarding this issue will be assessed. This will offer the historical basis on which the main question and sub questions will be built, which will be presented at the end of this introduction.
Box 1: India - painting a picture
Republic of India / Bharat Ganrajya
Government – federal parliamentary constitutional republic
Parliament – lower house / Rajya Sabha & upper house / Lok Sabha
Current president – Pranab Mukherjee
Current vice-president – Mohammad Hamid Ansari
Current prime minister – Manmohan Singh (party: Indian National Congress)
Population (2011) - 1,210,193,422

Modern history
This section discusses the history and development of Modern India, which is considered to take off halfway the 19th century. At that time, India was ruled by the British East India Company, which commenced in 1757. The ‘company rule’ of India entailed the collecting of revenue and direct involvement in governance by an appointed governor-general. The governor-general Lord Dalhousie, appointed in 1848 was believed to have set the stage for the modern Indian state. His rule brought about principles of sovereignty, education of the population and technological changes of that age, brought over from Europe. However, discontent with the ‘Company Raj’ grew over time, setting off the Indian Rebellion of 1857. While the Rebellion was under control by 1858, the British Crown felt that the grip on the Indian subcontinent should be tightened. The East India Company was dissolved and rule was directly transferred to the British government.

British imperialism was characterized by indirect rule; while establishing a similar parliamentary system, the British Crown balanced interest with vested rulers to prevent any rebellions in the future. In 1885, the first – and currently governing – political party was established: the Indian National Congress.

While technological progress and commercial agriculture brought about positive conditions such as increased food production and lower transport costs, dissatisfaction among the population developed. This was due to the fact that not much of the benefits gained were generated towards the Indian population. The First World War was a turning point for the country. While the British Crown imposed reforms that would gradually lead to more self-rule, this was considered too little, too late. A non-violent movement of non-cooperation was established, led by the charismatic Mahatma Gandhi. The 1940s were riddled with crises; the Second World War, non-cooperation by the Indian National Congress and Muslim nationalism shook the foundations upon which the ‘British Raj’ was built, which led to the independence of India in 1947 – where the subcontinent split up in the states of India and Pakistan. The Indian constitution was completed in 1950.

India has been a remarkable post-colonial state due to its relatively strong determination to be a secular, democratic republic. Its institutional capacities, civil liberties, relatively independent media and activist judiciary are admirable, especially considering its immense population. India’s economic record since liberalization in the 1990s has been impressive. During the past two decades, the country has held an average annual GDP growth rate of 5.8%. It is thereby one of the world’s fastest growing economies. Due to its large labor force (the second-largest behind China), it has a competitive advantage in labor-intensive sectors. Its economic liberalization policies have brought about economic wealth and an emergent middle-class, but have also had negative socio-economic implications such as increased extreme poverty. Therefore, not the entire share of its population have taken advantage of its ‘one of the world’s fastest-growing economy-status’. The World Bank notes issues as infrastructure, education and public health and nutrition as obstacles towards or risks as a result of economic growth.

1.2 World Bank & the development of good governance policy
The WB provides loans to developing countries, thereby focusing on the functioning of the market. The organization aims to promote and facilitate foreign (capital) investment and international trade by principles of liberalization, privatization and deregulation. At its establishment in 1944, the WB stated in its founding charter that interference with political affairs was outside its core mandate and that it was not allowed to take political considerations into account when offering financial support (Williams &
Young, 2001). This principle is a heritage of Cold War politics in which political integrity was a controversial issue.

During the 1980s and 90s, it became increasingly obvious that mismanagement and structural corruption were impeding the effective distribution of funding. Moreover, declining aid budgets and an increasingly critical civil society triggered the WB to reform its policies (Santiso, 2001). As a result, the improvement of governance became a focal area among International Financial Institutions. As Cold War remnants of political non-interference faded by the 1990s, a broader interpretation of the Bank’s mandate gained momentum, with a particular focus on good governance. As defined by the WB (1992), governance is “the manner in which power is exercised in the management of a country’s economic and social resources for development” (p. 1). In 1989, the WB moreover introduced the concept of good governance in a report on Sub-Saharan Africa. General conclusion of the report was that the political and economic impasse the region was facing was due to a “crisis of governance” (World Bank, 1989). The experience in Africa brought about the policy aim of improving governance in order to sustain economic and social development in developing countries.

This reinterpretation of policy and strategy consequently resulted in a new perception of the role of the state. As governments of developing countries seemed unable to manage their development properly under plain market conditions, attention was drawn to separating policy from politics in order to improve practice. States should not be occupied with the direct provision of services; rather, neutral and a-political institutions should regulate this - applying a technocratic perspective. The state would adopt a more passive role and be concerned with ‘setting the rules of the game’ in which the regulatory actors would perform.

As stated before, this policy redirection was a watershed moment in the history of WB lending, as it touches upon more than plain economic restructuring and deliberately takes into account political conditions. “In addressing governance, the Bank calls into question the ability, capacity and willingness of political authorities to govern effectively in the common interest” (Santiso, 2001, p. 5). However, the WB still adheres to a narrow interpretation of its definition. For example, a judgment on the democratic performance of a country remains outside its mandate.

**Good governance**

The concept of good governance boils down to principles of transparency, accountability and participation (Santiso, 2001). These principles will be applied in this thesis as a guideline to assess the effectiveness of regulatory reform in chapter 4. Furthermore, the second chapter will indicate that regulatory independence is essential for a proper functioning of regulatory agencies. Therefore, this thesis adds ‘autonomy’ to the equation to see whether regulatory reforms have been successful. While the principles of transparency, accountability and participation entail clear normative elements, the WB has aimed to translate these into practical, economic dimensions in order to stay within its authorization. In research carried out by the World Bank Institute, it is stated that there is a convincing casual connection between good governance and improved development (Kaufmann, Kraay, & Zoido-Lobaton, 1999). This research identified six indicators of good governance: voice and accountability, political (in)stability; government effectiveness – which also includes the quality of public service
delivery; the degree of regulatory burden; the rule of law; and graft or the independence of the judiciary (Kaufmann et al.; Santiso, 2001). By framing these six dimensions as practical elements, the WB has been able to justify its seemingly normative policy turn. This has resulted in a focus on “public sector management, financial management, the modernization of public administration, and the privatization of state-owned enterprises” (Santiso, 2001, p. 5). This development can be also traced if one looks at the position of the WB with regard to the Indian power sector, to whose current situation and course of history we now turn.

1.3 India’s electricity sector: current situation & implications

India’s international competitiveness is partly dependent on a reliable electricity infrastructure. When competing with either labor-intensive or capital-intensive countries, any electricity breakdown is one too many. This offers a remarkable characteristic of India as put forward by the annual Global Competitiveness Index (GCI) carried out by the World Economic Forum. The GCI identifies 12 pillars of competitiveness of a country, which are connected to three phases of economic development. The common rationale entails that if a country has well-performing requirements in the first phase of economic development, a country is able to shift to a next phase of economic development and global competitiveness. The 12 pillars and their corresponding economic profile are expressed graphically below;

According to the GCI 2011/2012, India can be regarded a factor-driven economy and is thereby in its first stage of economic development (World Economic Forum, 2012). On the Global Competitiveness Index of 2011/2012, India holds the 56th place out of 142 countries analysed. However, India ranks low on the pillars indicating the performance in this first phase (91st), while in comparison the country ranks high on the indexes connected to the second - efficiency driven - (37th) and third – innovation-driven -
economies (40th) (World Economic Forum, 2012). The provision of electricity is part of the pillar ‘infrastructure’, in the primary phase of economic development. In order to ensure an effective and well-functioning economy, extensive and efficient infrastructure is essential. It integrates both the internal as well as the external market, and determines economic impact.

“Economies also depend on electricity supplies that are free of interruptions and shortages so that businesses and factories can work unimpeded“ (World Economic Forum, 2012, p. 20).

An analysis of India’s performance on the GCI leads to the conclusion that whereas the country performs mediocre on primary areas considered to be essential for global competitiveness, it appears to have developed more characteristics related to second- and even third-phase economic development. Is it possible for a country to hold a strong international position while not performing properly on the primary requirements for economic development? It can be assumed that this situation cannot be sustained, leaving India’s efficiency- and innovation-driven characteristics without the ‘power’ to compete internationally.

Therefore, in order to sustain India’s global competitiveness, it is essential that its electricity sector meets the requirements of its economic development. However, in what way can this be managed? And how has the electricity sector in India developed in the first place? The following sections will address the development of the electricity sector in India; its organization, main actors and important development of the sector. In addition, it will go into detail about the 1993 World Bank policy statement and what this statement entails.

1.4 India, the World Bank & the power sector, post-independence

While applying different strategies over the years, the WB has always been involved in the electricity sector of developing countries. Until recently, this sector was mainly arranged through one national electric utility acting as a public monopoly. In the particular case of India, the provision of electricity was deployed as a strategic and political good after independence from the United Kingdom (UK) in 1947. Electricity was seen as a publicly-provided good and was used by the Indian government, alongside other publicly-provided infrastructure services, to address social equity.

At the time of writing the 1993 policy paper, India’s State Electricity Boards (SEBs) were in financial distress due to long-term inefficient governing. These SEBs were established with the Electricity Supply Act of 1948 and hereby became the most important actors in structuring the Indian power sector. SEBs are territorially organized, vertically integrated entities, responsible for power generation, transmission and distribution of electricity. The Industrial Policy Resolution of 1956 identified the electricity sector as an economically strategic sector, which thereby fell under public sector responsibilities. It is important to note that electricity is a concurrent subject in the Indian Constitution. This entails that both the central government and the state governments can exercise legislative powers over this sector.

The establishment of these SEBs heavily influenced the patterns of ownership. Whereas at independence in 1947, private companies accounted for more than 80 per cent of the total generation capacity, in 1991, the SEBs controlled more than 70% of power generation and basically the entire distribution system Dubash & Rajan 2001, p. 3368). While this redistribution firstly was effective in
providing electricity to support economic growth, two interrelated conditions account for the dire situation of the sector by 1993.

Firstly, the Green Revolution which was initiated in the 1960s and flourished by 1980 provided the country with high-yielding crop varieties by use of fertilizer and systems of irrigation, the latter requiring a lot of electricity. This Green Revolution subsequently achieved food security and increased profits for farmers. This development had its political consequences, which brings the second condition to the development of the dire state of the SEBs. Due to the positive conditions in the agricultural sector, farmers were seen as large and therefore interesting vote blocs. Hence, when political stability wavered in the 1960s and 1970s with the splitting up of the Congress Party and the uprising of regional parties, electricity subsidies were used as a political tool to bind farmers to re-elect the Congress party. Tariffs were lowered and in some states electricity was even offered for free to some groups of farmers (Dubash & Rajan, 2001).

Due to the subsidies/favors granted to farmers, it became increasingly difficult to monitor electricity as meters were no longer checked or entirely removed. This resulted in a loss of overview for the SEBs, who obscured all losses under the category of agriculture or Transmission and Distribution losses. For this reason, SEBs were able to keep up their functioning, while being in an unsustainable financial situation. In order to relieve financial distress, SEBs introduced cross-subsidies from industry. In order to compensate for the non-existent revenues from the agricultural sector, industrial tariffs were kept high. By 1999-2000, electricity tariffs for industry were 15 times higher than in the agricultural sector and 2.1 times higher than the domestic segment (Deshmukh, Kasuhik, Kulshrestha & Thakur, 2005). This led to dissatisfaction among industrial consumers, who eventually took care of their own electricity provision by means of generation plants – leading to a loss of 20 per cent of total SEB sales to industry between 1960 and 1991 (Dubash & Rajan, 2001, p. 3370) and to almost 30% by 1998 – 1999 (Deshmukh et al.). Gradually, the situation of the SEBs became untenable as income from industry declined, farmer’s consumption increased and a growing grey area of unmeasured and unmonitored electricity provision financially strangled the sector, as can be seen in the following figure.
Role of the World Bank before 1991

Before 1991, World Bank lending mostly consisted of supporting state-owned monopoly power utilities in order to provide basic infrastructural requirements for the productive sectors. This is in line with its principle of mere economic interference; strategy was aimed at improving economic and financial stability. In the case of India in the 1970s and 1980s, this resulted in the financial support for power sector projects. Particularly the National Thermal Power Corporation (NTPC) and the National Hydroelectric Power Corporation (NHPC), which were state-owned corporations, received almost 3 billion dollars between 1970 and 1991 for the construction of large power plants (World Bank, 1999). Additionally, the WB aimed at improving the institutional practices of the SEBs by directing loans for improving distribution efficiency. However, the SEBs were not able to distribute this funding in a way that would improve monitoring, nor financial restructuring. Consequently, the WB decided that ownership reform and private participation would subsequently positively affect the financial performance of SEBs.

1.5 - 1991: Independent Power Producers

While the NTPC was regarded one of the most successful state utilities worldwide and an example for the electricity sector, its interests lost ground after 1991 when the WB commenced projects regarding independent power producers (IPPs). This restructuring was part of a larger privatization wave sweeping over the country under Prime Minister Narashima Rao. He was guided by Manmohan Singh, then minister of finance and current Prime Minister. India was forced to embark on a path of reforms since the country was on the verge of bankruptcy. It was forced to open up for international competition in order to restore its balance of payments. The electricity sector was chosen to be one of the flagships of the liberalization initiatives. Various sectors that previously were under auspices of the state were now deregulated or even privatized. For the electricity sector, this entailed the entrance of private players in electricity generation. In October 1991, the Power Ministry published declarations to attract privately owned generating companies to invest in the Indian power sector. Private entities, who were hitherto excluded from involvement, were able to establish, maintain and operate generating plants. Furthermore, they entered into contracts with SEBs for long-term power purchase. In return, these IPPs received beneficial incentives such as guaranteed return on equity, tax advantages and minimal operating requirements.

These incentives had a considerable impact, with both Indian as well as international investors granted projects to increase capacity. Halfway 1995, 189 projects to increase capacity by more than 75GW were intended. Some were granted a ‘fast-track’ status in order to catalyze their progress even further. Despite the optimism, the projects decidedly under-performed. While a target of 40,000MW additional generation capacity was set for the period of 1992 – 1997, only 17,000MW was achieved (Dubash & Rajan 2001, 3372). However, this was not the main disillusion, as will be explained in the following section.

One of the most significant discontents from the start was a lack of trust at both the IPP as well as the government side. Doubts about political stability, financial guarantees of the SEBs and reliable fuel supply caused discontent among the IPPs and related companies and organizations. Additionally, aside
from all the proponents of the IPP policy within the central government, there was also considerable opposition from important officials at the Ministry of finance. The financial guarantees to the IPPs resulted in serious risks for the SEBs and consequently, the central government. They felt that the policy was pushed through by the Power Ministry without consultation of other agencies and with a lack of consideration for consequences on other levels. This led to unforeseen obstacles and delays for implementation, which then again discontented the IPPs. Additionally, other related agencies of the central government such as the Coal Ministry and the Railways Ministry were weary of the accommodation of foreign investors when this included unclear burdens for their own functioning.

Not only semi-related agencies proved to be obstacles for reform, the Central Electricity Authority (CEA) proved to be a hurdle for IPP accommodation. The CEA was established with the Electricity Supply Act of 1948 and is responsible for the examination and approval of the power projects. Obviously, their unwillingness to spur the entrance of IPPs increased the visible lack of trust for a successful power sector reform.

**The World Bank and 1991 reforms**

The position taken by the WB and other international financial institutions regarding the 1991 reforms was one of relative detachment. It was expected that due to the liberalization initiatives, the financial support of international donors would be replaced by private investment. The WB expressed its positive attitude towards the private power initiative, but abstained from active involvement. Since the IPP policy was not built on funding from the WB, it was not in the position to comment it. However, it tried to express its concerns regarding for example particular projects or the failures in rise of generating capacity. Still adhering to the principle of non-political judgment, the WB hid behind the idea that financial donors were not in the position to interfere with central government’s policy framework. On the other hand, the Bank continued to lend to SEBs while those signed long-term, binding purchasing agreements with the IPPs. Indirectly therefore, the WB supported a policy that proved to impede later attempts to reform these SEBs. The long-term contracts put a heavy financial burden on the SEBs, which would have to be relieved in the long term. As Dubash and Rajan state; “SEB reform could not be successful without bringing some type of financial closure to the so-called ‘IPP hangover’, namely, the enormous financial obligations that state governments had encountered as a result of their romance with IPPs” (Dubash & Rajan, 2001, p. 3375).

While the WB in general was positive about the liberalization initiatives, the shape they had taken regarding the power sector was not desirable. “Perhaps the best explanation of the Bank’s relative tight-lippedness in public about the IPP policy is that Bank staff sought to walk a fine line between criticizing both the unfavourable terms and the actually policy of seeking IPPs, even while signaling their support for government of India’s attempts at liberalization” (Dubash & Rajan, 2001, p. 3375).

**1.6 The World Bank 1993 Policy Statement**

Prior to the 1993 policy statement, WB loans for the power sector represented 15 percent of total Bank lending (World Bank, 1993a). Despite the development of the power system, the overall technical, institutional and financial performance of power utilities in most target countries declined. Demand structurally exceeded supply which led to unreliable supply and power shortages. When reviewing this
deterioration, the WB came to a similar conclusion as with the situation in Sub-Saharan Africa; the fundamental structural issue was the failure of developing countries to perform good governance. In the case of the power sector, a conflict existed between the role of the government as the owner and its role as the operator of utilities, which resulted in bad performance. The WB had to revisit its approach towards lending for the power sector in developing countries. It had to acknowledge that mere economic interference did not provide for sustainable improvement. Institutional restructuring was essential in order to avoid government’s interference in day-to-day practice of the power sector.

Therefore, several conferences were organized in the 1990s after which the WB created its policy paper; *The World Bank’s role in the electric power sector*. In addition, a conference was held particularly focused on the power sector in India and its desired reforms, which was also documented in a paper. Both documents confirmed the abovementioned conclusions and indicated that business-as-usual was no longer an option if the sector inefficiencies were to be relieved. Therefore, the WB developed a policy to address the institutional flaws that hindered the efficient development of the power sector. The policy focuses on the three interrelated issues of institutional, regulatory and financial reform. Five guiding principles were set, to be known as transparent regulation; commitment lending; importation of services; commercialization and corporatization; and private investment. These principles and their consequences for India will shortly be evaluated. The thesis will then move on to combine the concept of the regulatory state with the electricity sector of India, post-1993.

