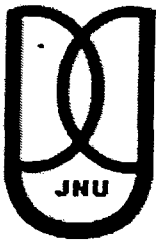
Political Economy of Public Policy Making in the Indian Electricity Sector:

A Study of Orissa and Andhra Pradesh

Dissertation submitted to Jawaharlal Nehru University in partial fulfilment of the requirements for the award of the degree of

MASTER OF PHILOSOPHY

ASHWINI KUMAR SWAIN



CENTRE FOR POLITICAL STUDIES
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067
INDIA
2006

Centre for Political Studies
School of Social Sciences
Jawaharlal Nehru University
New Delhi - 110067, India

Tel. : 011-26704413
Fax : 011-26717603
Gram : JAYENU

Declaration

This is to certify that the dissertation entitled '**Political Economy of Public Policy Making in the Indian Electricity Sector: A Study of Orissa and Andhra Pradesh**' submitted by me in partial fulfilment of the requirements for the award of the degree of Master of Philosophy, is my own work and has not been previously submitted in this or any other university.

Ashwini Kumar Swain

Certificate

We recommend that this dissertation be placed before the examiners for evaluation.

Dr. Gurpreet Mahajan
Chairperson

Chairperson
Centre for Political Studies
School of Social Sciences
Jawaharlal Nehru University
New Delhi-110067

Dr. Pralay Kanungo
Supervisor

ACKNOWLEDGEMENT

In the long course of my research and writing this dissertation I have accumulated many debts and it is a pleasure to acknowledge the people who have made this work possible.

I owe my sincere thanks to the academic and personal guidance of my supervisor, Dr. Pralay Kanungo in the completion of this work. I look back with a sense of deep gratitude to him for all his encouragement and advice, which has enabled me to fulfill this task.

My special thanks to Dr. Navroz K Dubash, whose able guidance, timely help and avid suggestions helped me in completing this academic exercise. He has been a major source of inspiration for me through out the period. Without his sustained attention and comments my work would never have been the way it is.

I take this opportunity to offer my gratitude to Dr. Rahul Mukherji, for having introduced me to the power sector. Working under him, although for a brief period, has been a privilege and is of genuine education to me.

I acknowledge the cooperation of the library staff of NIPFP, GRIDCO, APTRANSCO, ASCI, APERC and JNU in helping me with information about the database of the present study.

I am benumbed in gratitude, for the help and support of all my interviewees. Their valuable information has helped me in bringing my work to this level.

I am greatly indebted to the financial support from World Resources Institute, Washington DC and Foreign & Commonwealth Office, UK in successfully completing the research. Thanks to National Institute of Public Finance and Policy and my colleagues and seniors for providing a scholarly atmosphere to work.

I am filled with gratitude for the blessings and support of my family members. I offer my sincere thanks to all those people whose wishes and support had helped me to acquire a meaningful purpose to my pursuit. Last but not the least I thank my friend Rashmita Behera for her editorial help and constant support through out the period.

Lastly errors if any, are entirely mine.

28th July 2006 **Ashwini Kumar Swain**

Contents

List of Abbreviations:

APERC	Andhra Pradesh Electricity Regulatory Commission
APGENCO	Andhra Pradesh Generation Corporation
APSEB	Andhra Pradesh State Electricity Board
APTRANSCO	Andhra Pradesh Transmission Corporation
CEA	Central Electricity Authority
GoAP	Government of Andhra Pradesh
GoI	Government of India
GoO	Government of Orissa
GRIDCO	Grid Corporation of Orissa
MoP	Ministry of Power
NHPC	National Hydro Power Corporation
NTPC	National Thermal Power Corporation
OERC	Orissa Electricity Regulatory Commission
OHPC	Orissa Hydro Power Corporation
OPGC	Orissa Power Generation Corporation
OPTCL	Orissa Power Transmission corporation Ltd
OSEB	Orissa State Electricity Board
REC	Rural Electrification Corporation
SEB	State Electricity Board

Introduction:

In the wake of acute economic crisis of 1990 and 1991, the Government of India launched a series of economic policy reforms in July 1991. These measures were wide-ranging and included, for the first time in the post-independence history, consistent and coordinated steps to reduce protection, liberalise controls over industry and foreign investment, and increase competition in areas dominated by monolithic public sector enterprises. The new cabinet of ministers, under the leadership of P V Narasimha Rao, was sworn in on 21 June 1991. The next day Rao announced that to the nation that there was a crisis and his government intended to "sweep the cobwebs of the past and usher in change."[1]

The economic policy reforms, introduced by the government, have clearly been reflected in the Indian electricity sector. Since 1991, the sector has gone through several policy changes, starting from introduction of private player in electricity generation to restructuring of monolithic State Electricity Boards (SEBs). Immediately after the announcement of the economic policy reforms, the Electricity Laws (Amendment) Act, 1991 was notified, allowing private sector to set up generating stations of any size. By the mid-1990s the state governments started unbundling of the SEBs and corporatisation and privatisation of the newly created units. The basic objective of these policy measures was to improve the performance of the sector through introducing competition among the players (both private and government).[2] However, by late 1990s, independent electricity regulatory commissions were set up to manage competition among the players and also to promote competition in the sector.

This leads think on why a country which used to believe in public sector control of the basic industries, suddenly changed its economic policies and opened up its public sector for private capital. Some scholars of political economy claim that policy change is most often the outcome of economic crises that requires breaking with the old policies. They argue that economic crisis of 1991 provided an

[1] As cited in Gurcharan Das (2002): *India Unbound: From Independence to the Global Information Age*, New Delhi: Penguin Books.

[2] Narasimha Rao government was against full privatization of the public sector because of his deep faith in Nehru's mixed economy. What he wanted was to improve the public sector performance by introducing competition from the private sector. Ibid.

opportunity to go for neoliberal reforms in India.[3] These kinds of arguments better explain the timing of policy change, but fail to explain the nature of reforms undertaken. For example, in the 1990s, why the policy makers focus on encouraging private involvement when they could have advocated management reforms in the SEBs, a position that had vigorous supporters? These theories of policy change also tend to portray the policy makers isolated from the social forces amid which they operate, acting on autonomously derived impulses.

Another group of political economists and developing theorists argue that policy reforms are out come of the confluence of prevailing economic ideologies and the interests of dominant classes. The policy options available to policy makers are determined and influenced by various political economic factors like social classes, organised groups, international politics, international economic conditions, political structure, and electoral politics of the state. Policy changes in the long run appear to reflect the balance of political forces in society, and the extent to which they influence state action.[4]

All these arguments lead to think why do policy changes take place? What are the governing factors of the policy changes? How do these factors influence policy choices and how they influence implementation of the policies undertaken? Along with these questions it is also important to find out the timing of policy changes. The three important aspects of the larger question are 'when', 'what', and 'how' does policy changes take place in India?

To answer all these questions the study looks into policy making in the Indian electricity sector. Since independence, India's electricity sector has passed through four phases of major policy changes: The first, following Independence in 1947, established public sector-led electrification, which emphasised on two objectives, i.e. to power industrialisation in India (economic objective) and to provide electricity to

---

[3] Bimal Jalan (1993): *India's Economic Policy: Preparing for the Twenty-First Century*, New Delhi: Penguin Books; Amit Bhaduri and Deepak Nayyar (1996): *The Intelligent Person's Guide to Liberalisation*, New Delhi: Penguin Books.

[4] Although this kind of argument is absent in context of India's economic policy reforms, there is an emerging debate, on this line, in the context of neoliberal policy reforms in developing countries. Paul Whiteley (1986): *Political Control of Micro-Economy: The Political Economy of Public Policy Making*, London: Sage Publications; Gerald M Meier, Ed. (1991): *Politics and Policy Making in Developing Countries: Perspectives on the New Political Economy*, California: ICS Press.

all as a right, at affordable rates, and to the level required for ensuring adequate livelihoods (social objective). The second, beginning in late 1970s and early 1980s, established an era of subsidisation and rural electrification, which ignored the economic objective by focusing on the social objective. The third, beginning in the early 1990s, laid the groundwork for an increasing private presence in the sector. And the fourth begins in 2003 with the passing of the Electricity Bill 2003, which focuses more on the economic aspect rather than social aspect. The study tries to find out how different political economic factors have influenced the policy changes at these four moments. Although all these policy changes were initiated at the central government level, they were implemented by the state governments owing to the 'concurrent' status of electricity in India. To find out how these policy changes were received and implemented at the state level, the study takes to case studies- Orissa and Andhra Pradesh.