*Transparent regulation* - The first principle is in fact the instrumentation of the general idea of the regulatory state. The Bank connects a prerequisite to power lending; the intention towards the establishment of a transparent and independent legal framework and regulatory process (World Bank, 1993a). In order to achieve this transparency, the WB calls for the establishment of “some form of regulatory body as part of a broader governmental effort to redefine the respective roles of government, utility, and consumers” (World Bank, 1993a, p. 14). Independent and transparent regulatory bodies can keep the government from day-to-day interventions in power sector operations. This will safeguard the autonomy and accountability of enterprises, thereby improving general performance and investor confidence. It sets the state at an ‘arm’s length’ of operations, while retaining its coordinating and planning role – the exact purpose of the regulatory state. The two principles of transparent regulation and commitment lending are the institutional measures/reforms which will be the focus of this thesis.

*Commitment lending* - In order to bolster the WB leverage regarding regulatory reform, it reaffirmed its dedication to conditionality. It aims at developing a custom-made program for the varied needs of its borrowers. Those who are committed to improving their efficiency, accountability, and financial and regulatory situation will be rewarded with WB funding and instrumental support (World Bank, 1993a).

*Importation of services* - In order to improve efficiency and catalyze reform, the WB offered funding for outsourcing particular services under utility management contracts (World Bank, 1993a).

*Commercialization and corporatization* - By this guiding principle, “the Bank will aggressively pursue the commercialization and corporatization of, and private sector participation in, developing-country power
sectors” (World Bank, 1993a). In the case of India, this entails that the SEBs and other generation-transmission- or distribution-operators should function as autonomous commercial entities, making considerations on the basis of supply and demand in order to perform efficiently. Without external and particularly political interference, it should be able to uphold its financial accountability and actualize its financial resources in order to relieve debt and invest – ergo, act as an independent, commercial entity (World Bank, 1993b). Furthermore, cross-subsidization should be reduced through tariff reform, increasing transparency of provision (World Bank, 1993b).

**Private investment** - The WB aims at encouraging private investment in the electricity sector by assisting governments in relieving risks that have identified as withholding international investments. Private investment would generate an inflow of foreign capital, strengthening the capital market of the developing country (World Bank, 1993a).

**Implications for India**
The general implication with regard to the restructuring of the Indian power sector as put forward in the WB report *Conference on Power Sector Reforms in India* is that transparency, accountability and regulatory reform should improve the performance of the sector. In order to achieve these reforms, a policy and a regulatory framework should be established. Nevertheless, the WB states that where there is an opportunity to achieve efficiency by competition, this should be encouraged additionally. Secondly, transmission and distribution losses should vigorously be diminished. Thirdly, the financial situation of the sector has to become more transparent in order to run it on a more commercial basis and to facilitate possibilities for international private investment. Furthermore, particular attention should be paid to reforms on both state as well as federal level, as the electricity sector is a concurrent subject of the Indian Constitution. This means that decision making takes place both at the federal as well as at the state level. These reforms will be along the lines of the above stated principles.

**1.7 Framework of analysis**
This chapter has aimed to describe the history and development of the Indian electricity industry and the development of the 1993 World Bank energy policy statement. The second chapter will revolve around the theoretical development of the regulatory state theory, Levi-Faur’s interpretation of the regulatory state, and the relevance of this theoretical framework for the Indian electricity sector. This chapter will also go into detail about Levi-Faur’s characteristic of rule-making, which will be the guideline of this thesis. The first and second chapter should provide for an apt basis on which this thesis will then continue in order to assess the development of the Indian electricity industry after the 1993 World Bank policy statement.

The third chapter will continue with a historical account of rule-making, after which the fourth chapter will make an assessment of the actual effectiveness of this regulatory reform. The conclusion will bring this ‘thin’ and ‘thick’ narrative together in order to come to an all-encompassing examination of the presence or absence of regulatory state characteristics with regard to the Indian electricity sector.

The aim of this research is to judge the performance of regulatory reform initiatives by way of a prescribed framework by the WB. This regulatory reform prescription holds the requirements and
objectives of a regulatory state. According to David Levi-Faur, a regulatory state holds three characteristics; rule-making, rule-monitoring and rule-enforcement. This thesis will focus on the development of rule-making within the Indian electricity industry. This focus will not leave the other characteristics unexposed; elements of monitoring and enforcement will be visible when assessing the effectiveness of this regulatory reform. Nevertheless, an analysis of the development of rule-making fits the scope of this research and the scope of the developments of an emergent regulatory state. Therefore, the following chapters will revolve around answering the following central question;

To what extent is rule making, as a regulatory state characteristic as put forward by Levi-Faur and the 1993 World Bank energy policy statement, successfully implemented in India’s electricity sector?

As can be deduced from the main question, the research will analyse the regulatory development of the Indian electricity sector as a result of WB reform policies by applying the regulatory state concept by Levi-Faur, focusing on the characteristic of rule-making. In order to answer the central question, one has to look at the development of this rule-making in the Indian electricity sector. Firstly, this thesis will assess whether this rule-making can be traced in the development of the Indian electricity sector since 1993. This can be done by a historical account of rule-making in the Indian electricity sector. Therefore, the third chapter will apply the following sub question;

How has rule-making developed in India’s electricity sector after the 1993 World Bank energy policy statement?

The third chapter can be considered to tell the ‘thin narrative’ regarding the development of rule-making in India. This is because the enactment of laws and establishment of regulatory institutions does not automatically guarantee a transparent, accountable regulatory framework in which there is space for the input of interest groups. In other words, the sole creation of a regulatory regime is not sufficient to bring about real reform. It is not simply about ‘ticking a box’ in order to qualify for funding, it is about structural change to improve an industry. Has the regulatory prescriptions been effective in this? Or are the laws and regulatory agencies created as a result of this rule-making an empty shell without any real effect? The fourth chapter will answer these considerations through the following sub question;

To what extent has rule-making been effective in India’s electricity sector after the 1993 World Bank energy policy statement?

The fourth chapter will answer this question by assessing the degree of transparency, accountability and participation at both regional and national level. It thereby aims to tell the story behind the scenes or the ‘thick narrative’ of the actual effectiveness of rule-making in India’s electricity sector after 1993. Furthermore, this fourth chapter will examine the role of the WB in effectively implementing this reform. It was the WB who created the policy paper and thereby bound developing states to a reform process in order to still qualify for funding. The Bank guided the way towards liberalization and regulation. Yet, can success or failure of the development and effectiveness be traced back to the WB prescriptions? Were WB instructions followed up strictly and are the still applied? Or are there other forces that made the industry develop the way it did?
The two sub questions above will account for a structural analysis of the following elements; rule-making in an emerging regulatory state, the effectiveness of this rule-making and the role of the WB in regulatory reform. By telling both the ‘thin’ as well as the ‘thick’ narrative regarding rule-making in the electricity sector of India, chapter 3 and 4 will provide for the relevant information to answer the main question. Without going into extensive detail on technical matters, this thesis aims to provide a thorough overview of regulatory reform within the electricity sector of India after the 1993 World Bank policy initiatives.

1.8 Regulatory state theory & International Relations

Whereas it appears that analysing the institutional development of a single country such as India is a national affair, the reform process carries a significant importance for International Relations (IR) theorizing. Particularly considering the fact that at the first outset, the reform process is far from endemic; the WB has been an essential catalyst for change. The WB policy shift from exclusively economical judgements towards principles of governance has altered the approach to reforms in many developing countries. This thesis is therefore relevant when assessing the strength and influence of International Financial Institutions. Furthermore, this thesis analyses the extent to which WB reform prescriptions are effective in bringing about their goal. Assuming that bottom-up support is vital in building functioning regulatory institutions, I expect that the sole transplantation of a WB reform policy will not suffice to bring about the desired change in the electricity industry.

Secondly, the principles of good governance have settled solid within IR theory during the past two decades. Scholars increasingly acknowledge the conclusion drawn by the WB that economic effectiveness demands viable institutions to uphold the principles of good governance; transparency, accountability and participation. This thesis addresses these three principles as the most important pillars supporting the electricity reform program and therefore fits within IR theory. Asserting that ‘a chain can only be as strong as its weakest link’, I state that all three principles of good governance should be well-established in order to create an effective regulatory regime. In the case of an emergent regulatory state such as India, this can not be the case yet. Therefore, I expect that while these principles might be present when analysing the regulatory framework, they are yet far from desired.

Thirdly, the national impact of the electricity blackouts in India is too big to not have an effect on its global positioning as well. As stated in section 1.3, the current state of India’s electricity network critically endangers its international competitiveness. By redefining the role of the state to refrain from active involvement in an industry that is vital for its international competitiveness, regulatory state theory involves a risk, particularly for developing countries that are generally more vulnerable to international market circumstances. Considering the fact that a reliable electricity infrastructure is a vital requirement for industrial transformation and global competitiveness of a state, the subject of electricity reform in relation to the regulatory state carries relevance for theories of International Political Economy.

Whereas there is an important value of this thesis within IR theory and particularly within International Political Economy, the research also carries its limitations. It can therefore not be considered the single answer to issues around the Indian electricity sector, particularly because it focuses mainly on the
regulatory side, leaving the practical aspects underexposed. Furthermore, since the concept of the regulatory state has not yet matured, it lacks the solid, robust framework that is essential for applying and testing an IR theory. Nevertheless, it is a concept under current discussion and a possibly influential theory for the future assessment of WB reform policies and the development of (infrastructure) industries in developing countries.
2. Regulatory State Theory

2.1 - Electricity sector & the regulatory state

This research focuses on the electricity sector of India. One could wonder why this is a relevant field to assess the performance of the state, since electricity is not considered a collective good as for example fresh air or national safety would be. Collective goods are identified by two characteristics; they are non-excludable and non-rivalrous which means you cannot exclude someone from using it and that the use by one person will not affect the availability for another person. As a result, there will never be properly functioning markets of supply and demand for these goods, which then usually fall under the responsibility of the state. The electricity industry can be divided over three segments; generation, transmission and distribution. The characterization of electricity is twofold: although the access to the electricity network can be considered a collective good, electricity itself is excludable and rivalrous. In general, governments are responsible for the transmission and distribution network (access), while private entities take care of generation and end supply. Introducing competition to the electricity market offers the dilemma that while the generation and end supply segment can be liberalized through licensing of different entities, the transmission and distribution network are in fact natural monopolies. Transmission and distribution – access to electricity – is therefore a government affair. Furthermore, the non-storable nature of electricity complicates the matter of competition and consumer protection. In conclusion, electricity proves to be a striking case in assessing the struggle of the state to on the one hand privatize and outsource public assets and on the other to guarantee the access to electricity.

Aside from the fact that the electricity sector is an essential infrastructure sector, there are two additional reasons why the electricity sector is closely related to the development of the regulatory state, put forward by Dubash and Morgan in their article Understanding the Rise of the Regulatory State of the South.

Firstly, essential infrastructure industries such as electricity and water were the first to catalyze the establishment of independent regulatory agencies who operated at a distance from government and politics and were guided by their technical expertise in the field (Dubash & Morgan, 2012). This development was initiated in the 1980s in European countries – the United Kingdom (UK) in particular – and has been adopted by countries of the South from the 1990s onwards. This institutional reform of the infrastructure industries has been one of the first characteristics of the regulatory state.

Second, electricity provision is an affair that directly affects both consumers as well as business. Therefore, it is a priority for developing states to satisfy their citizens and maintain or improve their global competitiveness. For many countries of the South, this has been a catalyst for the development of regulatory institutions. Additionally, powerful external pressures, mainly from international financial institutions, have forced these countries to reorganize their institutional setting. This chapter will now turn to an extensive analysis of the development of the regulatory state and its theoretical elements.

2.2 - History of the regulatory state

In order to understand the concept of the regulatory state as it is applied in this thesis, it is essential to come to grips with the origins of the concept. The regulatory state concept has developed over the past
century, from relative invisibility in America in the 1960s, to influential works in light of the states of the European Union, towards a more general conceptualization of the state by David Levi-Faur, one of the most well-known scholars on the regulatory state. However, the characterization does not end there. Therefore, an explanation of the origins and development of the concept of the regulatory state is in place. This section will firstly discuss the history of the regulatory state. It will then move to a consideration whether there might exist a certain regulatory state of the South, as suggested by scholars Navroz Dubash and Bronwen Morgan. Thirdly, it will address the general definition and instruments of control of the regulatory state as put forward by Levi-Faur, which will be applied as the theoretical framework in the analysis of India and its electricity market.

American roots
The regulatory state originated as an American and subsequently European concept. It appeared first in literature in the 1960s in a book by James Anderson; *The Emergence of the Modern Regulatory State* (1962). The book explains governance and the expansion of bureaucracy within the United States through specialized, independent agencies. Anderson’s work on the American administrative state reflects the American administrative system, consisting of decentralized agencies that were responsive to the Congress and were occupied with a clearly demarcated range of responsibilities and instruments (Anderson, 1962 in Levi-Faur, 2011a). These agencies were a result of popular movements, which developed to counterbalance the increase of power of big business.

Other literature however, interprets the American regulatory state as a result of the redefinition of the role of the federal government by President Ronald Reagan in the 1970s. While the state was first regarded a positive state that was given the responsibility of traditional state functions as taxing, spending and redistributing, Reagan’s ‘revolution’ altered this perspective. According to Harold Seidman’s *Politics, Poisition and Power: From the Positive to the Regulatory State*, the federal role of the government was a limited one, a role of providing services, while outsourcing the production of them (1986).

Even though there has been scholarly attention for the regulatory state in America since the 1960s, few scholars have put an effort in defining or characterizing what the regulatory state is exactly. Theory on the state has not been central to American literature, keeping the regulatory state relatively invisible and underdeveloped (Levi-Faur, 2011a).

European development
David Levi-Faur speaks of the ‘homecoming’ of the concept of the regulatory state in Europe due to the work of Giandomenico Majone (Levi-Faur, 2011a). Majone’s work developed in the 1990s, focusing on the regulatory development of the European Union. According to Majone, circumstances such as a deepening economic integration and competitive external pressure have forced European countries to strategically adapt to these changes by way of reducing their positive roles of taxing and redistributing, and increasing rule making (Majone, 1997). Majone’s work has had a profound impact on the theory of the regulatory state. His perspective on the regulatory state is in the same direction of Seidman; of the state increasingly concerned with rule making instead of taxation and spending. While not offering a
clear definition, Majone develops an influential characterization of this state. He compares it to a more traditional characterization of the positive state, as can be seen in the table below.

Crucial element of the regulatory state theory is that the state transfers authority to regulatory agencies. The state is essentially still responsible, but leaves the actual organization to a specialized, technocratic agency.

Majone’s characterization calls for a shift from distributive and redistributive politics of the state to regulatory politics. Majone’s extensive work on the regulatory state nevertheless still has an inherited flaw according to Levi-Faur (2011a); while the differentiation between the positive and the regulatory state is clear, it does not allow for variety within these characteristics. According to Levi-Faur, different states are put under a common denominator, resulting in an inability for scholars to divide these into for example the developmental state or the welfare state. This characterization therefore provides for an unwanted limitation of the scope of analysis of the regulatory state.

A second influential European characterization of the regulatory state is offered by Michael Moran. In his book *The British Regulatory State* (2003), Moran discusses a regulatory state that is concerned with popular sovereignty, democratization and modernization of the state. His work can thereby be juxtaposed against Majone’s point of departure who is more concerned with an economic justification of the regulatory state. Moran’s notion is based on the development of Britain in the 1980s, transforming from a system based on elite-business arrangements and trusted agreements to a “modern system of arm’s-length regulation” (Levi-Faur, 2011a, p. 10). In this case it is not the case of a hollowed-out or withdrawing state, rather; the restoration of institutional formality and organizational hierarchy.
2.3 - Regulatory capitalism

Gaining influence at the end of the 20th century, the notion of the regulatory state has been theorized increasingly in the past decade. Ambitions have risen simultaneously; theorists such as Levi-Faur (2011a) aim to not only characterize a state as such, rather to develop a concept that is able to move beyond fixed geographical and historical contexts.

The concept of the regulatory state as applied in this thesis falls within a broader theorising on regulatory capitalism, as brought forward by scholars such as John Braithwaite, David Levi-Faur and Julia Black (Braithwaite, 2008; Levi-Faur, 2005; Black, 2002). Levi-Faur defines regulatory capitalism as follows;

*A political, economic, and social order where it is regulation, rather than the direct provision of public and private services, that is the expanding part of government, and where legal forms of domination are increasingly organized around functional roles and problem solving rather than national demarcation lines. (Levi-Faur, 2010, p. 210).*

While it was asserted that the wave of privatization and liberalization of public responsibilities such as telecommunications, water and electricity in the 1980s and 90s would lead to the demise or hollowing out of the state, the opposite has been proven the case, as S. K. Vogel strikingly states in his work ‘Freer Markets, More Rules’;

*I suggest that what we have witnessed has been reregulation, not deregulation. That is, the governments of the advanced industrial countries have reorganized their control of private sector behaviour but not substantially reduced the level of regulation. In part, the widespread misunderstanding of the deregulation movement reflects semantic confusion. People tend to use the term ‘deregulation’ indiscriminately to refer both the introduction of more competition within a market (what I shall call liberalization) and the reduction or elimination of government regulations (what I shall call deregulation) as if these two were naturally associated. In most cases of ‘deregulation’, governments have combined liberalization with reregulation, the reformulation of old rules and the creation of new ones. Hence we have wound up with freer markets and more rules (Vogel, 1996, p. 3-4 in Levi-Faur, 2010).*

As opposed to neo-liberal ambitions of deregulation, current society is exercised through regulation, particularly within the regulatory state. Whereas there is a clear ‘marketization’ of economic and social life, increased regulation manifests itself as the supplier of the means for this marketization. According to Xu Yi-chong, the regulatory reform creates an opportunity for the establishment of a new regulatory regime. “Instead of imposing direct rule, the government must create effective governance that ensures regulatory agencies are insulated from on-going political pressures, while utilizing processes that promote participation, transparency and predictability. Different interpretations of regulation led to different policy suggestions and different approaches to reform of the industry” (2004, p. 229).

According to Levi-Faur, regulatory capitalism represents a new way of looking at the relations between state, society and the market – “a new division of labor between state and business” (Levi-Faur, 2006, p. 505). As stated before, the Western state has increasingly shifted its role from taxation and spending –
an active role – towards rule-making and standard-setting; designing the rules of the game. Levi-Faur puts forward a comparison between ‘steering’ (“leading, thinking, directing”) and ‘rowing’ (public ownership/service provision) as the central activities of the state (Levi-Faur, 2006, p. 505).

This comparison is based on assertions made by Braithwaite in his article *the New Regulatory State and the Transformation of Criminology*. Braithwaite identifies a shift in government policy; from a Keynesian state of the 1930s – 70s to a new regulatory state which is identified with the 1980s and continues to develop itself (Braithwaite, 2000). Before the Keynesian state, in the 19th century, Braithwaite identifies the Nightwatchman State, which had a minimum role of protecting its citizens under a social contract and where civil society was responsible for the ‘steering’ and ‘rowing’ (Braithwaite, 2000). The Wall Street Great Crash of 1929 marked the introduction of the Keynesian approach, where the state increased its ‘rowing’ functions and increased its grip on market and society. The installation of the Thatcher government in Britain in the 1980s altered the view of a strong, steering state and showed the way for a global wave of privatization in the 1980s and 1990s (Braithwaite, 2000). New regulatory institutions were established in order to coordinate this privatization. According to Braithwaite and Levi-Faur, this is the classic characterization of the new regulatory state; one of steering instead of rowing. Where possible, the state has left rowing (including service provision) to market-oriented actors. The following table explains the course of development of the role of the state by Braithwaite (2000) and Levi-Faur (2006).

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**Steering and rowing for late developers**

Albeit for different reasons, this new ‘division of labour’ between the state and business is not only identifiable for developed countries such as the United States and Britain, but also for a ‘late developing’ country as put forward by Kiren Aziz Chaudhry in her article *the Myths of the Market and the Common History of Late Developers*. The key argument of Chaudhry’s article is that neo-liberal privatization and liberalization waves in the late 1980s and 90s were in the wrong policy direction if one considers the particular domestic and international circumstances of ‘late developing countries’ (LDCs) as Chaudhry termed these. Chaudhry asserts that considering these circumstances, it is an illusion to believe that LDCs were able to construct a neutral, a-political market economy. De-colonization, increased
international interdependence, and the institutional inability to execute effective regulation and extraction over/from the private sector inclined LDCs to take matters of production and (re)distribution in their own hands rather than leaving this to the market (Chaudhry, 1993). Additionally, these extractive and regulatory capacities were not stimulated because of the fact that large capital flows in the form of aid, loans and foreign investment were directed to the state without much effort by the receiver in the 1970s and 80s. This stimulated rentierism and the underdevelopment of LDC’s institutional structure. As Chaudhry strikingly states;

*While the external capital inflows of the 1970s and early 1980s enhanced the state’s role in production, distribution, and redistribution they simultaneously undermined the evolution and impaired the capacities of exactly those public and private institutions necessary for the creation of national market economies.* (1993, p. 261).

Therefore, by the end of the 1980s, LDCs faced a similar situation as Western countries, carrying a heavy burden of rowing – albeit as a result of different developments. In order to overcome their critical balance of payment deficits, LDCs had to establish “national regulatory, legal, and extractive institutions and their ancillary information gathering and enforcement agencies and create legal, accounting, and disclosure requirements for private business elites who had yet to experience the burdens of regulation” (Chaudhry, 1993, p. 261). Additionally however, international interdependence was knocking on LDCs’ doors as an unavoidable condition. This mix of domestic impotence and economic internationalization proved a particularly complicated situation for liberalizing LDCs.

Chaudhry’s article was published in 1993, a watershed moment for International Financial Institutions such as the World Bank. They seemed to have acknowledged the point made by Chaudhry and redirected their support policy by adding requirements of good governance, as can be read in the first chapter. Liberalization had to go hand in hand with the development of a stable institutional structure and regulatory practise. It had proven to be impossible to establish a market economy without institutions to regulate them. This brings us to the regulatory capitalism phase of the 1980s and onwards.

According to Braithwaite, Levi-Faur, Vogel and others, the state had to establish other institutions in order to manage and monitor liberalization. It was acknowledged that economic affairs, particularly in LDCs were too much politically loaded for them to function on a neutral, apolitical basis. Nevertheless, this remained the desirable situation. As can be concluded from Chaudhry’s work, LDCs certainly offer an interesting subject for analysing the development of regulatory institutions and indicate that the development of the regulatory state is not a mere Western phenomenon. In fact, Levi-Faur asserts that regulatory capitalism is diffused globally as a result of the new division of labour between state and society (privatisation), the increase in delegation from the public to the private sector, the proliferation of new forms and techniques of regulation, the formalization and institutionalization of previously informal arrangements of law and regulation in particular and the establishment of specialized agencies with influential experts or technocrats (Levi-Faur, 2005; Jordana & Levi-Faur, 2006). Although one can see that this is a big step from where LDCs such as India were in 1993, I believe these developments are
also applicable there. Complementary, Navroz K. Dubash and Bronwen Morgan speak of the ‘rise of the regulatory state of the South’, with its own distinct characteristics.

2.4 - The regulatory state of the South

While scholars such as Levi-Faur aim to shed off the contextual limitations of the regulatory state concept and want it to ‘travel’ across different countries and moments in time, attention is increasingly drawn to countries whose pathway has only recently indicated a transformation to the regulatory state. To be exact, many of these countries have been steered this direction due to both internal and external pressures, as pointed out by Chaudhry. Therefore, can these countries be approached in the same way while their historical development has been so different from the United States and the European countries? Is it possible to have a general framework to assess any state, or do these countries require a different framework of analysis?

Scholars such as Navroz Dubash and Bronwen Morgan speak of the ‘regulatory state of the South’ (2012), in which the countries of the South are characterized by their shared history, rather than strictly their geographical position. They acknowledge the fact that the countries vary in terms of economic development and institutional context as Chaudhry states, but believe that there is a common theme to be drawn from them. In fact, Dubash and Morgan believe that this common context reveals two characteristics of these emerging regulatory states which have to be taken into account, for they influence both the meaning as well as the implications of the regulatory state concept. This section will discuss their approach to the regulatory state concept and will consider its usefulness for this thesis.

External pressures & transplanting institutions

Firstly, Dubash and Morgan argue that the countries face strong external pressure to implement the institutional practice of the regulatory state, particularly by international financial institutions. This was justifiable by means of the Washington consensus, a set of economic policy prescriptions developed by international financial institutions. In order for Third World countries to receive loans, they had to follow a prescribed reform package, consisting of privatization and liberalization of the market. This conditionality catalyzed many of the institutional and market reform of the third world countries in the 1990s. In the electricity market, the World Bank (WB) decided to transplant ‘best practices’ and good governance through a policy of conditionality. Financial support for the development of the electricity sector required several reforms, including the establishment of transparent and independent regulation (World Bank, 1993a). Independent regulatory agencies were established in order to actualize these reforms.

Compared to the development of the mature regulatory states of the North, the establishment of these institutional reforms was one from the outside and did not develop as a natural course of events. Therefore, does this affect the traditional theoretical account of the regulatory state? It can be said that when the reforms were not part of an intrinsic process, their implementation lacks a sense of its purpose. Additionally, a one-size-fits-all approach to these countries results in a lack of adaptation to the local context. As a result, “regulatory agencies in the South are more likely to begin as relatively hollow institutional shells, which are populated by expectations, norms of institutional practice, and operational rules and cultures over time” (Dubash & Morgan, 2012, p. 267). Therefore, the meaning of these
institutions will develop depending on local, political and institutional context. A result similar to the mature regulatory states cannot be guaranteed. It is important to acknowledge this, when assessing the regulatory state of the South.

**Redistributive politics & regulatory society**

Secondly, Dubash and Morgan state that whereas in the mature regulatory states institutional reform and agencies revolve around removing politics from the field and having experts and technocrats make the decisions, this is simply not possible in the countries of the South. This requires a sharp distinction between factual and normative decisions; between efficiency and redistribution. However, it has been proven that this is a far cry from reality, even in the mature regulatory state, “snuggling social goals in via the backdoor into the regulatory regime” (Dubash & Morgan, 2012, 269). Dubash and Morgan indicate three reasons why this division is implausible for the emerging regulatory state. Firstly, when it comes to the provision of primary services in a country where access to these services is not self-evident, reform of infrastructure and organizational practice can actually mean the exclusion from these services. Secondly, the need for reforms in service delivery sectors is a direct result of their financial, technical and institutional incapabilities. Therefore, regulatory agencies are established to solve these shortcomings. As a result, the function of redistribution can impossibly be de-coupled from these agencies, since they too are in need of reformulating. Third, regulators from the South suffer from weak legitimacy of both the executive, as well as the legislative arm of government, failing to provide and guarantee basic services. The result is a vacuum, triggering “an activist judiciary and/or an active civil society, catalyzing extensive dialogue between regulatory agencies, non-state actors, and political branches”.

In conclusion, it is impossible to have a clear division between efficiency agencies and political redistribution. However, as Dubash & Morgan and Braithwaite suggest, one could speak of a regulatory society, in which civil society and the judiciary play a particular role in dealing with both redistribution as well as efficient regulation concerning the provision of primary services. For the purpose of generalization however, this thesis aims to apply Levi-Faur’s theoretical framework of the regulatory state in general, nevertheless keeping the reservations of the ‘regulatory state of the South’ in mind.

**2.5 - Levi-Faur’s concept of the regulatory state**

This thesis will draw on the theoretical ambitions of the article *The Odyssey of the Regulatory State* by Levi-Faur dating from 2011. The author aims to develop a thick theoretical concept of the regulatory state in order for it to travel across space and time. In a broader sense, Levi-Faur interprets regulation as “the promulgation of prescriptive rules as well as the monitoring and enforcement of these rules by social, business, and political actors on other social, business and political actors” (Levi-Faur, 2011a, 9).

For the purpose of this research, Levi-Faur’s definition of the regulatory state will be applied, which is defined as; “a theoretical definition that identifies the regulatory state with the application of informal and formal bureaucratic rule-making, rule-monitoring, and rule-enforcement” (Levi-Faur, 2011a, 2). One can note that this definition is a realization of the before noted definition of regulation, applied to the capacities and instruments of control of the state.
Whereas Levi-Faur in this article does not go into the meaning of the particular instruments of control (rule-making, rule-monitoring and rule-enforcement), his article Regulation and Regulatory Governance refers to the work by Hood, Rothstein and Baldwin who depict similar mechanisms as the essential components of the regulatory state. Hood et al. identify standard-setting/policy-making, information gathering/monitoring and enforcement or behaviour modification. These three mechanisms are considered the fundamental components of regulatory control of any regulatory state. The analysis of Hood, Rothstein and Baldwin, combined with general definitions and the assumptions of Levi-Faur will offer an understanding of the three components of regulatory control.

This thesis will analyse in-depth the extent to which rule-making has been successfully implemented in the regulatory reform of the Indian electricity industry. This does not leave rule-making and rule-monitoring unexposed, since this will be elements in chapter four, which analyses the actual effectiveness of the rule-making. The next section will shortly discuss the elements of rule-monitoring and enforcement for a general impression. The final section of this chapter will elaborate on rule-making and its corresponding elements in the 1993 World Bank policy statement.

**Rule-monitoring/information gathering**

Rule-monitoring or information gathering concerns the practical implication of regulation. It involves measurement, registration and therefore also issues of quality of information. According to Hood et al., there are many ways to gather this information. Regulators can conduct their own analyses, they can impose legal requirements for reporting and registration, or to have a third party collect the information. Additionally, it can be offered through voluntary bodies by for example customer movements (Hood, Rothstein & Baldwin, 2001). In general, a mixture of these procedures is the practise.

With regard to the electricity sector, this practically means the metering, billing and collecting of information about electricity production, transmission and distribution. Furthermore, the functioning of regulatory institutions should be monitored through in-depth assessment of their transparency, accountability and the degree of participation. This should be carried out by way of the abovementioned ways by Hood et al. In order for monitoring to be effective and reliable, both the monitoring agency as well as the regulate need to have a certain degree of accountability and transparency. In assessing the effectiveness of rule making, chapter four will unavoidably touch upon issues of monitoring, in relation to the principles of transparency, accountability and participation.

**Enforcement/behaviour modification**

Enforcement or behaviour modification indicates the extent to which institutions, enterprises and other actors actually adhere to regulation and what consequences this might or might not have. It revolves around compliance and the forms of enforcement in case of non-compliance. John Braithwaite offers an interesting tool to assess this enforcement through his view of responsive regulation and its corresponding pyramid of enforcement (Braithwaite, 2008). Braithwaite suggests a hierarchy of enforcement strategies for regulatory compliance. Strategies of cooperation stand at the broad bottom of this pyramid and should be the starting point for enforcement agencies. However, if cooperation fails, agencies can move up the pyramid to apply more punitive and coercive measures in order to attain compliance. If the regulate then improves its behavior and/or performance, the enforcement agency
can move down the pyramid to less rigid measurements (Nielsen & Parker, 2009). It is a game of action and reaction, a balance of deterrence and negotiation that requires a strong, transparent enforcement agency and accountable regulates, which will be assessed in chapter four.

The foundations for this pyramid of enforcement are made in Responsive regulation: Transcending the Deregulation Debate by Ayres and Braithwaite. As a criminologist, Braithwaite offers the following pyramid of compliance;

![Pyramid of Compliance](image.png)

In the case of the electricity sector, there is a thin line between monitoring and enforcement, particularly in the lower parts of the enforcement pyramid. This is one of the reasons that this thesis will focus on rule-making and its effectiveness. In assessing this effectiveness, the enforcement of regulation will be discussed.

2.6 - Rule-making/standard-setting

As can be deduced from the problem definition, this thesis will mainly focus on the characteristic of rule-making within the regulatory state concept according to Levi-Faur. This section will firstly describe what Levi-Faur regards as rule-making. It will then turn to a more in-depth analysis of the ways in which this vision is resembled in the World Bank 1993 policy statement. Additionally, it offers some fundamental information on rule-making, regulatory reform and regulatory agencies.

Rule-making is the basic component of any legal system. According to Hood, Rothstein and Baldwin, rule-making or standard setting as the setting of standards, goals, targets and guidelines is central to regulation, as it defines the direction and values of a regulatory system (Hood et al., 2001). Monitoring and enforcement are the natural consequences of regulation and standard-setting. According to Levi-Faur, rule-making in the context of regulatory capitalism requires elements of accountability, transparency as well as participation. Since the regulatory state sets the standards and relies on regulatory agencies to monitor their execution, both the regulators as well as the regulates have to operate in a transparent, accountable manner. Furthermore, it entails a certain level of autonomy from political pressure. The principles of transparency, accountability and participation offer reasonably measurable indicators of good governance and thereby regulatory state development as intended by
the WB. Therefore, these principles will be operationalized in chapter four when measuring the regulatory effectiveness of the electricity reforms.

In order to operationalize rule-making with regard to the Indian power sector in chapter three, the definition of regulation by the World Bank in its 1993 policy statement provides a valuable addition. This definition is as follows;

The supervision and control of the economic activities of private and arms-length public enterprises by government in the interest of economic efficiency, fairness, health, and safety. Regulation may be imposed simply by enacting laws and leaving their supervision to the normal processes of the law, by setting up special regulatory agencies, or by encouraging self-regulation by recognizing, and in some cases delegating powers to, voluntary bodies (World Bank, 1993a, p. 9)

The WB’s interpretation of regulation materializes Levi-Faur’s construction of rule-making. It concerns enacting laws, setting up special regulatory agencies and encouraging self-regulation. These components will guide the analysis of rule-making with regard to the Indian power sector in the third chapter. By analysing the development of rule-making in the Indian electricity sector since 1993, the third chapter will operationalize the WB interpretation of rule-making.

In its 1993 policy statement, the WB stated very clearly that it required serious commitment to the creation of a regulatory regime when this requirement was made a condition for borrowing.

A requirement for all power lending will be an explicit country movement toward the establishment of a legal framework and regulatory processes satisfactory to the Bank. To this end, [...] the Bank will require countries to set up transparent regulatory processes that are clearly independent of power suppliers and that avoid government interference in day-to-day power company operations (regardless of whether the company is privately or publicly owned). The regulatory framework should establish a sound basis for open discussion of power sector economic, financial, environmental, and service policies. (World Bank, 1993a, p. 14)

This quote reflects the WB’s determination to set up a transparent and independent regulatory regime in developing and transition economies such as China, Russia and India. This regulatory regime mainly revolves around the enactment of laws to regulate the industry and the establishment of regulatory agencies that operate at arms-length of the government.

It is important that the regulatory agencies that are to be set up, have clearly defined roles and objectives. This is essential for a proper division of responsibilities. Therefore, it is fair to ask what the exact function of a regulator is. As Xu Yi-Chong strikingly states; “Regulators are like referees in a game of sport where rules are clearly written. Referees ensure that the game is played fairly, the rules are followed and those players who have violated rules are penalized. They are not there to set up rules. This is the crucial dividing line between (a) government and ministries and the regulatory agency and (b) the corresponding division between policy issues and regulatory issues” (2004, p. 233). The establishment of regulatory agencies answers the need for a clear division between policy making and policy execution,
between steering and rowing. It is about keeping the government out of day-to-day business in the industry; about the establishment of the regulatory state.

**Economic regulation in an infrastructure industry**

It has become clear that the WB is determined to introduce regulatory reform of the electricity sector in developing and transitional economies, for example through the establishment of regulatory agencies. But, what in fact is regulated? This thesis revolves around the regulation of the electricity industry – a mass-market network industry such as natural gas and railways. Due to the fact that these networks require actual physical infrastructure, they can be termed utilities. Utility regulation in this thesis is interpreted as the regulation of economic issues such as pricing, tariffs, investment/costs of service, and quality (including service standards and service obligations) (Holder & Stern, 1999). Furthermore, the regulatory agencies are responsible for the settling of any disputes that might arise. Economic regulation excludes issues such as social and environmental standards or workplace safety requirements. Government involvement with utility industries pricing and tariff setting can easily be justified. Electricity is “consumed by and necessary to the welfare of all households. Hence, the prices of such commodities are highly political. Cost-based prices for small consumers can represent a substantial proportion of household budgets, especially for low-income households. Price changes for such goods (e.g. the abolition of cross-subsidies) can therefore have a considerable impact on the level and distribution of real incomes. In addition, since these services are critically important intermediate inputs for other sectors of the economy, their service levels and prices are of major importance for industrial costs and international competitiveness. These considerations can give governments a powerful incentive to behave strategically towards private investors in such industries” (Holder & Stern, 1999, p. 35).

**Responsibilities of the regulatory agency**

As stated in the previous section, regulatory agencies are responsible for regulating investment, pricing, technical standards and dispute settling. The functions of the regulatory body are clearly stated by Xu Yi-Chong;

- To aid and advise, in matters concerning generation, transmission, distribution and supply of electricity in the state;
- to regulate the working of licensees and to promote their working in an efficient, economical and equitable manner;
- to issue licenses and determine the conditions to be included in the licences;
- to promote efficiency, economy and safety in the transmission, distribution and use of electricity, including quality, continuity and reliability of service;
- to regulate purchase, distribution, supply and utilization of electricity, the quality of service, and reasonable tariffs;
- to promote competitiveness and progressively involve the participation of the private sector;
- to collect date and forecast on the demand for and use of electricity and to require the licencees to formulate perspective plans and schemes incoordination with other for the promotion of generation, transmission, distribution and supply of electricity. (2004, p. 257)
**Licence-based regime**

In a licence-based regulatory regime such as in India, regulatory agencies issue licences to companies for them to enter different segments of the industry. Since the electricity industry consists of different segments with various degrees of possibilities for competition, this is a politically sensitive responsibility. The regulators have a responsibility to ensure fair competition while they have no say over the investment decisions of the licensed companies. Furthermore, since investors have the full freedom to invest, they are also able to exit the market if they would want this. This can result in a situation where the government is left with the responsibility to fill the gap in electricity supply where the company has retracted.