Objectives of the Study:

By analysing the policy-making process in Indian electricity sector, the study seeks to find out:

- The reasons for policy change: Why does a policy change take place? When does it take place? How these new policies are adopted? And, obviously, what policies are under taken at each stage?
- To find out the key political economic players in the policy making process. What are the different forces that operate in the policy process in Indian electricity sector?
- How these players exercise their control over the process? How do they influence the process?
- How these new policies are implemented both at the central level and state level?
- What are the outcomes of these policy changes? How do these changes affect the performance and development of the sector?
- How does the policy process in Indian electricity sector represent the overall process in India?

- What has been the trend in policy process of Indian electricity sector? How it has been transforming over time? Does it represent the transformation in overall policy process in India?

Approach and Method:

Questions about political influence over the policy process are difficult to assess in any system. Data and information on political relations between the policy makers and the rent-seekers are often hard to find. Usually the relationship is an informal one and thus, hard to locate the depth of the relationship. This is compounded by lack of substantial research on policy process in India. Although there are a few studies on the topic, they are now dated. On the other hand, electricity sector in India is a less studies area and particularly, it is very difficult to find out any political analysis of the developments in Indian electricity sector.

To fill the gap of secondary resources, the study draws its evidence from intensive fieldwork completed in two research sites in Orissa (Bhubaneswar) and Andhra Pradesh (Hyderabad). I repeatedly visited the two capital cities to collect information over a period of July 2005 to May 2006. In addition, I collected national-level information in New Delhi.

Most of the existing literature, while focusing on economic analysis of policy outcomes, lacks the perspective of those who make policy decisions and whose choices actually affect economic outputs. The study goes beyond this, to look into the political economic factors that drive the decisions of policy makers. The study relies on a detailed and exhaustive set of interviews with relevant actors- bureaucrats, politicians, sectoral staff, interest groups (employees unions and consumer groups), consumers of different categories, media persons, civil society organisations and academia- so as to uncover the process through which actual decisions were made.

The study is also partly based on analysis of some government policy documents ranging from debates of legislative bodies to relevant Acts and rules, to find out the lacunas in the policies. For analysis of political economic conditions of India at different phases, I have relied on secondary resources. However, it was hard to find out secondary resources on state politics of Orissa and Andhra Pradesh during

the pre-1990s period. That gap is filled by interviews with some veteran politicians as well as academic circles keeping watch of the politics in the states.

The study has used qualitative as well as quantitative approach for analysis of the information collected through interviews and review of primary as well as secondary literatures. However, interviews can be misleading if not analysed in relation to the historical as well as sociological details that provides the contextual substrata to people's statements and perceptions. The influence of historical change and of different political contexts is too complex to be captured in even the most meticulous of surveys. Hence, I have drawn liberally from a variety of other sources as well as from notable historical studies of Orissa and Andhra Pradesh.

Plan of the Study:

The study is organised into four chapters which provide four different aspects of the study. The first chapter, *Political Economy of Public Policy Making in India*, is focused on the overall policy making process in India. It has two parts; the first part of the chapter discusses theoretical arguments on the policy process. It discusses how policy choices are made and implemented. And also focuses on the key players in the process and how they exercise their control over the process. It identifies three key players in the process- the state (the political structure and institutions), the government (the Proximate policy-maker), and the society (i.e. the stakeholders include different interests, who compete among themselves for rent-seeking). The second part of the chapter deals with the policy process in India. It discusses the policy space as well as process in India and how different political economic factors influence the process. It also discusses the relationship between the state, government and society in India and how this relationship has been transforming overtime since independence.

The second chapter, *Policy Changes in the Indian Electricity Sector: An Overview*, focuses on the four phases of policy changes in Indian electricity sector over a period of last five and half decades. The chapter has four different sections which discusses different phases of policy change. It also provides an account of the evolution of the sector in India and how it was governed in the pre-independence period. The chapter develops the argument that policy making in India is an outcome of interaction between the state, the government and the society. The policies adopted

are guided by the prevailing economic ideologies, held in India as well as globally and external political economic environment has its impact over the process. While putting forth the argument, the chapter analyses political economic conditions of India during the different phases and how it has been reflected in the policy process.

The third chapter, *Political Economy of Electricity Sector: The Orissa Experience*, is focused on power sector developments in Orissa during the period, while the fourth chapter, *Political Economy of Electricity Sector: The Andhra Pradesh Experience*, discusses developments in Andhra Pardesh's electricity sector. These two chapters mainly focus on how the policies adopted by the central government have been received and implemented at the state level. How does the politics at state level affect the implementation of these policies? The chapters also discuss different policies initiated at the state level. The chapters conclude that the states vary in implementation of policies owing to difference in political economic conditions, political regimes and interest group formation.

Finally, the conclusion makes a comparison between different phases as well as between the two states. It concludes that policy process in Indian electricity sector has undergone a shift from 'professional' model in 1950s and 1960s to a 'populist' model in 1970s and 1980s. The process has opened up in 1990s owing to the political and economic opening of the country. What is disturbing about the developments in 1990s is the emergence of confusion and conflict of interests among the policy makers. The shifts in the policy making of Indian electricity sector has well reflected the shifts in India's political economy as well as shifts in overall policy-making of the country.

Chapter 1

POLITICAL ECONOMY OF PUBLIC POLICY-MAKING IN INDIA

Policy-making is the process through which governments translate their political visions into programmes and actions. This does not mean governments are independent enough to take policy decisions. There are three kinds of views regarding governments' independence to make policy decisions. The first view claims that the policy options available to policy makers are determined and influenced by various political economic factors like social classes, organised groups, political structure and electoral politics of the state, and international political economic environment. It further argues that policy outcomes in the long run appear to reflect the balance of political economic forces in society, and the extent to which they influence the state action. The second view sees the state as independent of these political economic forces and it considers the state as autonomous agency. Finally, the third view claims that policy options available to the policy-makers are not fully determined by these factors. Although these factors clearly determine the outer boundaries of choice, the policy makers appear to have room for manoeuvre and capacity to influence the content, timing, and sequence of policy initiatives, which defines the 'policy space' for any given issue.

Drawing on these arguments, the chapter examines the public policy-making process in India. It seeks to assess the policy space available to the government and its agencies in India. It seeks to answer the following questions: how the policy space is captured by the political economic forces? How far the policy makers are independent of these forces in India? How has the relationship between these forces and the policy makers changed over time? The first part of the chapter is focused on theoretical debates of policy-making and discusses different political economic factors that govern the policy-making process. It further goes on to discuss how these factors exercise their control over the policy makers. The second part of the chapter deals with policy making process in India. It examines different political economic forces operating in the policy making process in India. It also unveils how these forces have developed over time, since independence.

Political Economy of Public Policy-Making: A Theoretical Analysis

Prior to presenting political analysis of the policy-making process, it is important to discuss "what is a public policy". Policy is that aspect of politics, which concerns most people. In crude terms, policy consists of the 'outputs' of the political

process. It reflects the impact of government on society, i.e., its ability to make things better or to make things worse. The term 'public policy' is construed to encompass the societally binding directives issued by a society's legitimate government. In other words, public policy is "whatever governments choose to do or not to do".[5] Carl Friedrich defines public policy as "a proposed course of action of a person, group, or government within a given environment providing obstacles and opportunities which the policy was purposed to utilise and overcome in an effort to reach a goal or realise an objective or a purpose."[6] Anderson claims that public policies are those policies developed by 'governmental bodies or officials'.[7] The special characteristics of public policies stem from the fact that they are formulated by whom David Easton has called 'authorities' in a political system, namely, "elders, paramount chiefs, executives, legislators, judges, administrators, councillors, monarchs, and the like." These authorities are recognised by the member of the system as having responsibility for these matters and they take actions that are "accepted as binding most of the time by most of the members so long as they act within the limits of their roles."[8]

Most of the literatures on public policy suggest that it is held to be public simply and solely because it originates from a duly legitimated government, which in turn is held to have the authority (within specified limits) of formulating and implementing such policy. In contrast to this argument, Vaison argues that public policy is not public solely because it is originated by the legislature or another branch of the government. It is public precisely because it affects the public, or those citizens who are directly concerned with the particular focus of that policy. It is public because it affects, involuntarily, members of society who had no immediate and direct acquiescence in its formation. The essence of policy's 'publicness' is its ability to bind (obviously with certain limits) citizens who have an interest in the area the policy covers.[9] A policy is public, then, not because of the legal status of the particular organisation (or individual) formulating it, but rather due to of the nature and effect of

---

[5] Thomas R Dye (1972): *Understanding Public Policy*, Englewood Cliff, N.J.: Prentice-Hall, p. 2.