**Structure of the regulatory agency**

There are various forms of regulatory regimes. According to Holder & Stern, “sometimes, they are independent regulatory agencies, sometimes they are departments within Government Ministries and sometimes they are semi-independent bodies or independent advisory agencies” (1999, p. 33). In its policy paper, the WB prefers the structure of regulatory agencies as they were set up in the United Kingdom or United States. For example, the British Office of Electricity Regulation was established in 1989 as an agency outside the existing government agencies (Yi-Chong, 2004). The British model has often served as an example for WB electricity reform policies.

The practical structure of a regulatory agency such as funding and criteria for selection of the regulators is essential for its autonomous functioning. This requires independent decision-making by the regulators. This in turn demands three factors to be in place. Firstly, the agency needs government-independent funding to enable the agency to operate autonomously. In order for this to happen, the agency should install some form of direct levy. Secondly, clear and transparent procedures for appointing regulators needs to be in place in order to avoid conflict of interest over the regulation that the regulators will impose. Lastly, the regulatory agency should be placed at an arms length of government ministries to safeguard their independency from political pressures and to make a clear division between regulation and policy-making (Yi-Chong, 2004).

The World Bank 1993 policy paper offers similar features for a sound regulatory framework;

- “Transparency and openness;
- Clear articulation of reform objectives, including tariff policies;
- A legal structure that clearly defines the rules and procedures for reducing the level of government involvement and increasing the autonomy and accountability of enterprise directors and managers” (World Bank, 1993a, p. 14).

While the requirements for the establishment of these regulatory agencies are clear, research has shown that many developing economies face a problem in finding qualified people to take place in these agencies and make the regime operational (Stern, 2000).

**Autonomy of the regulatory agency**

It has become clear from the previous section that independence and autonomy are essential qualities for a regulatory agency to be effective in encouraging competition while protecting the public interest.
According to Holder and Stern, “autonomy from political intervention (which will be easier to achieve if there is a clear statement of regulators’ objectives) will help to ensure that regulators are free to carry out their functions in the way they consider best satisfies their stated objectives, and their performance should be judged solely on this position” (1999, p. 43). The World Bank argues that this autonomy will help safeguard transparency, efficiency and economy, thereby strengthening investors’ confidence and attract private capital (World Bank, 1993a).

Nevertheless, this independence does not mean that the regulatory agency should not be accountable to the legal system. In this sense, independence entails that regulators should be able to make decisions that are free from pressure from politicians who are often driven by short-term interests (Yi-Chong, 2004). Xu defines three sets of accountability, being:

- “procedural accountability – procedures must be fair and transparent;
- substantive accountability – regulatory decisions must be accountable to the relevant laws and statutes; and
- financial accountability – regulatory decisions must be based on proper economic calculation” (2004, p. 239 – 240).

2.7 - Conclusion
This chapter has offered the theoretical basis upon which the following chapters will build in order to assess the development and effectiveness of rule-making with regard to the Indian electricity sector from 1993 onwards. The first section pointed out that the electricity sector is an interesting case in assessing the development of an emergent regulatory state due to the twofold nature of electricity, being both a common and a competitive good. Furthermore, the direct impact of electricity on consumers and industry makes electricity a priority subject for governments in which the regulatory state principles could be manifested. The chapter continued by elaborating on the origins and development of the regulatory state concept, stating that regulatory state theory revolves around a redefinition of the role of the state. Whereas in the past the state would be concerned with the direct provision of services, regulatory state theory entails that this responsibility has shifted towards designing the rules of the game rather than playing the game – steering versus rowing. Due to the fact that much of the regulatory state theory is based upon the development and experience of Western states, the chapter continued to make some considerations regarding the special circumstances in which regulatory states of the South or Late Developing Countries have emerged. In this perspective, the external pressure from international financial institutions is particularly worth mentioning.

The chapter continued to elaborate on Levi-Faur’s interpretation of the regulatory state and the operationalization of this approach; taking rule-making as the main principle of an emergent regulatory state. Rule-monitoring and enforcement can be considered elements of regulatory effectiveness. Measuring the transparency, accountability and participation of rule-making and the regulatory process will account for the operationalization of rule-monitoring and enforcement. Furthermore, the last section discussed implications of the 1993 World Bank policy statement and the essential characteristics of a regulatory regime. Upon this theoretical basis, the following chapter will assess the development of regulatory reform in the Indian electricity sector.
3. Regulatory development

This chapter analyses to what extent the regulatory state characteristic of rule-making can be traced in the development of the electricity sector of India as a result of the 1993 World Bank energy policy statement. The enactment of laws and establishment of regulatory agencies are two essential elements to this statement. When the World Bank (WB) revised their policy in 1993, was the current situation of India’s electricity sector their vision for the future? What regulation has been imposed and at what level(s)?

In my opinion, examining the regulatory development of the electricity industry in India can be done in two ways. One can look at the plain development and implementation of laws and regulatory agencies and conclude whether India fulfilled the WB requirements and thereby changed its industry. Nevertheless, this does not paint the whole picture. It is essential to know to what extent this enactment of laws and establishment of regulatory agencies has actually been effective. This requires a deeper investigation into the regulatory progress that has been made. Chapter 3 and 4 revolve around telling both stories and painting the whole picture. The ‘thin narrative’ in chapter 3 examines how rule-making has developed through the enactment of laws and the establishment of regulatory agencies and the ‘thick narrative’ in chapter 4 investigates to what extent these laws and agencies have actually been effective in improving the industry and living up to the requirements of the WB.

This chapter will elaborate on the ‘thin narrative’. Firstly, this chapter will discuss the history of electricity regulation in India in order to place the developments in a historical perspective. This section is in addition to the history of the entire industry as discussed in chapter 1. It will then continue to elaborate on the regulatory developments since 1993. Whereas this chapter is mainly a sequence of the regulatory developments, the following chapter will then continue with a critical evaluation; has the World Bank policy statement been effective in improving the regulatory framework of India’s electricity industry, benefiting generation, transmission and distribution? This chapter revolves around the historical process of this reform in India; what has been initiated and what form of regulation it has taken. It will answer the following question;

How has rule-making developed in India’s electricity sector after the 1993 World Bank energy policy statement?

In order to answer this question, this chapter will describe the development of regulation in the industry from 1993 onwards, applying the WB definition of regulation. According to the 1993 WB policy statement, regulation is “the supervision and control of the economic activities of private and arms-length public enterprises by government in the interest of economic efficiency, fairness, health, and safety. Regulation may be imposed simply by enacting laws and leaving their supervision to the normal processes of the law, by setting up special regulatory agencies, or by encouraging self-regulation by recognizing, and in some cases delegating powers to voluntary bodies” (World Bank, 1993a, p. 9). This definition will be applied as the standards by which the extent of rule-making is applied in the Indian electricity sector. This chapter will now turn to a historic account of the regulatory developments within the Indian electricity industry which laid the fundamentals upon which the 1993 World Bank policy statement was built.
3.1 - Rule-making: a history

Before turning to a discussion of the development of rule-making in the past two decades, this section gives an overview of the history of regulation before the 1993 World Bank policy statement. Current developments in the industry should be seen in a historical perspective. This section aims to offer an overview of the regulatory history of the industry and is thereby complementary to the general history of the industry, described in Chapter 1.

<table>
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<tr>
<th>1910</th>
<th>Indian Electricity Act (IE-1910)</th>
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<td>India’s regulatory history is based on legislation from its colonial position within the British Crown. The IE-1910 introduced a licensing system in order to create cohesion in the then highly competitive, yet fragmented electricity supply industry (Coopers &amp; Lybrand, 1993). The IE-1910 furthermore set up procedures to regulate the licensees. The IE-1910 was amended in 1926. This amendment revolved round electricity transmission and distribution within state boundaries (Coopers &amp; Lybrand, 1993).</td>
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<th>1948</th>
<th>Electricity (Supply) Act (ESA-1948)</th>
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<td>The ESA-1948 increased state involvement in the industry by reserving generation and distribution segment almost exclusively to the state sector through establishing the State Electricity Boards. It thereby limited provisions stated in the IE-1910 which had introduced the licensing system for both private as well as public actors (Dubash &amp; Rajan, 2001). In 1948, the share of private company supply was over four-fifths of the total generation capacity. After independence from the British Crown, the electricity industry was reconstructed, aimed at coordinated development by the state. State Electricity Boards (SEB) were established which were state-owned, vertically integrated structures. All generation, transmission and distribution facilities were brought under state purview.</td>
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As stated in the first chapter, the establishment of the SEBs in 1948 had a political load to them. They symbolised more than just state-level, publicly owned entities. Rather, “SEBs were crafted in the crucible of post independence India and strongly shaped by the idea that electricity was a tangible and realisable benefit that the state could demonstrate to its citizens as a gain from achieving independence” (Dubash, 2006, p. 451). |

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<th>1956</th>
<th>Industrial Policy Resolution</th>
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<td>The Industrial Policy Resolution earmarked the electricity industry as an economically strategic sector for national development. Together with the ESA-1948, this resolution introduced public sector dominance through nationalisation and licensing. The mandate of SEBs was widened, encompassing almost the entire segment of generation and distribution.</td>
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The movement towards the market-oriented approach of India’s ‘electricity restructuring’ was not a standalone phenomenon in the 1990s. Globally, countries reshaped their electricity industries in the 1980s and early 1990s. The successful restructuring of the electricity industry of the United Kingdom (UK) in 1983 towards a more competitive market structure led the way for many other countries and served as inspiration for the 1993 WB reform model (Dubash & Rajan, 2001). Whereas before, the electricity was regarded as a natural monopoly and left isolated from serious privatisation initiatives, this perspective changed in the early 1990s. In this period, Chile and Argentina underwent a relatively similar transformation to the UK with promising results within 2 – 3 years after implementation (Dubash & Rajan, 2001). The main regulatory lesson drawn from these restructured countries was that the dual role of the government as an owner and an operator of the utilities should be avoided. This principle, among others, proved the basis for the World Bank 1993 policy statement. The reform process in the UK served as its main guideline.

### 3.2 - 1993 onwards: State Reform Acts
After the WB presented its policy statement in 1993 and declared that it would no longer support states that did not make a substantial effort to restructure their industry, the organization started gathering political support among Indian states for this approach. This support was deemed essential because the “new state level restructuring approach to the power sector in India was not home grown” (Dubash & Rajan, 2001, p. 3376). Therefore, the Bank organised roundtables with government officials from Indian states to assess the condition of their electricity industry and create support and understanding for this new approach. Five states eventually requested the Bank’s assistance in restructuring their industry.

Within the federal state system of India, the state of Orissa was the first one to initiate these industry reforms with the assistance of WB experts. In addition to already realized project loans, the Bank managed to retrieve bilateral funding from primarily the Overseas Development Agency of the UK who

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<th>1976</th>
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<td>In 1976, the state took on even more active involvement in the electricity sector by establishing large scale-power generation companies by central and state governments. This was done in order to overcome the increasing gap between supply and demand.</td>
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<th>1991</th>
<th>Electricity Laws Amendment Act</th>
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<td>Whereas in 1947 nearly 80% of all electricity was supplied by private operators, the SEBs controlled over 70% of generation and nearly all distribution facilities by 1991 (Dubash &amp; Rajan, 2001). As the situation of the industry was worsening over time, India made a turn towards a market-oriented approach. The 1991 Electricity Laws Amendment Act allowed private participation in the generation segment for Independent Power Producers (IPPs).</td>
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was supportive of the regulatory change. The state reform act *Electricity Reform Act 1995* established the first Electricity Regulatory Commission – the Orissa Electricity Regulatory Commission (OERC) on April 1, 1996. The OERC was the first independent electricity regulatory agency in the history of India and was widely hailed by the WB and other International Financial Institutions. It was believed that the independence and autonomy of the ERCs would bring about investor’s confidence in tentative subjects such as tariff setting. Furthermore, the Orissa reform package consisted of the unbundling of the generation, transmission and distribution segments of the industry and privatising of a selection of these components.

The WB policy assumption was that with the establishment of the ERCs, the government could withdraw from utility operation and make way for privatized entities in a competitive and well-arranged electricity market. The ERCs would be responsible for regulating and monitoring the implementation of policies that were devised by the government.

Orissa was regarded a ‘model’ reform state due to little government intervention and low interest-group pressure. Furthermore, scholars have indicated that a strong support from the state chief minister Biju Patnaik for reforms according to the WB model proved to be crucial in the restructuring initiative. Notwithstanding these politically favourable conditions, the WB remained the most important catalyst for change. At that time, many government officials and NGOs very much appreciated the proactive role of the Bank. The electricity industry of many states was at the verge of bankruptcy and saw the Bank’s reform package as the only way out.

The OERC took over tariff setting from the Orissa State Electricity Board (OSEB). Nevertheless, neither the favourable conditions nor the transfer of authority from the OSEB to the OERC made tariff setting any less of a difficult task. The WB and foreign utilities alike still considered the tariffs to be too low to cover the costs, nor stimulating for further investment (Yi-Chong, 2004). The reform model was based on a single-buyer-single-seller model which should attract independent investment. However, Orissa had a very poor electricity infrastructure, which caused large (financial) issues with attracted private investors.

**3.3 - 1998: Electricity Regulatory Commissions Act**

From 1993 onwards, several states imposed reforms as laid out by the WB. These so-called *State Reform Acts* restructured the vertically integrated industry by unbundling and privatizing SEBs into generation, transmission and distribution companies. The reason for these initiatives were twofold. Firstly, the ‘Orissa model’ was increasingly accepted at the central government. The model had a ‘demonstration effect’ for other states of its political feasibility. Secondly, the poor situation of the sector in many other states did show any signs of improvement (Dubash & Rajan, 2001). The states of Andhra Pradesh, Uttar Pradesh, Harayana and Rajasthan signed loan agreements with the WB.

The WB eventually suspended the support for Haryana because the state government proved unable to fulfil its obligations. Nevertheless, other donor agencies are still actively supporting Haryana. The other states followed similar reform packages as Orissa, with key adjustments due to lessons learnt from the
Orissa model. Specifically, the target of reform efforts was shifted from the central government level to the state level.

As stated in the first chapter, the policy of attracting Independent Power Producers proved not to be the profitable solution to the problems the electricity sector was facing. The SEBs were continuously financially strangled while there was no significant improvement in the situation of the sector. Furthermore, the IPP experience demonstrated the risks that these developments posed if there was no strong and reliable institutional structure; large-scale corruption, favouritism and dysfunctional markets. Therefore, the bad experience with IPPs in the early 1990s led to a growing support for a stronger regulatory framework. Meanwhile, the WB slowly but steadily laid out the framework for large-scale SEB reforms behind the scenes. With Orissa as a politically insignificant ‘guinea pig’, the WB gradually convinced bureaucrats and consultants that the WB’s model was the right way forward. Furthermore, the Orissa reforms served to cause a demonstration effect towards other states. Nevertheless, it did not live up to those expectations as such. “In this context, it was more of a sense that there were no alternatives, rather than a deep belief in the Orissa model, that has led to its acceptance by power sector bureaucrats and others towards the end of the 1990s” (Dubash & Rajan, 2001, p. 3382).

The reform acts considered generation as potentially competitive and lifted licensing off generation. Segments of transmission and distribution were considered natural monopolies and remained regulated with a license requirement. Licensing became one of the first forms of regulatory control. Several state reform acts introduced the Single Buyer Model where the transmission and bulk supply company that holds the license buys all electricity produced by the generators. As a result, the licensee acts as bulk supplier to the retail distribution companies who hold monopoly supply rights in a geographically bound area.

By the late 1990s, several states had initiated the reform process, similar to the Orissa package. Regulatory commissions were set up in reforming states to oversee and regulate the supply industry. SEBs were structurally reformed, privatized if possible or re-regulated if unavoidable. This development took off relatively slow after the 1993 policy statement and the Orissa reforms. Scholars have pointed out that a change in mind-set was necessary in the early 1990s before reforms could be actively undertaken. This was because of a lack of confidence among the central and state governments towards real and radical privatization. After a long period of strict state control over several segments of the economy, government officials and the population in general were barely getting used to liberalisation (Dubash & Rajan, 2001). “Privatisation, in the sense of removing government ownership and control, was only just being contemplated and even then, not for ‘core sectors’ of the economy such as electricity” (Dubash & Rajan, 2001, p. 3381). The political and institutional circumstances of the early 1990s had to be prepared for the sale of public sector entities.

**ERC-1998: regulatory implications**

As stated in the previous section, several states embarked on the reform process with donor support after Orissa’s example. The regulatory component of these reforms is the establishment of an independent regulatory agency. The Electricity Regulatory Commissions Act (ERC-1998) provided legal grounds for establishing Electricity Regulatory Commissions at central and state level in order to achieve
competition and efficiency in the industry (Deshmukh, 2005). The essential idea behind the ERC-1998 was to establish those agencies that were separated from politically elected governments in order to relieve the difficulty of tariff setting (Yi-Chong, 2004). The establishment of ERCs would also relieve the burden of the tormented State Electricity Boards, who could then solely focus on practical matters. Additionally, ERCs were given an advisory role towards the government in formulating tariff policy and similar affairs.

Central Act ERC-1998 was imposed to force states that were reluctant to reform to follow suit of the reforming states. ERC-1998 was largely pushed by WB policy to prepare states for the privatisation of distribution. Measures from the ERC-1998 were reconfirmed and broadened in 2001. From then on, ERCs were authorized to set electricity tariffs.

**Developments towards Electricity Act 2003**

At the beginning of the new century, further steps had to be taken in order to revamp and restructure the industry further. WB reforms slowly but steadily were also absorbed and implemented at a central level. By the end of the 1990s, the central government embarked on the reform process through chief state minister meetings and legislative action, which will be further described in the next chapter. The passing of the ERC-1998 has been a decisive step in this direction.

In 2000, the Ministry of Power felt that the time had come to collect and consolidate all previous legislation in the electricity industry. In hindsight, this initiative is regarded quite radical – it indicates the severe institutional developments in the industry. Even more remarkable is the fact that this was a national initiative, which indicates the central government’s commitment to the reform process. The National Council of Applied Economic Research drafted the initial Electricity 2000 Bill, after which the Ministry had full control over the final content. The WB’s role in this drafting process is quite remarkable: the institution chose a rather hands-off approach. It limited its task to commenting on drafts. In fact, the Bank was slightly hesitant towards national legislation (Dubash & Rajan, 2001). Nevertheless, the Bank increasingly became more positive about the initiative as first drafts supported WB’s ideas to compose a stable regulatory framework.

The introduction of the Electricity 2000 Bill to parliament however, was hampered due to two developments. Firstly, the widely heralded Power Minister Rangarajan Kumaramangalam passed away in August 2000 before he could successfully pass the Bill through parliament. The proposal lost attention and the rule-making process was impaired. Furthermore, global tumult around electricity restructuring after large-scale problems with the electricity sector in California temporarily brought the furious determination to reform to a halt. In 2000 and 2001, California suffered widespread blackouts, price hikes and soaring utility debts due to privatization and restructuring of its electricity industry. The California experience made experts and consumers alike reconsider the requirements for and benefits of privatization. Thus, these two developments have made policymakers and the WB reconsider the Bill and its implications. The severe focus on privatization above anything lost ground. Even more, government and the WB seemed to agree that institutional capacitybuilding was the way towards a better electricity industry. The Bill was reconsidered and restructured. The content of the Bill is widely recognized within the following Electricity Act, which was passed in June 2003. The Electricity Act 2003 is
a consolidation and augmentation of the 1910 Indian Electricity Act, the 1948 Electricity Supply Act and the 1998 Electricity Regulatory Commissions Act and thereby fulfils the intentions of the Electricity 2000 Bill.

3.4 - 2003: Electricity Act

The 2003 Electricity Act has high expectations to meet. It would bring about revolutionary changes in the electricity sector of India. Its reform measures could serve as an example policy framework for other developing countries. Measures in the 2003 Electricity Act mainly revolve around the creation of a market-based regime supporting generation, transmission, distribution, trade and consumer protection. Furthermore, it should be promoting competition and increase transparency in tariff setting and subsidies. Lastly, it establishes a Central Electricity Regulatory Commission and an Appellate Tribunal. Additionally, it makes the establishment of State Electricity Regulatory Commissions mandatory. This will bring about significant changes in the current structure of the electricity industry on all segments; generation, transmission and distribution.

Box 2: EA-2003 – practical implications

The main practical objective of the 2003 Electricity Act is the creation of a multi-buyer model in which several players operate at the different stages of the power industry. Open access will create opportunities for investment, which would ultimately result in improved infrastructure. Competition will, on the long run, lead to increased efficiency and reliable supply at competitive prices. The final objective of this multi-buyer model in all segments is the elimination of the monopoly position of the highly indebted and inefficient SEBs, leading to a tariff structure determined by the market.

Privatization

Whereas privatization appeared to have lost ground in terms of importance within the reform process, the EA-2003 has made some significant provisions in order to spur privatization and accordingly increase competition. In the segment of generation, the licensing requirement has been lifted, with the exception of hydro-energy. Furthermore, the EA-2003 introduced more players into the transmission and distribution segment by introducing multiple licensing at these levels. Most importantly, the ‘open-access clause’ allows open access on transmission lines that are state-owned. Thereby, it offers the opportunity to distribute surplus captive power by private actors. Nevertheless, there have been signs of regulatory hindrance within this operations (Bhattacharyya 2008, p. 205).

Electricity Regulatory Commissions

With the enactment of the 2003 Electricity Act, a Central Electricity Regulatory Commission (CERC) and State Electricity Regulatory Commissions (SERCs) are installed through sections 76 to 109 (EA-2003 section 76 – 109). The role of these regulators is crucial for the goals of competition, reasonable charging for transmission, tariff-setting, correcting cross-subsidizing and consumer protection. In these regulated markets where competition is promoted, the role of the regulator shifts. It is a shift from setting prices to cautiously monitor the degree of competition and development of the market. The following table illustrates the new role of the regulatory commissions within the 2003 Electricity Act.
In general, the CERC will become responsible for regulating tariff or generation stations that are owned by the Indian government. Additionally, the CERC regulates those who supply or generate in more than one state – inter-state transmission. The SERCs are responsible for intra-state transmission and supply. While there is no hierarchy between the CERC and the SERCs, the EA-2003 requires the state commissions to follow some guidelines set by the CERC. On the one hand, this creates some uniformity; on the other hand, it could limit the autonomy of the SERCs.

The Regulatory Commissions have been granted a broader authority and increased methods of enforcement, for example the determination of charges in case of disagreement (transmission tariffs). Furthermore, the Regulatory Commissions received dispute resolution powers.

**National Electricity Policy**

The EA-2003 ordered the Central Government to formulate a National Electricity Policy (NEP) in consultation with the Central Electricity Authority, the Central Electricity Regulatory Committee, state governments and other stakeholders. This policy has a broader focus than the electricity sector alone. As
stated in the NEP introduction, "The Central Government shall, from time to time, prepare the National Electricity Policy and tariff policy, in consultation with the State Governments and the Authority for development of the power system based on optimal utilization of resources such as coal, natural gas, nuclear substances or materials, hydro and renewable sources of energy". The fact that this NEP is ordered indicates the long-term commitment of the central government to ‘lead the way’ for the industry rather than to be physically involved itself.

With regard to electricity, the NEP focuses on encouraging development of the electricity industry by fostering competition through regulation. Increased competition would lead to efficiency gains and improved quality of supply. Furthermore, the NEP aims to provide electricity to all households by 2015. This would entail bringing electricity to 44% of all households in 10 years (NEP, 2005). Due to the fact that this policy encompasses much more than the electricity industry itself, it will not be elaborated on in this section. Interesting to note, however, is the fact that rule-making in the electricity will also spur developments in other (related) sectors. The drafting process of the NEP will be examined in chapter 4 in order to give more insight into the transparency process of rule-making.

Elements of the regulatory framework
In terms of the changing role of the regulator, the 2003 Electricity Act attempts to deal with the main flaw of the previous regulatory frameworks. It has repeatedly been stated that the separation between the regulatory functions and the utility function was not executed properly, leading to poor performance and government interference in day-to-day practise. Since this separation is exactly what the regulatory state is about – the ‘steering’ versus ‘rowing’ – it was this issue that the EA-2003 aimed to relieve. While the state reform acts and the ERC-1998 have tried to solve this issue, the EA-2003 is a more encompassing act to ensure proper functioning of the regulatory system. It pays specific attention to the requirements of autonomy, accountability and clear role definitions, which will be elaborated on below.

Role definitions/Policy directions
Whereas in the past it has been unclear what agency held the role of rule-making within the Indian regulatory framework, the EA-2003 assigns policy making to the central government. This government is aided and advised in this role by the Electricity Regulatory Commissions and the Central Electricity Authority. “The act specifically requires the central government to formulate policies for optimal utilisation of resources, tariff policy, rural electrification policy, and off-grid supply policy” (Bhattacharyya, 2005, p. 286). The policies that the government prescribes are particularly meant to steer the reform process. The state acts will apply these directions in their state-specific circumstances. The EA-2003 is new in the sense that it allows for states to take measures that are inconsistent with the objectives and purposes of the electricity reform policy if this serves the regional situation. This provision safeguards regulatory independence of the state regulatory commissions to a certain degree.

Autonomy
Autonomy and independence of the regulatory bodies are important features of a regulatory framework. In the EA-2003, they are provided through the following measures.
- As in the ERC-1998, the regulatory agencies enjoy a quasi-judiciary status with their own dispute resolution powers. Therefore, they are not accountable to the legislature as such and thereby enjoy a certain degree of autonomy.
- The selection criteria and procedure for the regulators on the commissions is well-defined, following examples of the state regulatory acts and the ERC-1998.
- Additionally, the EA-2003 provides for sufficient powers to execute their function, including a clear funding arrangement for the functions of the commissions.

**Accountability & Transparency**

In order to ensure accountability of the regulatory framework, the EA-2003 entails the following provisions. Similar measures existed in the state reform acts and the ERC-1998.

- Every Electricity Regulatory Commission is required to develop regulations regarding how the operations of the commission are being controlled. Over the years, a transparent consultation process for conducting the business of the commissions has been established.
- The regulatory commissions are required to offer clear orders reasoned on existing laws and practices.
- The decisions of regulatory commissions can be reviewed. Either the commission scrutinizes its own regulations or the decision can be brought up for an Appellate Tribunal. Legal grounds for the establishment of this Appellate Tribunal are provided for in EA-2003. This Appellate Tribunal will hear appeals against orders by the Regulatory Commissions. The Chairperson of this Appellate Tribunal thereby exercises independent supervision over the Regulatory Commissions. In order to be effective, this Appellate Tribunal has powers equal to a civil court, whereby its orders hold the same decree as the orders of a civil court.
- Not only the commissions are open for scrutiny, inquiries into misconduct by members can also prevail under the EA-2003, which holds legal provisions for this procedure.

**Concluding remarks**

Concluding, the EA-2003 is a valuable step forward from it predecessors. It provides for essential elements that are required for the establishment of an independent, expert regulatory body that, with few exceptions, is separated from government interference at crucial points. This would lead to a better performance of the regulatory agencies, leading the way for a properly functioning regulatory state. Furthermore, this would exude confidence towards business, attracting investment and thereby improved infrastructure and performance of the Indian electricity sector. The EA-2003 has been slightly adapted in 2007, when cross-subsidy elimination was lifted as a hard requirement. Additionally, the licensing requirement for sale of captive electricity has been removed.

**3.5 - Conclusion**

This chapter aimed to answer in what direction rule-making has developed in India’s electricity industry. Objectively spoken, there has been progress in the development of laws, from state-level reform to the 2003 Electricity Act. These laws have also provided for the establishment of the sought regulatory agencies. The EA-2003 particularly aims to overcome the flaws that have hindered actual progress and structural institutional change through provisions for accountability, transparency and autonomy. Most
reforms have been aimed at or created in cooperation with the state level. Over the course of years, the central government has realized the benefits and unavoidability of these reforms and decided to be entirely on board and dedicated to the reform process as set out by the WB.

With regard to the focal point in rule-making, there has been a shift in perspective that it is institutional strength rather than pure privatization which should be the main focus of the reform policies. Therefore, the focus has shifted from hard economic requirements to more institutional capacity building. India’s electricity industry has not stood still. Yet, how effective has this regulation been? Has it led to the desired regulatory regime the WB was aiming for? The effectiveness of these acts and regulatory agencies will be assessed in the following chapter.

This chapter has examined the extent of rule-making; whether there were laws enacted and regulatory agencies established – as required by the WB in the 1993 policy statement. The story could end here, by concluding that regulation has been imposed and that ERCs have been established and that regulatory reform therefore has been successful. Nevertheless, this would not be the full picture, since it says nothing about the effectiveness of these laws or the functioning of the regulatory agency. This chapter has told the ‘thin narrative’ of rule-making. According to Levi-Faur, rule-enforcement and rule-monitoring are the natural consequences of rule-making and therefore the two remaining characteristics of the regulatory state. Summarizing these two characteristics, leads to an indication of regulatory effectiveness; have the laws and regulatory agencies been successful in bringing about structural reforms and bringing India one step closer to the regulatory state? The fourth chapter aims to give insight into this regulatory effectiveness by telling the ‘thick narrative’.
4. Regulatory effectiveness

4.1 - Introduction

The previous chapter has offered a chronologic overview of the regulatory developments after the 1993 World Bank (WB) policy statement. As stated before, this can be regarded the ‘thin narrative’; a first impression of initiatives rather than a thorough assessment of what these reforms did or did not achieve. This chapter aims to tell the story behind the scenes. How strong is the foundation underneath the regulation that has been set up? A person could make a comparison with actual electricity lines. Consider the electricity line to be the policy, aimed to serve consumers and industry; and the high voltage pylons the principles of good governance that connect these lines and bring the end-result to their customers. Without a solid construction to uphold the lines, a policy would not ‘come off the ground’, nor lead anywhere. This chapter assesses the degree of structural change and effectiveness that the reforms aimed to achieve by answering the following question;

To what extent has rule-making been effective in India’s electricity sector after the 1993 World Bank energy policy statement?

This question will be answered by assessing the developments in transparency, accountability and participation on both state and central level. Since Orissa was the first state to implement the WB prescriptions, the first section of this chapter will analyse this case. Secondly, the chapter will discuss a selection of developments that occurred due to or despite the regulatory reforms. The chapter will then continue to make an assessment of the developments of transparency, accountability, participation and autonomy for the entire country at both state and central level.

The WB has been a major actor in the entire reform process. It was the WB who created the policy paper and thereby bound developing states to a reform process in order to still qualify for funding. The Bank guided the way towards liberalization and regulation. Yet, can success or failure of the development and effectiveness be traced back to the WB prescriptions? Were WB instructions followed up strictly and are they still applied? Or are there other forces that made the industry develop the way it did? It has been 20 years since the reforms were initiated and reform measures might have been reconsidered in the meantime. In order to completely answer the main question of this thesis, it is essential to assess to what extent the WB reforms have actually been successful. Therefore, the role of the WB will be extensively discussed throughout this chapter in order to make a deliberation of the WB’s reform policy success and its influence over the past 20 years.

These three elements – Orissa, national level & WB role – will account for a structural analysis of the effectiveness of rule-making in India; the ‘thick’ narrative. This chapter will lead to a conclusion in which I will deliberate to what extent the regulatory state ideal has been reached.
Box 3: Physical development of India’s electricity infrastructure

While this chapter will discuss the regulatory effectiveness of the reforms, it is interesting to paint a picture of the development of the physical infrastructure of the industry since the 1993 reforms. The following section offers a short overview of the most important developments in the past two decades. This chapter will then continue to assess the developments in regulatory effectiveness of these two decades.

Since independence from the British Crown in 1947, India’s electric power installed capacity has grown significantly. It now ranks fifth behind the United States, China, Japan and Russia. Due to a shifted focus from generation capacity to transmission and distribution improvement, the growth rate since the 1993 World Bank policy statement has been around 4.4 per cent, while it noted 8 per cent during the period 1969 – 1990 (Bhattacharyya 2008, p. 203). Another significant trend occurring in the 1990s is the increased share of captive power – the capacity installed by industrial or residential consumers for own use. This is often a sign of the inability of the regular facilitator to provide for a reliable energy source. In the case of India, it furthermore has to do with high tariffs for industrial demand. Indian industrial consumers pay about 100 per cent more for their electricity than US industrial consumers (Bhattacharyya 2008, p. 204). It is therefore not surprising that the share of industry in electricity demand has fallen from 42 per cent in 1991 to 37 per cent in 2007 (Bhattacharyya 2008, p. 204).

Despite a strong desire for privatization and restructuring of the generation segment, still around 88 per cent of the non-captive generating capacity is owned by the state in 2008 (Bhattacharyya 2008, p. 203). Due to the fact that GDP elasticity of electricity demand in India is around 1, demand is likely to grow equal to GDP unless policy measures will influence this demand (Bhattacharyya 2008, p. 201).

In 2005, the average electricity consumption per capita was around 480 kW h – compared to a world average of 2700 kW h. Nevertheless, there is a wide deviation ranking between 50 kW h to 1700 kW h per capita (Bhattacharyya 2008, p. 204). With 400 million inhabitants without access to electricity, India globally holds the dubious reputation of highest concentration of inhabitants without access to an electricity network. Further justification for structural change is redundant.

Ownership

Despite the strong intention to alter the ownership model through private entry into the generation segment, the single buyer model or vertically integrated operation still remains the prevailing tendency in market organization. Foreign investors in the industry are very rare. Nevertheless, a few domestic private investors are actively expanding in the entire chain of supply business. The largest players are Tata Power, Calcutta Electric Supply Corporation and Reliance Energy (Bhattacharyya 2008, p. 205).
4.2 - The Orissa story

This section will discuss the regulatory effectiveness of the reforms in Orissa. Since this was the first state to implement the WB recommendations, it carries a heavy relevance and precedent for other states and the central level to follow. The first section will describe the development and content of regulatory reform in Orissa, paying specific attention to the degree of transparency, accountability, participation and autonomy. It will then continue with an examination of the role and position taken by the central government and the WB.

Regulatory reform

The regulatory reform process in Orissa consisted of training and assistance in initiating and sustaining institutional development. The WB assisted in educating the officials for the newly formed Orissa Electricity Regulatory Commission (OERC). In order to design and implement state-specific reforms, working committees were established. These working committees consisted of government officials, power sector officials and donor agencies. One flaw that could be noted was that employees and consumers were not actively represented in the committee. The committee was guided by a steering committee that fell under auspices of the Orissa secretary of power. WB consultants composed reports to be discussed at these working committees. For these reports, a council consulted the state government, the Orissa State Electricity Board (OSEB) and consumer groups. In this sense, there was some degree of consumer participation. Furthermore, consumers and employees were regularly informed through meetings with public officials and through media channels such as newspapers and radio.

Participation

Scholars and government officials alike reflected on this process stating that “the efforts to reach out to broader constituencies were, by and large, ex post attempts to explain forthcoming changes rather than seek input into design of those changes” (Dubash & Rajan, 2001, p. 3377). The participation element to the reform process was more about achieving public understanding for the proposed model rather than forming a model through public input. The risk in this approach is that local knowledge remains underutilized. On the other hand, national government officials acknowledged the WB’s fear that a long and tentative reform process would “allow vested interests in the sector to politically mobilise and oppose reform. [...] The Orissa case thus raises a possible trade-off between political expediency and democratic process” (Dubash & Rajan, 2001, p. 3377).

The establishment of an electricity regulatory commission is a cornerstone of the WB reform package. As Dubash & Rajan state, “since past problems in the power sector are directly associated to the effective capture of power sector institutions by vested interests, the regulatory commission is a lynchpin in a new model aimed at independent operation” (Dubash & Rajan, 2001, p. 3379). The establishment of the OERC proved to be a golden handle.

Transparency

The OERC has safeguarded transparency through open access to information by means of a complete and extensive website. The website disseminates past and present legislation, tariff orders, tenders, annual reports and newsletters (e.g. http://www.orierc.org/).
Accountability
The OERC has held several open hearings where labor and consumer interest groups were able to express their concerns and interests. Furthermore, the OERC has ordered/heard cases against electricity operators and providers in case of malfunctioning or non-implementation of OERC directives (OERC, 2005).

Autonomy
The OERC has also manifested a degree of autonomy from influences for tariff setting. Chapter 4 noted that Orissa was the first state to establish a regulatory commission that would independently decide about tariffs and other technical subjects. Nevertheless, soon after the establishment of the OERC, the double-edged nature of this responsibility became visible. As stated before, the implementation of regulatory commissions would foster investor's confidence and thereby spur electricity privatization. Therefore, the WB assumed that the OERC would start by significantly raising tariffs in order to make up for cost recovery, which would attract private investment. However, the OERC only imposed only a modest rise in tariffs, arguing that consumers were not responsible for excessive system inefficiencies, T & D losses, and theft, which was in fact not their fault. The OERC argued that the utility should bear these costs, which would serve as a stimulus to reduce these losses. In this sense, the OERC also takes up a certain degree of consumer protection. Nevertheless, this is regarded a mere side effect. In fact, the ERCs aim to operate as a-political as possible, limiting its role to sole tariff-setting and technical issues.