[6] Carl J Friedrich (1963): *Man and His Government*, New York: McGraw-Hill, p. 79.

[7] James E Anderson (1975): *Public Policy Making*, USA: Nelson.

[8] David Easton (1965): *A Systems Analysis of Political Life*, New York: Wiley, p. 212.

[9] Robert Vaison (1973): 'A Note on "Public Policy"', *Canadian Journal of Political Science/Revue Canadienne de Science Politique*, 6(4), pp. 661-662.

the policy itself. It is public if it directly or indirectly affects members of the society outside the organisation initiating the policy. Taking into account the conflicts arising out of these definitions, I offer the following as a useful concept of public policy: *A purposive course of action followed by a person, a group, an organisation (government or private), or government to deal with a problem or matter of public concern.*

This concept of public policy accepts that policies (having implications for public) are made by various organisations and groups other than government. So public policy could be conceived as any 'socially authoritative' decision or directive that binds or strongly influences those in society outside the boundaries of the particular organisation making the policy. Thus public policy would include: (a) statutes enacted by a legislature; (b) decisions handed down by the courts, as finally appealed; (c) rules, regulations, and directives issued by cabinet, or by a government department or agency, acting within its legal capacity; (d) decisions made by a corporation, or a cartel of corporations, which are unopposed by any of the earlier three, that affects goods, services, job opportunities, and such available to the public; and (e) decisions made by other private organisations (such as professional associations) which similarly affect citizens beyond the organisation's membership.[10] Although I accept the fact that public policy includes policies made by non-government bodies, in the following chapters I will mainly focus on policies made by the government or its agencies.

For a better understanding of the nature of the public policy as a course of action, it could be broken down into following five categories. Firstly, *Policy demands* are those demands or claims made upon public officials by other actors, private or official, in the political system for action or inaction on some perceived problem. Secondly, *Policy decisions* are decisions made by public officials that authorise or give direction and content to public policy actions. Thirdly, *Policy statements* are the formal expressions or articulations of public policy. Fourthly, *Policy outputs* are the tangible manifestations of public policies, the things actually done in pursuance of policy decisions and statements. And fifthly, *Policy outcomes*

[10] Ibid., p. 663.

are the consequences for society, intended or unintended, that flow from action or inaction by government.[11]

Policy Process and the Key Players:

Policy making is a cyclical process. It begins with the agenda setting stage with recognition and definition of a significant public problem and an organised call to government action. In response, the legislative and bureaucratic machinery of government may formulate, adopt, and implement a strategy for addressing the problem. Analysis of policy effectiveness in turn often reveals shortcomings in formulation or implementation or new problems to add to the policy agenda. (See Fig. 1)

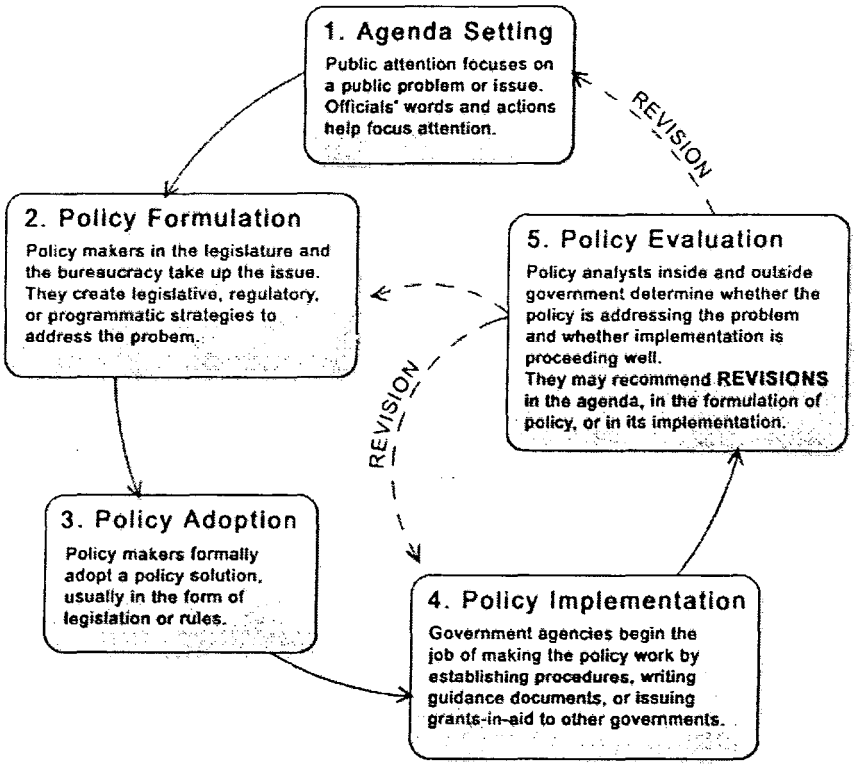


Fig. 1: Policy Making as a Cyclical Process

Source: http://texaspolitics.laits.utexas.edu/html/bur/features/0303_01/policy.html, last accessed on 12.07.2006.

The diagram shows five stages of policy-making process. This is based on Harold D. Lasswell's famous writing on decision-making.[12] The first stage, agenda

[11] James E Anderson (1975): *Public Policy Making*, op. cit.

setting, is when public attention is focused on some public problem or issue, frequently with considerable guidance from officials' words and actions. In the second stage, policy makers in the legislature and bureaucracy formulate legislative, regulatory, or programmatic strategies to address the problem. Given policy proposals, policy makers then in the third stage move to formally adopt a particular solution in the form of laws or bureaucratic rules. Once adopted, government agencies in the fourth stage begin the task of implementing the policy. They establish procedures in accordance with the policy, write guidance documents, and issue grant-in-aid to other government bodies. In the fifth stage, analysts in the implementing agency, the legislature, and outside government evaluate a policy to determine whether it is addressing the problem and whether implementation is proceeding well. Evaluation may reveal a need for revisions in the policy, a need for changes in implementation, or even a whole set of new policies. It may also reveal new problems in need of policy solutions.

Once governments have been created they must govern and the process of governing concerns the formulation and implementation of public policies. "Policy making is the process by which governments translate their political vision into programmes and actions deliver 'outcomes'- desired changes in the real world".[13] This does not mean governments are independent enough to make public policies. The policy options available to policy makers are determined and influenced by various political economic factors like social classes, organised groups, international politics, international economic conditions, political structure, and electoral politics of the state.[14] Policy outcomes in the long run reflect the balance of political forces in society, and the extent to which they influence state action.[15] Thus for a better understanding of the policy-making process we need to analyse the relationship between three key players in the policy making process- the society, the state, and the government.

---

[12] Harold D Lasswell (1956): *The Decision Process*, College Park, Md: Bureau of Governmental Research, University of Maryland.

[13] GoUK (1999): 'Modernising Government': The Stationary Office, Government of UK.

[14] Gerald M Meier, Ed. (1991): *Politics and Policy Making in Developing Countries: Perspectives on the New Political Economy*, op. cit.

[15] Paul Whiteley (1986): *Political Control of Micro-Economy: The Political Economy of Public Policy Making*, op. cit.

Debates around the relationship between the society, the state and the government have been dominated by contemporary Marxist writings. Karl Marx, in 1844, himself provided little guidance about the relationship between the state and society in his most cited work- *Manifesto of the Communist party*: "The executive of the modern state is but a committee for managing common affairs of the whole bourgeoisie".[16] Taken literally, it means that the state is run entirely in the interest of the bourgeoisie, and the working class is unable to influence outcomes. After 1850, Marx himself abandoned this view after the disappointments of revolutions of 1948. He developed somewhat more complex theory, which claims that bourgeoisie abdicate from power or abstain from taking it because they perceive that their interests may be better served by remaining outside politics. This is the origin of the 'neo-Marxist' idea of the state being 'relatively autonomous' of the bourgeoisie even though it acts on behalf of the latter and safeguards its interests.[17] However, Marx himself recognised that the organised working class could influence legislative action in order to further its own interests, when he argued "This organisation of the proletarians into a class...compels legislative recognition of particular interests of the workers by taking advantage of divisions among the bourgeois itself".[18]

After more than one and half century, Marx's presumption has come true, as the proletariats are organised for their interests. But still the government is dominated by the bourgeoisie as the key actors in the state apparatus are predominantly middle and upper class in their social background. Even if both the proletarians and the bourgeoisie as interest groups are playing their role in policy making process through 'articulation of interests' and influencing the proximate policy makers; it is the bourgeoisie interest which is getting the privilege. It is because of the bias in the interest group formation. The frequency of membership in interest groups is strikingly correlated with socio-economic status. The bias is of course not limited to interest group participation. Elected and appointed proximate policy makers are overwhelmingly from the more favoured class. Therefore they will seek out and listen

---

[16] Karl Marx and Frederick Engels (1977): *Manifesto of the Communist Party*, New Delhi: People's Publishing House, p. 44.