This tariff-setting issue proved a rude awakening for the WB. While they had strongly claimed for this independent agency, it would – independently – choose a different direction, thereby endangering the efforts made towards privatization. As Navroz K. Dubash strikingly states, “even as the government lost control over use of tariff setting for populist and other political purposes, so too did reformers lose control over tariffs as a device to attract investors” (Dubash, 2006, p. 453).

National response
At the national level, the Orissa reform process was viewed with suspicion. The Orissa reform process and corresponding Orissa Electricity Reform Act was a watershed for electricity legislation. Responsibility for the industry shifted from a national to a state framework and towards independent regulation through the Orissa ERC. At the central level, the Indian government was not at all pleased with the process that is in fact the core to the regulatory state; the transformation of responsibilities from the state to independent, technocratic agencies. Particularly the Central Electricity Agency was hostile towards the development, fearing an erosion of their responsibilities resulting from the laws at state level. Together with the WB, the Orissa government carried the heavy and complex task of mobilizing political support in New Delhi. This approach indicates that the regulatory state transformation was a process imposed from the outside; the WB introduces a model for reform, consults and binds a state to this model and then convinces the national government to support this reform. Therefore, the WB seems to have played a crucial role in the development of a regulatory state in India with regard to its electricity sector.
Orissa: World Bank role
The WB consultants played a crucial role in the reform process in Orissa. They combined technical knowledge with state-specific assessments of the social and political context in which the reforms would take place. Nevertheless, “national consultants and Orissa power officials questioned the international consultants understanding of both the domestic social and political constraints to reform, and the social objectives of reform. [...] Moreover, expatriates alienated power professionals in the state by treating them as ‘scoundrels’, thereby losing the opportunity to learn about local conditions. International consultants, they concluded, lacked ‘national feeling’ (Dubash & Rajan, 2001, p. 3378). For their article, Power Politics: process of power sector reform in India, Navroz K. Dubash and Sudhir C. Rajan interviewed many national and state government officials, NGOs, WB officials and consumer groups. Dubash & Rajan state that while there was a core of truth to this statement, it should not simply be taken as the whole truth since national consultants and government officials feared to become redundant as international consultants to a certain degree ‘took over’. Nevertheless, it is a clear indication that there was a sentiment of negativity among those who were to execute the WB policy in the end.

By the late 1990s, other states followed with the establishment of ERCs as independent, technocratic agencies, overseeing and regulating the industry. Next to this regulatory aspect, they have also followed suit on fronts such as State Electricity Board (SEB) unbundling and privatization. However, “stung by this experience, pro-privatization advocates have been far more cautious in their advocacy of regulatory independence in other states” (Dubash, 2006, p. 453). Examples from proceedings in other states seem to indicate that the WB after all wanted a larger say in these regulatory decisions. For example, consultants funded by the WB advised the state of Karnataka that the regulatory commission should only hold office with the approval of the Governor of State. Furthermore, these advocates recommended to remove a provision in the law that separated regulatory functioning from policies (Prayas, 2003, p. 36). This would effectively mean that the regulatory agency would be placed under closer scrutiny from the government, an implication that would undermine the entire initial idea behind the regulatory reforms. The government however, chose to ignore the advise from the WB consultants. Nevertheless, these incidents in the early years of regulatory ‘independence’ undermined the credibility for the regulatory reform process and the neutrality of the WB.

The Orissa experience and following experiences in other states give a rather bitter taste to the WB’s intentions. While on the one hand advocating the independency of the ERCs, the WB would try to intervene if this agency with its desired independence would actually make an independent decision that did not fit the WB plan.

4.3 – National level
Introduction
Despite possible friction among the national government or WB’s over-determination to let its policy prevail, the Orissa story meant the way forward. Following the example of Orissa, other states have established ERCs through the Electricity Regulatory Commissions Act 1998 (ERC-1998) or state-level legislation. Their performance in the late 1990s, early 2000s has been assessed by Madhav Godbole in
his commentary piece *Electricity Regulatory Commissions: The Jury Is Still Out*. Whereas the title does not seem very promising, Godbole does state that there are some positive developments in the power sector due to the ERCs. He particularly mentions the transparency of tariff setting and the large degree of public participation in this decision-making process. This has created a broader basis for understanding and acceptance of the tariffs set by the ERCs. These issues will be elaborated in in the last sections of this chapter. The following section will address a selection of features of the regulatory reform and make an examination of their functioning or other elements worth noting. The analysis will mainly revolve around the functioning of ERCs as a result of the Electricity Regulatory Commissions Act 1998 (ERC-1998) and the effectiveness of the Electricity Act 2003 (EA-2003).

**Electricity Regulatory Commissions: establishment & functioning**

*Structure* - As stated in the previous chapter, other states followed Orissa’s example by the late 1990s with the establishment of ERCs and the corresponding reforms in unbundling and privatization. The composition of every ERC has been quite similar; three officials of which the chair is usually a former government official and the other two members have a technical and/or financial background. What is more remarkable and diverse is their performance. Some of the newly formed ERCs are regarded as extensions of government due to their closed and non-transparent operations. Other ERCs on the other hand, have actively approached interest groups “seeking technical assistance and informal consultation from analysts and consumer groups, resulting in bold initiatives that even seem to annoy donors and state governments because they may be ‘too independent” Dubash & Rajan, 2001, p. 3384). This conflict can also be traced to the Orissa Electricity Regulatory Commission (OERC) tariff setting issue described in Chapter 3. In conclusion there is a variety in performance of the ERCs.

*Performance* - Whereas reforms have been initiated from 1993 – and, in fact, even before – much progress is still to be made. With the ERC-1998 and the EA-2003, legal basis was provided on which ERCs and their associated institutions such as an Ombudsman could be established. In 2007, the Indian Ministry of Power outlined to what extent these ERCs have been implemented. The following table offers a summary of these indicators. Appendix 1 gives a full overview of the status of reform of the Indian power sector.

<table>
<thead>
<tr>
<th>Description</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>No regulator</td>
<td>Arunachal Pradesh and Nagaland</td>
</tr>
<tr>
<td>Independent regulator but no</td>
<td>Bihar, Chhattisgarh, Goa, Himachal Pradesh, Jharkhand, Jammu and</td>
</tr>
<tr>
<td>structural change</td>
<td>Kashmir, Kerala, Meghalaya, Manipur, Mizoram, Punjab, Sikkim, Tamil</td>
</tr>
<tr>
<td></td>
<td>Nadu, Tripura and West Bengal</td>
</tr>
<tr>
<td>Regulator with unbundled</td>
<td>Assam, Andhra Pradesh, Gujarat, Haryana, Karnataka, Madhya Pradesh,</td>
</tr>
<tr>
<td>SEB under state ownership</td>
<td>Maharashatra, Rajasthan, Uttar Pradesh and Uttarakhand</td>
</tr>
<tr>
<td>Regulator, unbundled</td>
<td>Orissa and Delhi</td>
</tr>
<tr>
<td>SEB with privatised distribution</td>
<td></td>
</tr>
</tbody>
</table>

As can be seen in the overview, only the states of Orissa and Delhi have been able to fulfill the entire reform package, which consists of the following:

- a functional State Electricity Regulatory Commission
- an ERC that makes the tariff orders
- an unbundled SEB
- a privatized distribution segment
- an established Consumer Grievances Redressal Forum
- an appointed Ombudsman.

Many states are still ‘stuck’ at the stage of the establishment of a Regulatory Commission, yet without any structural change. This leads to the impression that many states have fallen into the trap of solely 'ticking the box' for donor support without giving any substance to the actual regulatory body or its desired implications. For the states that did unbundle their State Electricity Board, many of the unbundled entities remain under state ownership. As a result, the (state) government remains actively involved in the electricity industry. This accordingly leads to a political load to the industry; a circumstance that was pursued to be avoided by all means. As Navroz K. Dubash states, “if the Orissa regulatory could credibly lay clam to a measure of regulatory independence [...] the early impression from other states is that of a toothless regulatory structure on the brink of complete capture by the state” Dubash 2006, p. 453). This is a rather pessimistic statement that will be proven true or false in the upcoming decade. It could be possible, as stated in the section on the regulatory state of the South in chapter 2 that these institutions will create substance over the course of years. Nevertheless, they do need the freedom, autonomy and independence from government in order to enable this development.

**EA-2003**

The enactment of the EA-2003 has consolidated the legal framework regarding the electricity industry. Yet, the sector still fails to attract the much-needed investment in order to ensure further growth. Despite serious attempts at sector reform, the slow progress towards a viable business model development remains a cause for concern. Some analysts indicate that a “deadlock appears to have been reached in terms of reform and regulatory improvements” (Bhattacharyya, 2008, p. 201).

The passing of the EA-2003 further consolidated central government’s determination to follow the WB reform package towards separating the state’s role of both operator and owner of electricity facilities. From this perspective, the central government has indeed embarked on the process towards the regulatory state in which the national state lays down a framework within which regulatory agencies will operate. In a way, the steering phase for the Indian government has taken off.

### 4.4 – National transformation

This section discusses the development of the attitude of the central government towards the reform initiatives. Power has been, and continues to be in the concurrent list of the constitution. Central and State governments have specified roles in policy making and operating the sector. Country-wide planning, funding, fuel issues, crucial manufacturing, bulk generation, research and inter-state transmission have been handled by the Central government. States managed the planning and
operation of the state power grids. With the poor performance of the State utilities, the role of the Central government in the sector has been slowly increasing. E-Act is a culmination of this change. Another reason for increased role of the central government has been, the need for a uniform policy across the country to ensure level playing field essential to facilitate competition.

The history and development of the regulatory framework indicates that the reform package has not been an endemic process. Rather, the WB has placed a crucial role in implementing the reforms. The states were the main subject and authority with which the WB cooperated in order to bring about the reforms. This state-level financial restructuring fitted within a new approach for the WB in the early 1990s; the WB’s Country Assistance Strategy (Dubash & Rajan, 2001, p. 3382). Therefore, does the credibility exist to speak of a transformation towards a regulatory state model if the central government has only recently become actively involved in the process? Over the first decade after reforms, the central government had to catch up and become involved in state-level reforms. Two initiatives by the federal government are particularly worth mentioning for their regulatory relevance.

**Common agenda on electricity industry reforms**

Firstly, by the end of the 1990s, the government organized regular consultations between state chief ministers. The purpose of these meetings was to develop a common agenda on electricity industry reforms. One of these meetings in 1996 is described a turning point in national policymaking. Chief ministers decided to set a minimum action plan, agreeing that State Electricity Regulatory Commissions (SERCs) would from then on be responsible for tariff setting. This has been the basis upon which the ERC-1998 was drawn, which requires the establishment of state electricity regulatory commissions. In fact, this decision implied that actual responsibilities were transferred to the regulatory agencies. Furthermore, measures were taken in order to improve metering and billing, to restrict cross subsidies and to improve transmission and distribution. Whereas these initiatives and meetings do indicate an increasing political determination to reform at the central level, there are still reasons to remain cynical. The main reason for this is the progress and implementation of these reform initiatives, which has been agonizingly slow (Dubash & Rajan, 2001, p. 3383).

**National legislation**

The second, more concrete, move of the central government is the development and implementation of national legislation supportive of regulatory reform. The passing of the ERC-1998 has been a clear example of national legislation that fits the WB regulatory reform model. It was thereby also an acknowledgement by the central government that the Orissa-model proved to be significant. As Dubash & Rajan state, “the 1998 Act marked, in a sense, the national coming out of the Orissa model” (2001, p. 3384). With the implementation of national legislation, the central government tries to balance between putting a national framework in place while allowing for a degree of flexibility for the states. Scholars have noted that the “acceptance of the need for fundamental state-level reform at the political and administrative levels at the centre is striking” (Dubash & Rajan 2001, p. 3383). The initiative for the Electricity 2000 Bill was also taken at a national level and contained very high expectations. As stated in the previous chapter, the National Council of Applied Economic Research and the Ministry of Power composed the draft for this Bill. Scholars have pointed out that there has been a shift towards “new standards for legislative processes in India” (Dubash & Rajan 2001, p. 3384). During the design of the
Bill, there was a large extent of participation from actors in the industry through opportunities for comments and workshops to enhance dialogues. Nevertheless, critics argue that this participation came too late. They state that public input should have been more useful before the first draft. Furthermore, they believe there was a misbalance between more resourceful, knowledgeable lobbyists from the industry versus consumer and environmental advocates.

**International comparison**

The 1993 reforms in the electricity did not only take place in India. The country is often compared to similar developments in China and Russia. Nevertheless, all three countries underwent the reform process with different institutional and practical circumstances and followed different paths towards different outcomes. For example, the WB applauded India for establishing independent national and state regulatory agencies. Since India has a well-established legal system compared to China and Russia, this was a regulatory reform advantage for India over these countries. Xu Yi-Chong argues that this India’s legal system even allowed “independent regulatory agencies to function as they do in developed countries” (Xu Yi-Chong, 2006, p. 811). It was argued that progress in China and Russia has been slower for the fact that they did not establish any independent regulatory agency. This indicates that in the case of a proper functioning legal system, ERCs would be effective in executing their authority. Nevertheless, a lack of practical and economic conditions that were to underpin these reforms impeded structural change in India. Russia for example, had a much better organized and all-encompassing transmission and distribution network. Therefore, the country was better able to implement ownership and structural reforms.

**4.5 – Interest Group Influence**

Despite the fact that space for participation in the rule-making process appears limited, the ERCs have certainly attracted interest groups that are keen to influence the process and thereby give substance to the regulatory commissions. As Dubash & Rajan state, “as bureaucrats and consumer activists agree, there is keen interest among members of the public to ‘democratise’ the commissions at an early stage, through efforts to intervene in all aspects of regulation” (2001, p. 3384). Nevertheless, not all interest groups are yet fully mobilized in order to handle the often complex and technical issues that the industry faces. Furthermore, they have to compete with the strong lobby from the industry experts.

The introduction of competition in the electricity industry signifies changes for India’s consumers. Regulatory agencies and their Consumer Grievances Redressal Forum and/or Ombudsman (if in place) should provide for a degree of participation or a place where consumers can advocate their interests. Despite that not in every state these mediating institutions are in place, consumer groups in India are increasingly mobilizing to represent their interests (Dubash, 2006, p. 450). They are becoming aware of the strategic possibilities of regulatory agencies. However, many others prefer to use the conventional ways of direct political mobilization in order to influence policymaking. Navroz K. Dubash furthermore states that the institutional arrangements for consumer action within the regulatory framework are weak. Furthermore, the opportunities for consumers to actively engage in the regulatory process are very limited.
Prayas Energy Group research
It appears that the new regulatory framework leaves space for public involvement and consumer activism, provided that civil society actively takes this space. In fact, contributions from civil society through reports or proposals is regarded an element of rule-making by the WB. One specific example in India proves to be very valuable for this thesis. The Prayas Energy Group developed itself as a non-profit nongovernmental organization and aims to represent and protect the vulnerable and disadvantaged groups of Indian society. The Prayas Energy Group was established in 1990 and grew in scale and importance over time. Through research, training, intervention in policymaking and support to civil society, the Prayas Energy Group aims to improve policy and practice in India’s electricity sector (http://www.prayaspune.org/).

In cooperation with the World Resources Institute, the National Institute of Public Finance & Policy in New Delhi and leading scholars in the field such as Navroz K. Dubash, the Energy Group presented a valuable report in 2006; *Electricity Sector Governance in India: An Analysis of Institutions and Practice.* The report investigates the implications for transparency, accountability and participation as a result of the power sector reforms in the 1990s. Data from this report are therefore very valuable for this thesis and will be applied in the following sections in order to indicate degrees of transparency, accountability and participation. However, the report has certain limits in scope which will be indicated when described in the relevant sections. The data for this research is collected through a so-called ‘Electricity Governance Indicator Toolkit’. The toolkit revolves around the state of governance in the sector. The Prayas Energy Group is on the same page as the WB when it comes to their presumptions about the solution for the energy sector; improving governance through accountability, participation and transparency. In order to measure this, they have made an in-depth assessment of the presence or absence of these governance principles at both central and state level policy making.

4.6 - Transparency
Transparency and openness are cornerstones of good governance. Accessible knowledge creates understanding, trust and acceptance of policies among those who are affected by decision-making. This section will assess the degree of transparency that is present regarding rule making in the electricity sector after the 1993 reforms.

Transparency: national level
The Prayas Energy Group research has examined transparency at a national level by assessing the National Electricity Policy (NEP). As stated in the third chapter, the EA-2003 provided for the drafting of this policy, which was published by the Ministry of Power in 2005. Nine indicators give an overview of the transparency in institutions and procedures, ranging from the Ministry of Power, consultants, donor agencies and the role of the media. Indicators were ranked not applicable – low – low/medium – medium – medium/high – high. The values assigned to the indicators are a result of interviews with stakeholders and in-depth research and analysis of documentation.
The formulation process of the NEP had a limited degree of transparency. The draft policy was published on the website of the Ministry of Power and public input was requested. The final policy was published a year after posting the draft version. The Prayas Energy Group notes that while the procedure for policy-making was clear and transparent, not all stakeholders were included in the drafting. Most importantly, those who were impacted by the NEP – consumers – were not involved. “The process of policy-making envisages limited scope for meaningful public contribution in a formal, mandatory manner and it is largely left to the discretion of the concerned decision makers” (Prayas Energy Group, 2006, p. 8).

Furthermore, even if participation was made possible, there is a lack of access to data and analysis or explanation of the implications of the highly complex policies.

Secondly, the role and input from non-government actors such as consultants or donor agencies have been completely non-transparent. The fact that a consultant has been appointed is rarely disclosed, let alone that its input is made public. This explains for the ‘low’ value on the indicator ‘information available to public regarding consultants’. Donor agencies such as the WB have been indispensable in shaping the reform process. Due to its conditionality on loans, the WB was able to direct the course and content of reform policies. Nevertheless, there is not much transparency regarding their actual role. Whereas the agencies themselves have published certain key documents, governments have done little to clarify their influence over policies. The media can be a strong actor in the field of transparency by analyzing and explaining the important features and consequences of any reform policy. Nevertheless, their coverage has been cluttered and uncritical.
The high indicator of ‘transparency in allocation of subsidies’ is due to the fact that the subsidy-system to foster distribution reforms of the government of India is rather clear. Due to the fact that subsidies are granted to states rather than end-consumers, there is less space for political pressure or manipulation.