[17] Pranab Bardhan (2005): *The Political Economy of Development in India: Expanded Edition with an Epilogue on the Political Economy of Reform in India*, New Delhi: Oxford University Press, Pg. 33.

[18] Karl Marx and Frederick Engels (1977): *Manifesto of the Communist Party*, op. cit., pp. 55-56.

to interest group leaders with whose desires they are already sympathetic. To be sure, officials do not see themselves as representing the interest of some classes against others; rather they see the general interest in the light of their own group affiliations. They see public interest as equivalent to what they agree on.[19] To sum up, the dominant interest in the society has a great control over the policy making process.[20] And usually the dominant interest represents the rich people in the society. They have control over policy process not only because of their control over the capital, but also because they are over represented in the government and other policy making institutions.

Second important factor that determines policy making in any country is the political structure and public institutions of that country. Stephan claims that federal institutions matter for policy making at all points. All federal systems constrain the law making capacity of the democratically elected legislatures at the centre.[21] A unitary state is more autonomous in policy making than a federal state, as in a federal state the sub-national units act as veto players, who need to be satisfied. In a unitary state, the government is independent of these veto players in the policy process.[22] A difference exists between the closed and open political systems, in the way public policies are deliberated, formulated and implemented. Closed political systems are more likely to have a policy process that is centralised, secretive and unresponsive; whereas open political systems are likely to be associated with a reverse set of characteristics- decentralised, consultative and responsive. However, this happens in ideal type of political systems. Characteristics associated with closed political system are not limited to authoritarian regimes but may exist in democracies and authoritarian

---

[19] Charles E Lindblom (1968): *The Policy-Making Process*, Englewood Cliffs, N.J.: Prentice-Hall.

[20] Mancur Olson (1977): *The Logic of Collective Action: Public Goods and the Theory of Groups*, Cambridge: Havard University Press.

[21] Alfred Stepan (1999): 'Towards a New Comparative Analysis of Democracy and Federalism: Demos Constraining and Demos Enabling Federations', paper presented at a conference on *Federalism, Democracy and Public Policy*, Centro de Investigacion y Docencia Economicas, Mexico City, Mexico, p. 2.

[22] T N Srinivasan and Jessica Wallack (2003): 'Federalism and Economic Reform in a Global Economy', available online at http://www.yale.edu/leitner/pdf/PEW-SW.pdf, last accessed on 21.04.2004, p. 41.

regimes may be open in terms of public policy making.[23] At the same time, an authoritarian government will be more autonomous than a democratic government, as in the latter all the stakeholders have a say in the process. The democratic governments are less autonomous because of greater influence by rent-seeking groups. Authoritarian governments, by contrast, can override interest group demands by fiat. Partly because of their ability to dominate interest groups, authoritarian governments also have longer time horizons.[24] However, powerful leaders in democracies can initiate and implement some policy changes that they deem necessary. But there are fairly sharp limits on how far and how fast those changes can be implemented in a democracy.[25]

In the recent years, drawing from new institutional economics and historical institutionalism, many works have emphasised on the critical role of public institutions and how and why they matter. Institutions structure incentives for actors within society and provide mechanisms for coordination, sometimes enabling and sometimes impeding it. Explaining performance and design of public institutions in India, Kapur and Mehta claim that institutions are public simply because "they represent some aspects of the exercise of state power." The performance of these public institutions varies to a great extent: some institutions manage political pressures and societal demands better than others. Institutions and institutional capacity can themselves often shape the configuration of social forces.[26] Thus, existence of public institutions and their performance has a great impact on the policy process.

The third important factor in the policy making process is the electoral politics of the country. A central insight of the theory of political business cycles is that timing is critical for successful policy reform. Simple models of political business cycle postulates that parties in power will manipulate macroeconomic policy in the

---

[23] Mark Robinson (1998): 'Democracy, Participation, and Public Policy: The Politics of Institutional Design', in Mark Robinson and Gordon White edited. *The Democratic Developmental State: Political and Institutional Design*, Oxford: Oxford University Press, pp. 150-186.

[24] Stephan Haggard and Steven B Webb (1993): 'What do We Know about the Political Economy of Economic Policy Reform', *The World Bank Research Observer*, 8(2), pp. 143-168.

[25] Atul Kohli (1989): 'Politics of Economic Liberalisation in India', *World Development*, 17(3), p. 305.

[26] Devesh Kapur and Pratap Bhanu Mehta, Eds. (2005): *Public Institutions in India: Performance and Design*, New Delhi: Oxford University Press.

short run to maximise their electoral chances, stimulating the economy as elections approach and stabilising immediately afterward. Parties have macroeconomic policy preferences that reflect the material interests of their constituencies. But, there is only scattered evidence from developing countries on how party orientation might affect policy making, in part because the simple distinction between left and right- useful in understanding political cleavages in developed countries- does not easily fit the developing world. Dominant parties capable of ruling by themselves have the easiest time securing legislative support for their programs. Coalition governments fare less well, and minority governments and presidential systems in which the president and legislature are of different parties have the greatest difficulty. In general, fragmented party systems encourage bidding wars among contending political forces, make legislative support difficult to mobilise and ruling coalitions hard to sustain, contribute to political instability.[27] Peter Hall argues that policy changes are not a result of autonomous action by the government, but are response to "an evolving societal debate that soon became bound up with electoral competition."[28]

Political stability of governments is also a determinant of stable policy making. Societies which have experienced long period of government under one dominant party, or under a dominant power bloc have been able to implement relatively successful economic and industrial policies. An incumbent regime that believes its days are numbered will be strongly tempted to drum up support through expansionist policies, even if this policy is self-defeating over the longer run.[29] Political base of the political parties shows the bias in policy making process. Wide

---

[27] Stephan Haggard and Steven B Webb (1993): 'What do We Know about the Political Economy of Economic Policy Reform', op. cit.

[28] He views policy making as a process of social learning where the most important influence is previous policy itself. The important point in policy making process is that 'powering' and 'puzzling' often go together. Both are dimensions of the process whereby policy changes, especially in democratic polities. Politicians compete for office precisely by propounding new solutions to collective problems which appeal to the electorate. Officials advance their own fortunes within the bureaucracy partly by devising new approaches to old dilemmas. The institutional arrangements designed to marry the public interest to private interests in a democracy rarely works perfectly, but they do operate so as to militate against a rigid distinction between power-based and idea-based models of politics. The competition for power, thus, can be itself a vehicle of social learning. Peter A Hall (1993): 'Policy Paradigms, Social Learning, and the State: The Case of Economic Policy-Making in Britain', *Comparative Politics*, April.

[29] Paul Whiteley (1986): *Political Control of Micro-Economy: The Political Economy of Public Policy Making*, op. cit.; Stephan Haggard and Steven B Webb (1993): 'What do We Know about the Political Economy of Economic Policy Reform', op. cit.

political base of the ruling party will be corresponded in more responsive and unbiased policy making. Similarly, limited political base of the ruling party will result in biased policy making targeted towards a limited group of people.

Finally, the external political environment also plays an important role in policy making process.[30] To a great extent policy making in the developing countries is guided and constrained by the prevailing dominant economic ideologies.[31] There are at least three channels through which the external milieu might influence policy choice: first, cycles of prices and demand can influence the propensity for policy reform; second, policy choices are influenced by international networks and socialisation that result in the transmission of policy relevant knowledge; and finally, external actors seek to influence policy more directly through loan conditionalities.[32] Another important channel is voluntary policy transfers[33]. International financial organisations play a critical role in this process.[34] In the last few decades, International financial institutions, by promoting their model of development through aid and loan conditionalities, have been shrinking the 'policy space' in developing countries so much so that ability to achieve economic development is being threatened.[35] Gallagher argues that existing and proposed rules for the global

---

[30] Stephan Haggard and Steven B Webb (1993): 'What do We Know about the Political Economy of Economic Policy Reform', op. cit.

[31] James E Anderson (1975): *Public Policy Making*, op. cit.; Sunila S Kale (2004): 'Current Reforms: The Politics of Policy Change in India's Electricity Sector', *Pacific Affairs*, 77(3), pp. 467-491.

[32] Loan conditionality is a bargain game with several steps. The international financial institutions may have leverage at the outset, when the governments' need of support is urgent, but the success of the program depends on its implementation. Gustav Ranis and Sayed Mahmood (1992): *The Political Economy of Development Policy Change*, Cambridge: Basil Blackwell.

[33] Policy transfer is the process by which knowledge of ideas, institutions, policies and programmes in one time and/or place is fed into the policy making arena in the development of policies and programmes in another time/or place. Policy transfer is dependent upon the transforming political system possessing the political, bureaucratic and economic resources to implement the policy. Where policy transfer is coercive the effects are inevitably negative. In developing countries it may result in 'inappropriate administration'. Richard Common (1998): 'The New Public Management and Policy Transfer: The Role of International Organisations', in Martin Minogue, Charles Polidano and David Hulme edited. *Beyond the New Public Management: Changing Ideas and Practices in Governance*, UK: Edward Elgar, pp. 59-75.

[34] Ibid.

[35] Kevin P Gallagher, Ed. (2005): *Putting Development First: The Importance of Policy Space in the WTO and International Financial Institutions*, London: Zed Books; Ha-Joon Chang (2006): 'Policy Space in Historical Perspective with Special Reference to Trade and Industrial Policies', *Economic and Political Weekly*, p. 627.

economy are restricting policy spaces for development in nations that need development most.[36] The current phase of shrinkage in policy space started in 1980s, when the World Bank and the IMF massively expanded their 'programme' loans in after math of the debt crisis in 1982 in the form of structural adjustment programme (SAP) and broadened the scope and enhanced the strength of the conditionalities attached to their loans. While in the early days, the conditionalities set by these organisations concerned budget deficits, monetary expansion, privatisation and liberalisation, these days, there is virtually no area on which these organisations do not have control. Along with the World Bank and the IMF conditionalities, aid policies of developed countries have also contributed to the shrinkage of policy space in developing countries. Since 1980s, the conditions attached to aid by the donor countries have stretched to include policy recommendations similar to that of the World Bank and the IMF. This is because of the fact that the World Bank and the IMF are controlled by those countries that are main providers of foreign aid to developing countries.[37]

These different factors, in the policy making process, exercise their power in different forms through force, manipulation, persuasion and authority to secure compliance. All these actors play their role in a specified policy space. While power exerted by these factors work as 'inputs' to the policy makers, it is the proximate policy makers who produce the 'outputs'. (See Fig. 2)

[36] Kevin P Gallagher, Ed. (2005): *Putting Development First: The Importance of Policy Space in the WTO and International Financial Institutions*, op. cit., p. 1-3.

[37] Ha-Joon Chang (2006): 'Policy Space in Historical Perspective with Special Reference to Trade and Industrial Policies', op. cit., pp. 627-633.

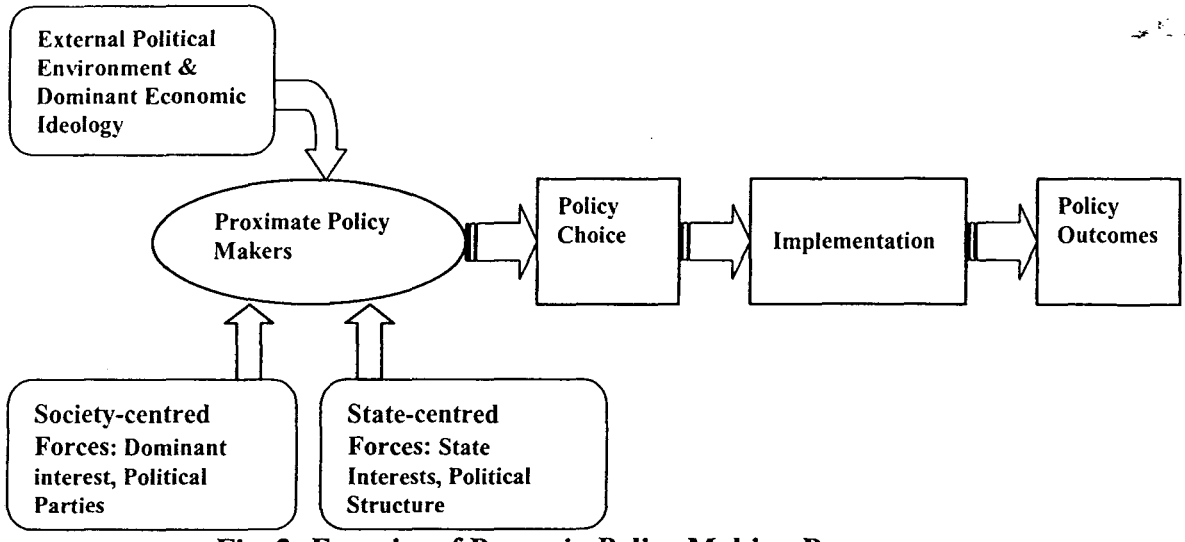


Fig. 2: Exercise of Power in Policy Making Process

Source: Gerald M Meier, Ed. (1991): *Politics and Policy Making in Developing Countries: Perspectives on the New Political Economy*, California: ICS Press.

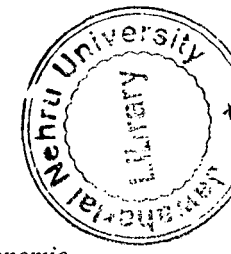
Grindle and Thomas argue that the options available to policy makers are not fully determined by the political economic factors. These factors clearly determine the 'outer boundaries of choice', but, regardless of the issue, policy makers appear to have room for manoeuvre and capacity to influence the content, timing, and sequence of policy initiatives. This room for manoeuvre and influence defines a 'policy space' for any given issue, a space that is determined by the ability of a regime and its political leadership to introduce and pursue a policy measure without precipitating a regime or leadership change or major upheaval and violence in the society, or without being forced to abandon the initiative. The boundaries of policy space can be enlarged or constricted by the action of policy makers and their skill in utilising the technical, economic, political, and bureaucratic resources available to them.[38]

Within their perceptions of what constitutes the available policy space for any given issue, policy makers play important roles in defining the content of the policy. Policy makers generally have articulate and logical explanations for the problem they seek to solve. Thus, for any given problem they confront, they are likely to have or develop a coherent explanation of its causes and a set of ideas about how best to respond to it. These understandings and perceptions of cause-and-effect relationships are important in terms of the measures adopted to deal with particular problems. Thus,

[38] Merilee S Grindle and John W Thomas (1991): *Public Choices and Policy Change: The Political Economy of Reform in Developing Countries*, Baltimore: The Johns Hopkins University Press.

an important ingredient in policy initiatives is how policy makers define the problem and what they perceive to be valuable solutions.[39]

Any new policy will have some winners and some losers. While the winners will support the policy change, the losers will oppose it. In contrast to the winners, the losers are more organised and they resist reduction in the benefits through policy changes.[40] Long back in 16th Century, Machiavelli had rightly opined: "There is nothing more difficult to plan, more doubtful of success, more dangerous to manage, than the creation of a new system. For the initiator has the enmity of all who would profit by the preservation of the old system and mere lukewarm defenders in those who would gain by the new one".[41] Existence of a constituency of winners with a stake in sustaining and advancing policy reform will contribute to the process. This has been a common strategy both for making the policy reforms irreversible and building up the necessary political support for further policy making. Joel Hellman studying reforms in post-communist countries found that the winners can do far more damage to the progress of reforms than the losers. While the probable losers will oppose any new policy change, the winners may halt the policy reform in the mid course when their benefit is highest. Actors who enjoyed extraordinary gains from the distortions of a partially reformed economy will fight to preserve those gains by maintaining the imbalances of partial reform overtime.[42] On the same line, Dhar argues that policy changes strengthen the existing interest groups and lead to the emergence of new interest groups which are benefited from the change.[43] Even in



[39] Ibid.

[40] Anne O Krueger (1974): 'The Political Economy of the Rent-Seeking Society', *American Economic Review*, 64(3), pp. 291-303; Pranab Bardhan (2005): 'Nature of Opposition to Economic Reforms in India', *Economic and Political Weekly*.

[41] Nichole Machiavelli (2002): *The Prince*, London: Oxford University Press.

[42] Hellman suggests that the success of policy reform depends both on creating winners and on constraining them. Paradoxically, the most effective means of constraining the winners in the post-communist countries has been to guarantee the political inclusion of the very constituency that most existing political economy models seek to exclude- the short-term losers of reform. Joel S Hellman (1998): 'Winners Take All: The Politics of Partial Reform in Post-Communist Transitions', *World Politics*, 50(2), pp. 203-234.