**Transparency: state level**

At the state level, transparency is measured through the access to information regarding the practice and procedures of SERCs. Furthermore, the Prayas Energy Group assesses the degree of information dissemination, procedural certainty and availability of documents of the regulatory body. Lastly, the report examines the reporting performance of utilities. The Prayas Energy Group assessed the ERCs of Andhra Pradesh, Haryana and Tamil Nadu through interviews with stakeholders and in-depth research and ranked indicators from low – high. Due to the fact that it is a sample of 3 out of 28 ERCs, the results should be seen as indicative rather than representative.

![Image](image.png)

*Figure 7 – Transparency in Regulatory Process: State Level. Prayas Energy Group (2006) Electricity Sector Governance in India: An Analysis of Institutions and Practice, p. 14*

The report indicates mixed results regarding transparency at the state level. Overall, the performance is medium. Whereas the EA-2003 offers strict requirements for the selection of regulatory body members, the process is “neither transparent nor independent and the eligibility criteria for regulators are vague enough to allow less than optimal choices” (Prayas Energy Group, 2006, p. 13). Nevertheless, there is a variation between states which points out that these are results of only 3 states and these results are therefore a mere indication of the practice in other states. While this redefinition of the regulatory framework through the EA-2003 seems promising, there are some structural flaws. These flaws lie at the
heart of regulatory independence of said commissions. Firstly, the selection of regulators remains a bureaucratic procedure in which high-ranking government officials take place in the selection committee. The selection committee appoints the regulators for a period of three years. This period can be extended, by approval of the government, with another period of three years. As an implication, the regulators are subservient to the governments that appoint them and which are in charge of their term. Therefore, the regulatory commissions are vulnerable to political pressures (Deshmukh, 2005). Furthermore, the criteria of qualifications of the regulator are very general and do not prescribe desirable technical attestations.

The indicator ‘procedural certainty about regulatory process and decisions’ offers space for optimism. The research found that regulatory procedures are transparent and predictable. There are legal provisions in place for disclosure of documents and reports. Furthermore, decisions are generally properly disseminated. A point of concern is the indicator ‘information available to public regarding use of consultants’ which ranks low in all three states. All states indicated that they apply consultant input, yet, this input is never made public. With regard to utilities, these should improve on their periodic performance reports which function as a monitoring instrument for the ERCs. Therefore, the ERCs should be more enforcing towards the utilities in order to retrieve the desired information.

Concluding, formal requirements and procedures seem well in place to ensure transparency and access to information. Nevertheless, improvement can be made to make these procedures user-friendlier by structural data processing and the publishing of decisions in local languages. Furthermore, there should be more clarity on the role and contribution of consultants in the rule-making process. Since regulatory agencies in India heavily rely on their advice, this flaw should be dealt with great determination.

4.7 - Accountability

Accountability is an essential governance principle that indicates the responsibility for implemented policies by, in this case, a public actor. This actor should be able to explain its decisions and be liable for the resulting consequences. In order to achieve this accountability or to hold an actor accountable, certain circumstances are required. Public actors should be required to explain for their decisions and a mediator should be in place to address consumer concerns or grievances. This section will discuss the degree of accountability regarding rule-making in the Indian electricity sector since 1993. Several indicators and requirements of accountability will be discussed in order to present an all-encompassing overview of this governance principle.

Accountability: national level

The development of electricity reforms is generally the responsibility of the legislature which describes the legal framework after which the executive designs a policy within this framework. However, in practice, there is interplay between both parties with formal and informal input from other actors such as donor agencies and civil society. Within this process, accountability of before mentioned actors and regulators is essential to good and effective governance. An adversarial process can ensure accountability in policy making for those who will be influenced by the policies. Policymakers have to reach out to those stakeholders, hear their opinions and objections and report back to them during the
policymaking process. Furthermore, policymakers should not in any way be involved in a conflict of interests that would misbalance policies.

In order to assess accountability in the policy making process, the Prayas Energy Group has investigated several indicators of accountability at a national level through in-depth research, case-studies and interviews with a range of stakeholders. The indicators were then ranked on a scale of not applicable – low – low/middle – medium – medium/high – high. Of the five indicators, the first two assess accountability of the legislature, the remaining three assess executive accountability.

Due to the fact that this assessment is on the national level, it entails the procedures and practice of the national executive power and the checks and balances by the legislature. In India, 45 standing committees on specific issues relieve the heavy volume of work that the Parliament is facing. In these parliamentary standing committees, matters are scrutinized, deliberated and discussed in-depth. Additionally, these committees can consult the public. The parliamentary standing committee on subordinate legislation consists of 15 members, appointed by the Speaker of the House and “scrutinizes and reports to the House whether the powers to make regulations, rules, sub-rules, by-laws etc. conferred by the Constitution or delegated by Parliament are being properly exercised by the executive within the scope of such delegation” (Parliamentary Committees, n.d.). This parliamentary standing committee on subordinate legislation acts as a legislative ‘watchdog’ over the executive and is therefore assessed by the Prayas Energy Group. As can be seen in figure 8, it has found its procedures to be satisfactory, which therefore provides for a certain degree of accountability of the policy-making process. Nevertheless, the report notes some structural flaws of the committee. Firstly, conflict of interest prevention is weak and only minimally enforced. Furthermore, the committee procedures are closed and public interest groups are rarely being consulted.
Executive accountability is regarded low since there has been no independent scrutiny of any of the recommendations made by policy consultants such as the WB. The indicator ‘methodology for asset valuation/balance sheet restructuring during reforms’ refers to a case study of the privatization process. Since public assets were privatized, there should have been disclosure of this process. Accountability regarding subsidies, on the other hand, is indicated high. According to the Prayas Energy Group, this is due to the simple character of disclosing this information versus the complexity of other measures (Prayas Energy Group, 2006).

Concluding, accountability in policy-making on a national level could be improved by opening the process to public participation – no discussions and deliberations behind closed doors.

**Accountability: state level**

Whereas the previous section discussed accountability on a national level regarding policy-making, this section focuses on the regulatory processes at state level. By making an examination of institutions, mechanisms and procedures, the Prayas Energy Group assesses the degree of regulatory accountability. This assessment is made of three states – Andhra Pradesh, Haryana and Tamil Nadu. Due to the fact that there are actually 28 state regulatory commissions in India, these findings have their limitations. Nevertheless, the three states that were selected have commissions that have been established as one of the first and have thereby operated for a while. Yet, these results should be seen as indicative, rather than representative of the regulatory processes in the other states. Similar to the previous section, results have been collected through interviews with stakeholders and in-depth research of documentation. The indicators of the accountability principles were ranked on a scale of not applicable – low – low/medium – medium – medium/high – high.

*Figure 9 – Accountability in Regulatory Process: State Level. Prayas Energy Group (2006) Electricity Sector Governance in India: An Analysis of Institutions and Practice, p. 16*
The first indicator – the prevention of conflict of interest of regulatory body members, is an institutional indicator. The Prayas Energy Group research has found that sufficient provision to prevent this conflict of interest are made and adhered to. The Appellate Tribunal, established with the EA-2003, accounts for the appeal mechanism which is in place an functioning properly in all three states. Another requirement for accountable governance is the disclosure of information regarding orders and decisions; ERCs should make reasoned decisions and these decisions should be openly accessible. In two out of three states this disclosure was high; it was found that Haryana could do more in making their orders pre responsive to public input. The weak spot in regulatory accountability is found at ‘tariff philosophy’, which entails the predictability and regulatory certainty in tariff setting. The research found that tariff philosophy papers were not widely circulated at a drafting stage or not published afterwards. ERCs are supposed to hold mechanisms to enforce their regulation on utilities, which is mainly done through issuing, revoking and amending of licenses. The research found that these mechanisms for ensuring good standards of performance (indicator ‘consumer service and quality of supply’) are all well in place.

Overall, regulatory accountability is well-ensured at the state level through mechanisms of appeal, disclosure and enforcement. While these results only cover three of the 28 State Electricity Regulatory Commissions, it gives a positive indication for accountability of the regulatory process.

4.8 - Participation
Support of the population is essential for any policy or reform to be successful. In order to achieve structural support and sustainability of a policy, one needs an open political process and public input. Participation is therefore essential in building sustainable reform. In the previous chapters, it has been indicated that this to a certain degree explains for the problematic history of the electricity industry. With support from donor agencies, governments have sought to avoid lengthy consultation procedures which would constrain adequate decision making. Nevertheless, public access to decision-making could relieve a lack of support for reform. On the other hand, extensive participation and input would hamper fast progress. This section will assess the degree of participation that has occurred regarding rule making in the electricity sector after the 1993 reforms.

Participation: reform procedure
The WB policy statement presented in 1993 is regarded as “the genesis of state-level electricity regulators” (Dubash, 2006, p. 451). The reform package was more or less based on electricity restructuring practices in the UK, Argentina and Chile. The procedure and experience from these countries became the foundation upon which the entire reform process in India and other developing and transitional countries was based. From this perspective, there has not been much premeditated and purposeful public debate or input into the reform model. This is a severe flaw to the reform process, as it is a prerequisite for a bottom-up approach that would in turn create understanding and a solid base in the country for those reforms. Similar to Chaudry’s conclusion in chapter 2, late developing countries underwent reforms partially under pressure from international financial institutions. Furthermore, it resembles the characteristic of hollow institutionalism that Dubash and Rao define as a typical issue for
a ‘regulatory state of the South’. Regulatory agencies can not be implemented artificially, they need substance. This is something that is lacking in many of the ERCs established, which would lead to the conclusion that it is merely about ‘ticking the box’ rather than actual regulatory effect. A lack of public participation and thereby associated public understanding to a certain degree accounts for the fact that many ERCs have not functioned properly.

As stated in Chapter 3, the proposed reform package by the WB was not home grown. Therefore, it needed political support from national and state level government officials to create understanding and support for the reform process. In order to achieve this, the WB organized consultations with states in order to assess the state of their electricity industry and to decide how the reform package would be implemented in these states. Whereas there was no consultation of Indian government officials at the design of the reform package, there was a certain degree of participation in order to receive the desired support for the reforms.

**Participation: national level**

The Prayas Energy Group has examined processes around the drafting of the NEP by the Ministry of Power (central level). It has assessed the processes regarding the drafting of the NEP and its responsible committee and the policy itself.

![Figure 10 – Participation in Policy Process: National Level. Prayas Energy Group (2006) Electricity Sector Governance in India: An Analysis of Institutions and Practice, p. 10](image)

Firstly, the advisory committee to the electricity Ministry had a clear mandate and sufficient financial resources to fulfill the task. Furthermore, the committee was composed of different stakeholders, which
accounts for a balanced and deliberate advice to the Ministry. Nevertheless, the research found that consultants have provided the committee with inputs while this fact has not been disclosed, nor was the consultant’s advice itself. The meetings were scarcely documented; minutes were not made available to the general public. While the draft policy was accessible through the website of the Ministry of Power and the Planning commission, there was no further attention drawn to this publication nor was there explicit request for public feedback. As stated by the Prayas Energy Group, “in short, participation envisaged was a one-way process with neither the committee nor the Ministry considering it necessary to provide responses to any feedback received from the public” (Prayas Energy Group, 2006, p. 9).

The actual process of drafting the NEP did not do much to compensate for the institutional flaws of the advisory committee. “Public participation is by no means accepted or practiced as a mandatory step in electricity policymaking. There was no well laid out procedure for participation, and other necessary steps [...] This is not to say there was no consultation; some stakeholders did indeed file comments. But the consultation was ad hoc, not open to all, and there was lack of clarity on how the results of consultation were used. All these indicate a highly inadequate process of public participation (Prayas Energy Group, 2006, p. 9).

The public participation process of the NEP indicates that many improvements have to be made in order to absorb the benefits of public participation for the policy process. Nevertheless, these findings are all related to the drafting of the NEP, which does not offer the full picture of the entire rule-making spectrum in the electricity industry. It does offer a cause for concern when it comes to public participation.

**Participation: state level**

Public participation at the state level through SERC mechanisms has been slightly more promising than at a national level. The Prayas Energy Group Identified three indicators to assess this participation in the regulatory process which are again ranked from low – low/middle – medium – medium/high – high.

**Figure 11 – Participation in Regulatory Process: State Level. Prayas Energy Group (2006) Electricity Sector Governance in India: An Analysis of Institutions and Practice, p. 15**

![Figure 11 - Participation in Regulatory Process: State Level](image)
The opportunity for public participation in the regulatory process exists through public hearings and open proceedings, for which all states rank medium/high to high. Nevertheless, none of the states have made a special effort to represent the interests of weaker or disadvantaged stakeholders. Furthermore, civil society intervention in the regulatory process has been modest. Prayas Energy Group attributes this indicator to the complexity of the sector, which makes it difficult for the common people to make a meaningful contribution or intervention in the regulatory process. The Prayas Energy Group feels that the government, the ERCs or the WB should assist in building civil society institutions to give a voice to (disadvantaged) consumer stakeholders.

In conclusion, the Prayas Energy Group report indicates that there is much to be done in the field of public participation at both federal and state level. Currently, public participation is not generally accepted or practiced, while it is regarded a cornerstone of good governance.

4.9 - Autonomy

While autonomy is not recognized as a feature of good governance, I believe it plays a significant role within the regulatory state framework. Due to the emphasis on independent rule-making within regulatory state theory, it is important to examine the status of autonomy for the ERCs within the Indian electricity industry. In order to function as an a-political, technical agency, the ERCs should be able to operate independent from political pressure. This does not mean that the ERCs are not accountable to any institution, as can be seen in section 4.7. Rather, it entails that ERCs are free from pressure from politicians with a short-term interest in upholding their position rather than improving the electricity industry. This section will address this issue.

The 1993 World Bank policy statement and particularly the EA-2003 have made essential provisions and requirements in order to safeguard autonomy for ERCs. Well-defined selection criteria and a clear funding arrangement should provide the agencies with sufficient autonomy. Nevertheless, events in 2004 indicate that it still appears to be impossible to insulate politics from practice and separate the regulatory agencies from government. The historical account in chapter 1 described how farmers in India are a critical electoral block. Since independence, the provision of electricity was strategically applied in order to retrieve support for (state) government(s). When in 2004 the reform-oriented Chief Minister of Andhra Pradesh was beaten with significance by its opponent – who declared free electricity for farmers – hope for progress was smashed to the ground. Even more so when other politically significant states of Tamil Nadu, Maharashtra, Haryana and Punjab followed suit in one way or another, making financial concessions to farmers.

Secondly, while the EA-2003 states that government policy making should not negatively affect or interfere with the activities and authority of the commission, history has shown that the government has in fact issued controversial policy directives. Controversial in this sense means that the government would decide on an issue that is in fact outside of its authority. This mainly occurs in the field of tariff determination, which should actually be a responsibility of the regulatory commissions (Bhattacharyya, 2005).
Nevertheless, there is also room for optimism. Whereas previous examples sketch a grim picture of the autonomy of ERCs, the regulatory agency has also refused to follow instructions of other authorities. Most strikingly, the example of the OERC who decided to implement a modest tariff hike while the WB strongly advised it to make a very high one. Furthermore, autonomy of the ERC seems to be stronger in states where there is less agriculture. Farmers are considered politically significant voting blocks and are therefore granted special ‘privileges’ as seen in chapter 1. However, in states where there is less agriculture, ERCs have the ability to operate more autonomous.

4.10 - Conclusion
This chapter has aimed to assess the effectiveness of the regulatory reform of the electricity sector in India. It is the ‘story behind the scenes’ of chapter 3. The enactment of laws and establishment of regulatory agencies as described in chapter 3 indicates that reform principles are followed. However, as stated before, the story does not end there. This chapter has presented the story behind the scenes or the ‘thick narrative’ in order to assess the extent to which rule-making has been effective. How strong is the foundation underneath the regulation that has been set up? A person could make a comparison with actual electricity lines. Without a solid construction to uphold the lines – the high voltage pylons, a policy would not ‘come off the ground’, nor lead anywhere. This chapter has examined the strengths and flaws of the ‘high voltage pylons’ of transparency, accountability, participation and autonomy on central and state level.

The establishment of ERCs did not provide for instant relieve and a smooth operation of the regulatory framework. Whereas some ERCs have evolved into the desired a-political, technocratic regulatory agencies, others have just been established and have not yet gained any substance. Furthermore, ERCs struggle to operate autonomous from political pressures.

The analysis indicates that there is a variety between the performance of the regulatory state/good governance principles. The principle of accountability is relatively strong due to sufficient legal provisions, mechanisms of appeal and requirements of disclosure. Formal requirements and procedures seem well in place to ensure transparency and access to information. Nevertheless, there should be more openness regarding the role, input and advice from independent consultants and International Financial Institutions. The principle of participation appears to be the most flawed. There is much to be done on both federal and state level. Currently, public participation is not generally accepted or practiced, while it is regarded a cornerstone of good governance. In order to improve this, civil society input and consumer protection should be actively supported.

When assessing the role of the World Bank over the past 20 years, it becomes clear that the institution has played a major, if not decisive, role in the reform process. Through policy direction, mediating, consulting – if not intervening – the Bank has sought to carve out the future of the Indian electricity Industry. In my opinion, I believe that the time has come for India to take over this steering role. The World Bank could then focus on strengthening the high voltage pylons – work on institutional capacity building. Particularly, the Bank should assist in empowering civil society and supporting them in understanding the complexity of the industry, while state and central government of India puzzles out the way forward in the development of its industry.
5. Conclusion

5.1 Enlightening the future of India’s electricity sector

The 2012 blackout is a clear sign that India, 20 years after the World Bank (WB) policy initiatives, is still struggling to provide for a reliable electricity infrastructure. This unreliability has both domestic and global consequences. Particularly, India’s global competitiveness and reputation as one of the most promising economies of the upcoming century is increasingly disputed. Nevertheless, there is light at the end of the tunnel – perhaps not physically, rather institutionally. This section will firstly offer an overall assessment of the problem definition and the answers found in the analysis. The conclusion will then continue to discuss the theoretical, social and environmental considerations after applying Levi-Faur’s regulatory state concept to the Indian electricity sector. Thirdly, special attention will be drawn towards the role of the WB and its reform policies. These answers and insights will then offer considerations for the future as well as for a broader International Relations perspective.

As stated in chapter 1, the general implication with regard to the restructuring of the Indian power sector as put forward in the WB report Conference on Power Sector Reforms in India is that transparency, accountability and regulatory reform should improve the performance of the sector. In order to achieve these reforms, a policy and a regulatory framework should be established. The redefinition of the role of the state of a regulator rather than a provider of primary good has resulted in the application of the regulatory state theory to this thesis. In order to answer the main question – the extent to which rule-making, regarded the main regulatory state characteristic is successfully implemented in India’s electricity sector – I have developed a twofold argumentation. The ‘thin’ narrative in chapter 3 has elaborated on the development of rules and regulatory institutions, while the ‘thick’ narrative in chapter 4 discussed the effectiveness of these rules and regulatory processes. Together, these chapters account for answering the problem definition.