[43] P N Dhar (2003): *The Evolution of Economic Policy in India: Selected Essays*, New Delhi: Oxford University Press.

some cases, when the citizens are uncertain about benefits at the aggregate and individual levels they will oppose to the policy change.[44]

All these political economic factors not only exercise their influence at the stage of policy choice (the first stage of cyclical model), but also they have a great control over the other stages, particularly at the implementation level. This has led to a wide gap between policy choice and its implementation. Sustainability and effective implementation of policy changes and new policies depend on the policy makers' and the implementing agencies' capacity to balance these political economic actors and the forces they exert. The existence of a small dedicated elite bureaucracy (staffed by best management talents) and political leaders who are motivated by a clearly defined goal of economic development facilitates the policy making process and makes it more stable.[45] The political system should allow the bureaucrats sufficient scope to operate and implement the policy without the interference of special interest groups. There should be a broad political consensus in the society about the new policies.[46] And finally there is a need for the continuity of policy. In the following section, I will discuss how these theoretical models apply to Indian context with reference to the electricity sector.

Political Economy of Policy-Making in India

Public policy making in India has frequently been characterised by a failure to anticipate needs, impacts, or reactions which could have reasonably been foreseen, thus impeding economic development. Policies have been reversed or changed more frequently than warranted by exogenous changes or new information.[47] Since independence till present, policy making in India has been shaped by the changing

---

[44] Fernandez and Rodrik blame uncertainty regarding the distribution of gains and losses from policy reform, for governments' failure to adopt efficiency-enhancing policies. These is a bias towards the status quo (and hence against efficiency-enhancing policy reforms) whenever some of the individual gainers and losers from reform cannot be identified beforehand. There are reforms which, once adopted, will receive adequate political support but would have failed to carry the day *ex ante*.Raquel Fernandez and Dani Rodrik (1991): 'Resistance to Reform: Status Quo Bias in Presence of Individual-Specific Uncertainty', *American Economic Review*, 81(5), pp. 1146-1155.

[45] Paul Whiteley (1986): *Political Control of Micro-Economy: The Political Economy of Public Policy Making*, op. cit.; Arnold C Harberger (1993): 'Secrets of Success: A Handful of Heros', *American Economic Review*, 83(2), pp. 343-350.

[46] This political consensus is, very often, referred as 'political will' in Indian context.

[47] O P Agarwal and T V Somanathan (2005): 'Public Policy Making in India: Issues and Remedies', New Delhi: Centre for Policy Research, pp. 1-6.

international and domestic political compulsions[48] and the nature of the process has been continuously transforming coping with the social and political transformation in India. Rushikesh Maru studying policy making in health sector over a period of 1947-75, found that policy making in India has shifted from a 'professional' model to a 'populist' model. He provides four clusters of explanatory variables for this shift in policy making: first, personal socialization background of relevant actors; second, attitude and opinions of the relevant professional and political elites towards policy issues; third, relative influence of various individual actors and groups; and finally, environmental influences such as resource constraints, popular pressure for redistribution of resources, ideological milieu and external influences.[49] Similar kind of shift in the policy process is very much visible in the Indian electricity sector. The shift to a populist model of rent-dissipation through electricity prices in 1970s provides an example to the claim. Agnihotri points out two distinct, although not mutually exclusive, tendencies in public policy making in India- structured and unstructured. The structured approach to policy making results in outputs variously termed as national policies, policy statements, policy resolutions, policy measures, action plans and so on. Unstructured policy making is the normal and universally practised method where policy making proceeds from problem identification to selection of a suitable policy alternative to solve the problem.[50]

Policy Process and the Key Player in India:

For a better understanding of the public policy making in India, we need to understand the relationship between the state, the government, and the society. These three dominant players of policy process better fit into the 'iron triangle'[51] model

---

[48] P N Dhar (2003): *The Evolution of Economic Policy in India: Selected Essays*, op. cit.

[49] Rushikesh M Maru (1985): 'Policy Formulation as Political Process- A Case Study of Health Manpower: 1947-1975', in R S Ganapathy, S R Ganesh, Rushikesh M Maru, Samuel Paul and Ram Mohan Rao edited. *Public Policy and Policy Analysis in India*, New Delhi: Sage Publications.

[50] V K Agnihotri, Ed. (1995): *Public Policy Analysis and Design*, New Delhi: Concept Publishing Company.

[51] Iron Triangle is a phrase typically used by American political scientists to describe cosy relationships in U.S. politics between the legislature, government bureaucracies, and interest groups that result in tight policy-making circles. The term is frequently used in discussions about the possible control of government agencies by special interest groups, especially the Military-industrial complex. In this context, iron triangle refers to the relationship amongst the weapons industry/military contractors, the military bureaucracy headquartered at The Pentagon, and politically powerful legislators in the United States Congress. Central to the concept of an iron triangle is the assumption that bureaucratic agencies,

often used to describe policy process in America.[52] They represent three key power points in the policy process (see Fig. 3); the government is the proximate policy maker, the state with its institutional structures, to a large extent, influence the process, and the society represents different interest groups, who compete among themselves to have their share of control over the process.

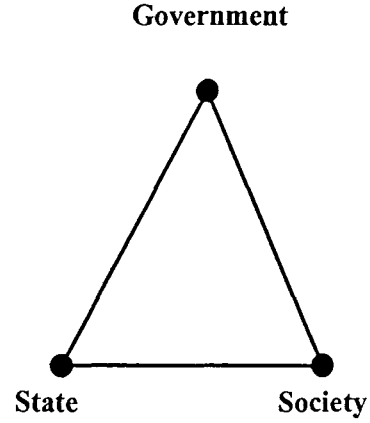


Fig. 3: Iron Triangle model of policy process

India is a federal state comprising of twenty-nine states and six Union Territories. All the states have their own governments and both the states and Union Territories are represented in the Indian parliament. Other than this, Indian has also inherited Indian Civil Service from the British Indian government, which creates an elite cadre of bureaucrats both at the state and central level. Thus, there exists a group of proximate policy makers representing different regions with a different socio-economic and political culture. Existence of a sub-national government at the state level has resulted in policy making at two levels- one at the state level and other at the central level. While the central level policy making, in most cases, is done with the consensus of the sub-national actors, which is binding upon the latter, the state level policy making, to a large extent, influences the central policy making. Existence of a federal system with policy making at two levels has affected the policy making in electricity sector both positively and negatively. Moreover, the entry of electricity in

---

as players in the political game, seek to create and consolidate their own power base. In this view an agency's power is determined by its constituency, not by its consumers. (For these purposes, *constituency* is defined as a group of politically active members sharing a common interest or goal; *consumers* are the expected recipients of goods or services provided by a government bureaucracy and are often identified in an agency's written goals or mission statement.)

[52] Jerri Cockrel (1997): 'Public Policymaking in America'. *Cooperative Extension Service*: University of Kenticky, pp. 1-4.

the 'concurrent list', where both the central government and the state governments have joint jurisdiction, has contributed to the fact. On the positive side, this has resulted in uniform institutional structure in the states. On the negative side, there is a wide variation in policy choice at state level and also, the states vary in implementing the policies initiated by the Central Government. This has led to wide disparity in performance of state electricity boards and utilities.

Although, Indian federalism is much influenced by the United States model, it varies from the latter in certain aspects. Firstly, in contrast to the United States, India has certain unitary features, which give the Centre more power over the states. Secondly, United States has a population of around 250 million divided among 52 states, while India has a population of more than 1 billion spread out among 29 states. The boarder areas of North-East and North-West are trouble areas since independence and represent secessionist movements. That is why, the concern of national unity and integrity have always dominated the policy concerns of the Central Government. A consequence of such thinking has been hesitant decentralisation and reluctant opening up of decision-making process to wider sources of consultation and advice.[53]

On the other hand, India has a parliamentary system of government, where the Prime Minister is the real head of the Centre, as well as the country. But still the Prime Minister is accountable to the executive, to the legislature, and to the political party he represents. At the state level, the system of government is similar with the Chief Minister as the real head of the state. He is also accountable to the executive, legislature and the political party he represents. At both the levels, there are separate ministries for each departments, which are accountable to the executive, to the head of the government and to the party. These political parties have their distinct political bases, which they protect through manipulating government policies in favour of their political bases. Over time, electricity sector in India has been used for this purpose.

The institutional framework for policy making at the Central Government level in India has the Council of Ministers headed by the Prime Minister at its apex.

---

[53] Kuldeep Mathur (2000): 'Governance and Alternative Sources of Policy Advice: The Case of India', paper presented at a conference on *Beyond Economics: Multidisciplinary Approaches to Development*, Tokyo, Japan.

For facilitating its work the Council of Ministers makes use of the committee system[54] comprising standing committees which are assigned specific areas, and as well as ad hoc committees which are constituted to investigate and report on specific issues as and when needed. However, the actual functioning of the Council of Ministers largely depends on the leadership of the Prime Minister and, in recent times, the holders of this office have tended to be the principal decision makers supported by their independent secretariat. The creation of Prime Minister's secretariat in 1965 was an institutional innovation of far reaching consequences with regard to the policy making process in India. Over a period of time the Prime Minister's Office, headed by a secretary, has tended to become a super-ministry of officials who are accountable only to the Prime Minister. In addition, the Prime Minister often enlists the support of experts as advisors to assist him in discharge of his policy making functions in certain areas. In some ways National Development Council is the highest policy making body in the country. The other 'super' policy making body is the Planning Commission which is also chaired by the Prime Minister.[55] Along with these public institutions, the Indian electricity sector has some sector specific institutions like the Central Electricity Authority (CEA), Rural Electrification Corporation Ltd. (REC), National Thermal Power Corporation (NTPC), National Hydro Power Corporation (NHPC), etc. And recently, a set of independent regulatory commissions have been set up both at the state and central level.

Kapur and Mehta argue that societies are well organised to the extent that their public institutions can adequately manage the demands imposed on them. It is commonly held that a modest record in development and governance in India is explained by the somewhat limited utility of many public institutions.[56] Kapur argues that increasing political competition and concomitant political instability has strengthened some aspects of India's institutions while weakening others. While India

---

[54] The suggestions of these committees make increasingly greater input on official government policy choices. The composition of each committee and the nature of its sponsor are critical determinants of the scope and nature of policy analysis conducted by each committee T L Sankar (1985): 'Energy Policy Formulation- The Indian Experience', in R S Ganapathy, S R Ganesh, Rushikesh M Maru, Samuel Paul and Ram Mohan Rao edited. *Public Policy and Policy Analysis in India*, New Delhi: Sage Publications..

[55] Pai Panandikar (1985): *Policy Making in India*, New Delhi: Centre for Policy Research.

[56] Devesh Kapur and Pratap Bhanu Mehta, Eds. (2005): *Public Institutions in India: Performance and Design*, op. cit.

has found it hard to institutionalise the many organisational forms it creates (be it state institutions, non-profits and non-governmental organisations, think-tanks, and academic institutions or private firms), the country finds it easier to create new organisations which weave new strands even as earlier institutional strands fray.[57]

Electoral politics of India has passed through a long transformation, where it has moved from a single-party dominance system to a multi-party coalition system. Immediately after independence, for almost two and half decades India had a stable one-party dominance system with the Congress party at the leading end. Electoral competition was between the Congress and the opposition, where the latter was weak enough to challenge the Congress hegemony. This established consistency in the policy making and implementation at central level and state level. Later in 1970s, emergence of new regional parties based on certain regional issues became the feature of Indian electoral politics. During the second half of 1970s and 1980s, these regional parties strengthened their base at state level and by late 1980s, these regional or state-based parties ensured their presence in the parliament. This resulted in formation of minority governments at the central level, and later coalition governments became the trend. As no single party is able to secure absolute majority, different political parties with different ideologies and different objectives forged coalitions to form the government. By the second half of 1990s, the same trend emerged at the state level, as a number of regional parties emerged in a state. This has resulted in conflict of interests within the policy-making agency and a non-coherent policy making and implementation at the state and central level. The transformation of India's electoral politics has been well reflected in policy making in the electricity sector. For example, the emergence of regional parties with a strong peasantry base led to lowering of agricultural tariffs in 1970s.[58] The worst effect of increasing instability in India's electoral politics was realised during the reform period. During this period of 1990s, political parties maintained a double standard on electricity reforms. While the parties

---

[57] Devesh Kapur (2005): 'Explaining Democratic Durability and Economic Performance: The Role of Indian Institutions', in Devesh Kapur and Pratap Bhanu Mehta edited. *Public Institutions in India: Performance and Design*, New Delhi: Oxford University Press.

[58] Stuart Corbridge and John Harriss (2004): *Reinventing India: Liberalization, Hindu Nationalism and Popular Democracy*, New Delhi: Oxford University Press, p. 81; Pranab Bardhan (2005): *The Political Economy of Development in India: Expanded Edition with an Epilogue on the Political Economy of Reform in India*, op. cit.

remained in power, they used to support the reforms; once they are out of power the same parties opposed the reform policies initiated by them.

Indian political democracy grants one adult (18 years old or above) one vote, which gives the poor mass in India immense control over the electoral politics. Although the system does not work perfectly, and the rich are often able to purchase votes, the 'maturing of Indian democracy' has meant that the power of the rich and powerful to determine the outcomes of elections has increasingly been constrained.[59] However, with the maturing (I would prefer the term 'widening') of Indian democracy, the poor and hitherto marginalised communities have come up to claim their share of control over the policy process along with the existing rich and the dominant groups, which has resulted in a clash of interests. This clash of interests emerged in Indian electricity sector, when the agricultural tariff was lowered owing to a demand from the farmers and domestic tariffs were deliberately fixed much below the cost to serve, obviously for political reasons. These two trends in electricity pricing led to the emergence of 'cross-subsidisation' from the industrial consumers, which the industrialists opposed vehemently.

India has a structure of interest-groups partly inherited from the struggle for freedom. But some of these groups, especially peasants and trade-union groups, are weakened by being subordinated to political parties. As the Congress party controlled many of these groups, sometimes the former turns these groups into a propaganda arm of the party. And till early 1980s, the Congress party managed to control these interest groups by establishing a punishment regime. Later some of these groups formed independent parties to separate from the Congress. Other than these groups, the industrialists since the pre-independence period have been working as most influential interest group in India. Through their control over capital, they have been able to influence the government policy making. In the pre-independence period these industrialists used to fund the freedom struggle, now they are major sources of election funding. This dependence of political parties on industrialists for election funding has made the former obliged to the latter and to make favourable policies for them after coming to power. The rich peasantry in India also has a strong lobby in the

[59] Amit Bhaduri (2005): *Development with Dignity: A Case for Full Employment*, New Delhi: National Book Trust, p. 12.

policy process, particularly since late 1960s after the Green Revolution.[60] Their emergence in the regional/state politics has contributed to it. The public sector employees also form a strong interest group by creating large unions.[61] As these two groups of peasantry and public sector employees form big vote-banks, their interest is always considered by the governments.

Since 1970s, India started borrowing from IMF, later followed by loans from the World Bank and other developed countries. These institutions provide loan and aid with certain conditionalities, which India had to follow in the due course of time. With their aid and loans these institutions also impose their model of development on the borrowing countries. During last few decades, this has, to a large extent, governed the policy making process in India. Alagh claims that the early 1990s reforms in India were shaped by the Bretton Woods Institutions. The reform process continued at an even keel, there was no particular Indian contribution to the thinking.[62] During 1990s, the World Bank has provided a huge amount of loan for infrastructure restructuring, predominantly for electricity sector restructuring in Indian states. In all the cases, where the Bank has financed the restructuring, it is claimed, the Bank has dictated the reform policy.

The policy making process in India itself is necessarily polyarchal. However, two broad categorisations could be made, namely, political and administrative, which ultimately merge in final policy output. In some cases, however, they are simultaneously in operation. By and large, the political process is more complex and originates from diverse sources, but most importantly from the political parties which do not always have a policy-orientation. Their role in policy making comes into focus at the time of general elections when important ones among them publish their manifestos. The election manifesto of a party is traditionally the policy framework for its governmental decision-making. However, these manifestos, to a large extent, do

---

[60] Stuart Corbridge and John Harriss (2004): *Reinventing India: Liberalization, Hindu Nationalism and Popular Democracy*, op. cit., p. 64; Pranab Bardhan (2005): *The Political Economy of Development in India: Expanded Edition with an Epilogue on the Political Economy of Reform in India*, op. cit.

[61] Pranab Bardhan (2005): *The Political Economy of Development in India: Expanded Edition with an Epilogue on the Political Economy of Reform in India*, op. cit.

[62] Yoginder K Alagh (2004): 'Policy without Theory: Indian in a Globalising Economy', *Economic and Political Weekly*.

not get translated into specific policies, programmes and schemes when the party comes to power.[63]

These political economic factors are important players in the policy making process in India. To a large extent, they determine the policy options available to the proximate policy makers and they also exercise their power at the implementation of these policies. However, the policy makers get enough space for manipulation. The volume of the space that the governments get depends on how they manage their relationship with the society.