Chapter 3 elaborated on the principles regarded by the WB as being the central subjects of rule-making; the enactment of laws and the establishment of regulatory agencies. In terms of the enactment of laws, the Electricity Regulatory Commissions Act 1998 and the Electricity Act 2003 (EA-2003) have made a demonstrable difference. Particularly the EA-2003 did not only provide for more authority for regulatory commissions, it also provided for more mechanisms of transparency, accountability and participation. In nearly all states, State Electricity Regulatory Commissions have been established with donor support from the WB. It is particularly interesting to mention the shift in the approach towards the reform of the industry. While at the outset of the reforms in 1993 privatisation was the greatest good, institutional capacity building gained ground over the years which is particularly expressed in the EA-2003. Furthermore, the fact that the central government has created a long term vision for the industry through the National Energy Policy indicates a commitment to ‘setting the rules of the game’ rather than the state being physically involved in the electricity industry. In this sense, the regulatory state has settled in with regard to the enactment of laws and the establishment of regulatory agencies.

The ‘thick’ narrative described in chapter 4 paints a more dynamic picture of the effective or non-effective implementation of rule-making. With the Orissa experience serving as a catalyst for other
developments at State and Central level, the WB has come a long way in bringing about regulatory change. Furthermore, civil society initiatives such as the Prayas Energy Group report indicate a degree of voluntary commitment and public participation to this new institutional structure. In my opinion, incidents in which political pressure prevails over regulatory independence overshadow the small but decisive steps that are being taken in institutional capacity building. Slowly but steadily, Electricity Regulatory Commissions are able to manifest themselves as independent regulatory agencies, thereby supporting the regulatory state idea in the Indian electricity sector. While the good governance principles of transparency, accountability and participation can be traced, much work still needs to be done. By opening the rule-making procedure, India could make way for more transparency and participation, the principles that appear to be the weaker ‘high voltage pylons’ supporting the reform policy. As stated in the introduction that a chain can only be as strong as its weakest link, improvements of these principles are vital in developing the regulatory state in India.

In conclusion, the electricity industry of India has certainly witnessed an institutional change over the past two decades. Both in theory as well as ‘behind the scenes’ the characteristic of rule-making has established itself within the regulatory framework of India. I believe it is too early to speak of a regulatory state, not only because of the flawed performance of the good governance principles in India, but also due to the immaturity of the regulatory state theory itself. The conclusion will now turn to a more in-depth deliberation of this concept.

5.2 - Regulatory state theory
In this thesis, the regulatory state theory by David Levi-Faur was applied to the development of the electricity industry of India as a result of World Bank policy reform requirements in 1993. Levi-Faur’s approach identifies three characteristics to the regulatory state; rule-making, rule-monitoring and rule-enforcement. This is a seemingly straightforward approach that provides for a good frame of reference in assessing any case. Nevertheless, it has proven complicated to apply it to the case of India and the electricity industry in particular. There are several reasons for this, which will be elaborated upon in the following section. Firstly, the nature of electricity as a common good complicates matters of analysis. Secondly, the initial practical conditions of the sector were incompatible with the desired starting point for institutional capacity building. When reading these comments, the reservations made in chapter 2 regarding the regulatory state of the South and the common good complexity become confronting realities.

Regulatory state of the South
In chapter two, it is pointed out that Late Developing Countries that aim to improve their institutional structure through regulatory state theory face differences and difficulties that the ‘older’ Western regulatory states have not. The a-political functioning of a regulatory agency in case of insufficient physical conditions is simply impossible.

Impossible to be a-political
The introduction of competition into the sector in the case of India can have very undesirable effects for its poor population. Therefore, market power has to be answered with regulation. In this case, K. Vogel’s quote from Chapter 2 proves true, that what we are witnessing today is not deregulation (for
privatization). Rather, it looks more like increased regulation or re-regulation for the sake of market conditions and consumer protection. This does offer however, the dilemma that ERCs have been facing since their establishment; to on the one hand operate a-politically and solely regulate technical issues and on the other hand face the political and social reality that is bound to this ‘a-political’ regulation. A statement from scholar Xu Yi-Chong proves very applicable to this judgment. “Treating the problems in the electricity sector, whatever they may be, all as the result of government involvement while prescribing a technical remedy raises questions about both the diagnosis and remedy. After all, electricity reforms are as much political as economic issues. [...] When an overwhelming majority of the population does not have access to electricity, it is a political matter an the government’s responsibility to determine whether and how to provide universal access to reliable electricity supply at an affordable price” (Yi-Chong, 2006, p. 812).

Other scholars agree with Yi-Chong by stating, “as arbiters of the balance between profit and public interests, regulators reward and penalize constituencies, authorize and deny profits. In other words, regulation is inescapably political, and regulatory credibility hinges on how it manages competing political pressures” (Dubash, 2006, p. 450). Again, this issue is referred to in Chapter 2, where it is stated that even Western country’s regulatory institutions seem to ‘smuggle social goals through the back door’. On this issue, I would like to conclude that truly a-political regulatory agencies are a far cry from reality. Rather than stubbornly ignoring this reality, governments and institutions alike should acknowledge this and discuss a way to deal with this. This conclusion does mean that the baby should be thrown out with the bath water and that regulatory commissions are useless. Regulatory agencies should aim to operate as a-political as possible in order to keep the government out of day-to-day operation of utilities.

Unfavorable/insufficient practical starting point
Chapter 3 indicated that the regulatory agency’s responsibility revolved around mere financial and technical aspects of regulation; subjects of regulation, standards for regulators, procedures and tariff setting. However, a single focus on these aspects is insufficient to regulate such an essential industry in such a vulnerable country. Scholars argue that while the regulatory commissions ought to be strictly a-political, the industry and its conditions at this point are simply too political to avoid the social and political reality that the regulation might cause.

Regulatory performance
While the regulatory commissions might not have properly functioned at their establishment, I believe that progress has been made. The ERCs need time to grow into their role and give substance to their responsibilities. In this perspective, I would agree with Dubash and Morgan that a certain regulatory state of the South is developing in which regulatory agencies are established as hollow shells, but that they will be filled in over the course of time. Their responsibilities and proper functioning will follow through experience. Nevertheless, these regulatory agencies need a certain room for maneuver in order to take that responsibility. Therefore, it remains crucial that the government keeps at an arms-length distance of their operations and the operation of the industry itself. Government can indicate a policy direction or goal – in fact, it should give a very clear direction within which the regulatory agencies can operate for a slow but steady transition towards regulatory reform. Nevertheless, the regulatory
agencies need the freedom to implement these in the way that they see fit for their state and their circumstances.

**Common good complexity**

Section 2.1 describes the twofold nature of the electricity industry; that electricity to a certain degree is a public good, but not quite. Whereas competition can be introduced in generation and end supply, transmission and distribution are more or less natural monopolies, taken care of by the state. Therefore, Yi-Chong is right in stating that the government should be responsible for universal access. Nevertheless, I disagree that the entire industry should therefore fall under the auspices of the state. While still subject of discussion – even in developed countries, competition in generation and supply forces the electricity industry to work (cost) efficient. This would bring about benefits for consumers. However, consumers do need a certain degree of protection in sub-optimal markets where for example infrastructure is insufficient. In those cases, government should be held responsible for universal access and companies should be regulated.

Furthermore, the complexity of electricity as a semi-common good complicates Levi-Faur’s application of the regulatory state. In assessing the transparency, accountability and participation, I have found it impossible to separate rule-monitoring and rule-enforcement. Furthermore, while the characteristics of rule-making, monitoring and enforcement appear to be applied in an uncomplicated way, Levi-Faur’s theory does not provide for any measurable indicators in order to assess these characteristics. A reference to other scholars – Hood, Rothstein and Baldwin – does not suffice to get a clear view of what Levi-Faur means by these characteristics. Those who want to apply his framework are therefore left with a rather hollow framework that has to be filled in by connecting many principles from different angles – good governance theory, World Bank policies, regulatory capitalism, etc. This is also due to the fact that Levi-Faur’s concept of the regulatory state only stems from the past decade. In order to fulfill Levi-Faur’s aim of his concept ‘traveling across space and time’, more space and time is needed in order to provide clear foundations for his theory.

**5.3 - Social & environmental considerations**

The independent and a-political nature of the regulatory commissions is regarded a holy cow within the regulatory framework. Nevertheless, there is a pitfall to this approach. The narrow interpretation of the ERCs responsibilities leaves social or environmental outcomes of the reform unaddressed. It appears that the state government has a blind spot in this development, trying to “rid itself entirely of what has become a burdensome sector. There is, therefore, an absence of responsibility for longer term and broader issues raised by power sector development” (Dubash & Rajan, 2001, p. 3380). Yet, an assessment of these implications for longer term and broader issues should definitely be made in the near future. I believe this should be a future step where research in this field should focus on: the incorporation of social and environmental issues or public benefits into this picture of technocratic agencies. Where and how are these issues addressed? Who carries the responsibility for this?

This is also something that Dubash & Morgan also touch upon when discussing the regulatory state of the South. Developing countries carry both the opportunity and the risk of a ‘carte blanche’, where responsibilities can be avoided or where they are explicitly addressed and taken care of from the start of
the process. For the sake of social and environmental conditions, I believe the second approach should be most desirable and a long-term vision should be incorporated into the ERC’s policy. Nevertheless, the addressing of public benefits should explicitly not be included into the mandate of the electricity regulatory commissions since it was exactly the conflicting nature of sociopolitical issues and the provision of electricity that were the cause of the malfunctioning of the sector.

A fair case can be made for the reservations made by Chaudry and Dubash & Morgan when it comes to the special conditions that developing countries are facing when implementing policies. The pressure from International Financial Institutions such as the WB is a strong factor to take into account. Therefore, this conclusion now turns to the role of the WB.

5.4 - Role of the World Bank

The WB has come a long way in reforming the Indian electricity industry. Yet, universal access is a far cry from reality, as is reliable supply. Nevertheless, I believe that the implementation of good governance principles and thereby the regulatory state has been quite successful. While there is a long way to go in capacity building to strengthen transparency, accountability and particularly participation, an institutional structure has evolved and will gain substance over time. Nevertheless, the physical circumstances seem to lag behind.

Did the WB devote enough attention to the actual state of the industry at the start of the reforms in 1993? A belief in the market and simple market conditions and that these could simply be implemented might have been different than the actual political and economic reality. Was it too idealistic to believe that a model could just be implemented and the industry would simply work like any other? In my opinion, it might have been. Nevertheless, I do believe that the WB initiatives have brought about certain awareness among Indian policymakers that something had to be done. Yet, in the meantime, many mistakes have been made with grief financial consequences.

It is therefore questionable whether it is possible for an international financial institution such as the WB to implement a template and expect it to work in the desired way. Policy transfer in itself is not a bad word. In a world that continuously integrates, countries can and should learn from each other. The electricity reforms in India were based on British reforms that occurred about a decade before the 1993 reforms. Whereas one could expect India to be a good candidate due to their historical relation with the United Kingdom and similarly established legal system, technical circumstances in both countries are worlds apart. A model for reform then, cannot simply be copied. It would have been more effective to work towards similar goals and adapt the instruments and techniques to local circumstances. That is the difference between simply copying practice and working towards a similar situation in a different country with the tools that are available in that situation.

As stated in the first chapter, the WB was determined to avoid any deliberate political involvement regarding donor receivers at its establishment in 1944. Nevertheless, the Bank realized that institutional failure and structural corruption were the factors hampering economic growth. As a result, the improvement of governance became a focal area for the WB. In the case of India, I believe the WB has taken another step from its original mandate in pushing through its reform package. The involvement in
national affairs and policies shaped it to such a large extent, that it is not simply governance improvement, but actual governance by the WB. Nevertheless, I believe that this ferocity and determination was required in order to bring about structural change in India’s industry and institutions. On the other hand, I believe the task is now up to India to lead the way in continuously improving its industry. The WB should focus on strengthening institutions and supporting civil society in structurally participating in the rule-making process rather than determining the actual policies.

International Relations Theory
The conclusions drawn in this thesis can be interpreted in a broader, theoretical perspective. As stated in chapter 1, whereas the electricity industry of a country appears to be a domestic affair, there are lessons for International Relations as well. The previous section already elaborated on the role of the WB as a catalyst for institutional change, concluding that the contribution of international financial institutions is critical in bringing about institutional change. Nevertheless, these institutions are not omniscient and should therefore leave space for local experts in order to find the right balance between local circumstances and lessons drawn from international (success) stories. Among others due to the physical realities of the electricity infrastructure in different countries, a one-size-fits-all approach is impossible to apply in this industry. Furthermore, the WB should increasingly refrain from direct involvement in national rule-making, rather focus on institutional capacity building – for example through supporting civil society participation.

In terms of applying common International Relations concepts, the principles of good governance have proven to be solid tools in order to give an all-encompassing overview of the regulatory effectiveness. Therefore, I would encourage other students to apply these principles when assessing institutional performance.

On a national level, I expect implications of the regulatory reform outside of the core subject – its electricity industry – as well. Considering the way in which the Indian Central government slowly adjusted to and embraced the reform initiatives, I expect that the institutional development within the electricity industry will have a spillover effect into other layers or divisions of the Indian state. Nevertheless, the regulatory state approach cannot be considered the answer to all of India’s issues. Particularly due to the fact that is just as much an institutional as it is a physical issue. It is a fact that India’s global competitiveness is harmed by its unreliable electricity infrastructure. Multinational corporations are hesitant to invest in a country that regularly suffers severe blackouts. In order to uphold its promising reputation of a possible economic global power, much work still needs to be done – both institutionally as well as physically.

5.5 – The ‘power’ to reform
In the past twenty years, India and the World Bank have come a long way in improving the electricity sector. Although reality might not always reveal this – for example when 10% of the world’s population has no electricity for two days – improvements have certainly been made. This thesis merely focus on the institutional reforms of the industry. I believe that while they were implemented as an exogenous policy, regulation and regulatory agencies have managed to add substance to their existence. Nevertheless, power cuts are a reality. A reality that endangers the future of one of the world’s fastest
growing economy. In order to overcome this, serious physical improvements have to be made. Solid generation plants, solid pylons supporting solid power lines. Institutionally, there is also a power network to be built in order to provide universal and reliable electricity to India.
6. References


**Legal documents**


**Websites – box 1: India – painting a picture**


7. Appendix I – Status of Power Sector Reform

### Status of Power Sector Reforms

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>States</th>
<th>Status</th>
</tr>
</thead>
</table>
| 1.    | Assam            | • SERC functional (28.2.2001)  
• Tariff Orders issued  
• SEB unbundled  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |
| 2.    | Arunachal Pradesh| -                                                                      |
| 3.    | Andhra Pradesh   | • SERC functional (31.3.1999)  
• Tariff Orders issued  
• SEB unbundled  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |
| 4.    | Bihar            | • SERC constituted (April, 2002)  
• Functional (August, 2005)  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |
| 5.    | Chhattisgarh     | • SERC functional (1.10.2001)  
• Tariff Orders issued  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |
| 6.    | Delhi            | • SERC functional (3.3.1999)  
• Tariff Orders issued  
• SEB unbundled  
• Distribution privatized  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |
| 7.    | Goa              | • SERC constituted (1.8.2002) |
• Tariff Orders issued |
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• Tariff Orders issued  
• SEB unbundled  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |
• Tariff Orders issued  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |
• Tariff Orders issued  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |
| 12. | Jammu & Kashmir | • SERC constituted (July 2004) |
| 13. | Karnataka | • SERC functional (22.8.1999)  
• Tariff Orders issued  
• SEB unbundled  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |
• Tariff Orders issued  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |
• Tariff Orders issued  
• SEB unbundled  
• Consumer Grievances Redressal Forum established |
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<tr>
<td></td>
<td>Maharashtra</td>
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<td>16.</td>
<td>SERC functional (5.8.1999)</td>
<td>Ombudsman appointed</td>
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<tr>
<td></td>
<td>Tariff Orders issued</td>
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<td></td>
<td>SEB unbundled</td>
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<td></td>
<td>Consumer Grievances Redressal Forum established</td>
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<tr>
<td>17.</td>
<td>Meghalaya</td>
<td>-</td>
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<tr>
<td></td>
<td>SERC constituted</td>
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<tr>
<td>18.</td>
<td>Manipur</td>
<td>-</td>
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<tr>
<td></td>
<td>JERC constituted (Manipur and Mizoram) (18.1.2005)</td>
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<tr>
<td>19.</td>
<td>Mizoram</td>
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<td>JERC constituted (Manipur and Mizoram) (18.1.2005)</td>
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<td>20.</td>
<td>Nagaland</td>
<td>-</td>
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<td>21.</td>
<td>Orissa</td>
<td>-</td>
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<td></td>
<td>SERC functional</td>
<td>Ombudsman appointed</td>
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<td>Tariff Orders issued</td>
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<td>Distribution privatized</td>
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<td>Consumer Grievances Redressal Forum established</td>
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<td>22.</td>
<td>Punjab</td>
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<td></td>
<td>SERC functional (18.4.2001)</td>
<td>Ombudsman appointed</td>
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<tr>
<td></td>
<td>Tariff Orders issued</td>
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<td></td>
<td>Consumer Grievances Redressal Forum established</td>
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<td>23.</td>
<td>Rajasthan</td>
<td>-</td>
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<td></td>
<td>SERC functional (10.12.1999)</td>
<td>Ombudsman appointed</td>
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<td>Tariff Orders issued</td>
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<td>SEB unbundled</td>
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<td>Consumer Grievances Redressal Forum established</td>
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<td>24.</td>
<td>Sikkim</td>
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<td></td>
<td>SERC constituted (August, 2005)</td>
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<td>25.</td>
<td>Tamil Nadu</td>
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<td>SERC functional (17.3.1999)</td>
<td>Ombudsman appointed</td>
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<td>Tariff Orders issued</td>
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<td>Consumer Grievances Redressal Forum established</td>
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<td>26.</td>
<td>Tripura</td>
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<td>SERC functional</td>
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<td>Tariff Orders issued</td>
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</table>
| 27. | Uttar Pradesh | • SERC functional (10.9.1998)  
• Tariff Orders issued  
• SEB unbundled  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |
• Tariff Orders issued  
• SEB unbundled  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |
| 29. | West Bengal | • SERC functional (6.1.1999)  
• Tariff Orders issued  
• Consumer Grievances Redressal Forum established  
• Ombudsman appointed |

- Joint Electricity Regulatory Commission has been set up for the Union Territories (except Delhi) (2.5.2005).