Changing Relationship between the State, Government and Society in India:

For a better understanding of the policy process in India and the role of political economic actors in the process, it is necessary to discuss the relationship between the state, government and society in India. This relationship has been continuously transforming since independence, resulting in a shift in the nature of the policy process. However, this transformation can be categorised into three distinct phases: the first phase is the Nehruvian era (1947-1966), which saw a broad consensus among the three players, as a legacy of the nationalist movement. The second phase is from 1966 to 1989, which saw a decline in this consensus owing to the emergence of the 'politics of individuation'.[64] The third phase, beginning in 1990, has been experiencing lot of confusion and conflict of interests among and within the players, due to pluralisation of the state and society.

During the first phase, Indian state was in the process of making. New institutions were being created and institutionalised. The political system, during the phase, was dominated by the Congress Party, which inherited the power as a legacy of the nationalist movement. The Congress took root and came to political power not as a political party but as a movement for independence and reform. As the movement had a mass base and encompassed all the major sections and interests of the Indian

[63] V K Agnihotri, Ed. (1995): *Public Policy Analysis and Design*, op. cit.

[64] The phrase 'politics of individuation' or 'individualisation of politics' meant the personal quest for power and the setting apart of competing personalities and groups and the expected programmatic homogeneity and unity in the residuary power groups. Iqbal Narain (1970): 'Democratic Politics and Political Development in India', *Asian Survey*, 10(2), pp. 88-99.

society, it acquired a stamp of legitimacy and came to represent what Rajni Kothari called a 'historical consensus'.[65]

India experienced a 'one party dominant' system during the phase, which was called the 'Congress system'[66]. The system had five distinct features, which made it different from other political systems. Firstly, the Congress, after coming to power, assigned a positive and overwhelming role to government and politics in the development of society. Secondly, it emphasised the power of the central authority for national survival. Thirdly, it made legitimacy the principal issue of politics and gave to the government and the ruling party a great symbolic value. Fourthly, the Congress, after coming to power, concentrated the resources, monopolised patronage and controlled economic power, which crystallised the structure of its power and made competition with it a difficult proposition. Finally, by adopting a competitive model of development, it made mobilisation and public cooperation a function of political participation.[67]

As the Congress controlled all the economic powers, it would have been suicidal for the new sections of interest to join or form an opposition party and invite the hostility of the ruling party. So the new sections of interest also joined the Congress system, resulting in broadening of the social and ideological base of the system. However, the credit for sustaining the system goes to the strong political leadership of Jawaharlal Nehru. He managed to turn the Congress into an umbrella party, accommodating all kinds of ideologies and interests. He properly utilised the sentiments of struggle for independence, to ensure unity in Indian political society. The relationship between the government and the society was legitimised and emphasised for overall development of India; and the Indian state was building up on the basis of this relationship. This led to a broad consensus among the three players on the issues of development and policy-making. Nehruvian socialism which emphasised on public sector led industrialisation was widely accepted. Although, during the initial period, this consensus was an outcome of the sentiments inherited from freedom struggle, latter it sustained because of the fact that the Congress controlled the

---

[65] Rajni Kothari (1964): 'The Congress 'System' in India', *Asian Survey*, 4(12), pp. 1161-1173.

[66] For a detailed account of the Congress System, see Ibid; Rajni Kothari (1974): 'The Congress System Revisited: A Decennial Review', *Asian Survey*, 14(12), pp. 1035-1054.

economic powers and going against the consensus would have resulted in loss of the economic benefits.

However, by 1967, this consensus started breaking down. Firstly, because India did not have the able leadership of a person like Nehru. Secondly, because the new sections of interest were emerging during the phase, often against the Congress. The general election of 1967 has been considered as a milestone in the transition of Indian electoral politics. It started the transition from a 'one party dominant' system or 'Congress system' to a multi party competition system, with an end to a historic phase in India's political development. The country was passing through an essentially transitional period of political polarization. Narain describes it as the 'politics of individuation'.[68] Rudolph and Rudolph refer this period as 'state-dominated pluralism', under which the political arena was populated by relatively autonomous interest groups, but they were overshadowed by an 'omnipresent state'.[69] Beginning from 1967 election, the Congress Party had to face opposition from some newly-formed regional or state-based parties. The mid-term poll of 1969 in four states (i.e. West Bengal, Punjab, Uttar Pradesh, and Bihar) again proved the strength of these regional parties. The regional parties were the result of increasing political power of the rich peasantry, and of their capacities to mobilize support across rural India because of the connections of kinship, caste and patronage. Their increasing local power in important parts of north India was tied up also with the horizontal mobilisation of backward classes. The rise of rich peasantry has eroded the hold of the historically dominant high-caste local elites and, in the process, that of the Congress Party.[70]

Francine Frankel claims that the 1969 mid-term election in Uttar Pradesh marked the emergence of peasantry in Indian politics and says it "signalled the first

---

[67] Rajni Kothari (1964): 'The Congress 'System' in India', op. cit.

[68] Iqbal Narain (1970): 'Democratic Politics and Political Development in India', op. cit.

[69] Lloyd I. Rudolph and Susanne Hoeber Rudolph (1998): *In Pursuit of Lakshmi: The Political Economy of the Indian State*, New Delhi: Orient Longman Limited.

[70] For example, Charan Singh, a long-time Congress leader in Uttar Pradesh, first brought about the collapse of the Congress government in the state in 1967 by leading his supporters out of the party. Subsequently, he formed the Bharatiya Kranti Dal (BKD) in 1969 for the mid-term polls, which emerged as the second largest party in the state with 99 seats. Stuart Corbridge and John Harriss (2004): *Reinventing India: Liberalization, Hindu Nationalism and Popular Democracy*, op. cit., p. 82.

signs of changing patterns of peasant participation toward new forms of horizontal alignments, as customary ties between upper-caste landlords and low-status peasant cultivators and landless groups began to erode. The long-term viability of vertical patterns of political mobilisation was called into question within the Hindi-speaking heartland itself'.[71] Same trend of political factionalism and defection from the Congress emerged in other states also. In 1970, Biju Pattnaik, a strong and vibrant leader of the Congress party who had been the Chief Minister of Orissa during 1961 to 1963, resigned from Congress party and formed a new party called Utkal Congress. In 1971 elections in Orissa, the Utkal Congress party could manage to win only 33 seats. Latter Biju Pattnaik joined hands with Bharatiya Lok Dal in 1974 and became the President of the local branch. He also was the opposition leader. Later he played a major role in the formation of the Janta Dal in 1976.[72] Gradually, same trend of political competition emerged in the southern states. By late 1970s and early 1980s, the regional parties had established their credential in respective states. For example, newly formed *Telegu Desam Party* (TDP) in Andhra Pradesh led by N T Ramarao won its first election in 1982 and the Janata Party in Orissa led by Biju Pattnaik won the 1977 election in the state. All these state-based non-Congress parties used 'economic leftism' to attract popular support. To face the challenge from these regional parties, the Congress Party also came up with regional issues and tried to restore its political base among the backward class voters, predominantly in rural India.

Another reason for the emergence of regional parties in opposition to the Congress and political factionalism within the party may be the autocratic leadership of Indira Gandhi. She began to dismantle the democratic principles put up so carefully by Nehru. Under her tenure during 1966-77, the Congress party's local roots withered, the principles of federalism were flouted, bureaucracy was politicised, secularism was compromised and independence of judiciary was undermined.[73]

However, despite growing opposition from the regional parties, the Congress managed to dominate Indian national politics till late 1980s except for the brief Janata

---

[71] Francine R. Frankel (2005): *India's Political Economy 1947-2004*, New Delhi: Oxford University Press, p. 387.

[72] http://www.123orissa.com/ accessed on 04.07.2006.

interlude from 1977 to 1980. During these four decades, the Congress system has enjoyed a considerable degree of autonomy in the initiation and design of public policy, and the Congress policies have played a crucial role in shaping the entire character of the post-independence Indian economy. Despite such autonomy in shaping public policy, the Congress-led governments have remained sensitive and responsive to the large variety of pressures and demands emanating from the highly pluralistic character of Indian society. While the most intense pressures have originated among the large number of 'demand groups'[74] based on language, religion, region, and caste, newly emerging 'functional interests' have also come to play an important but limited role.[75] The most vocal and organised of these interests were the 'Indian business community', peasantry, and public –sector workers, which Bardhan calls Indian proprietary classes.[76]

Plurality and heterogeneity of Indian proprietary classes and the conflict in their interest make it difficult to compare them to the division of the bourgeoisie in industrially advanced countries into different fractions, like industrial capital, finance capital and mercantile capital. Indian business community had better connections and better access to the government (often through election funding) and to a certain extent they had a control over government policy making. They had a greater control over the implementation of government policies. Even the adverse government policy of an elaborate scheme of industrial and import license has been allowed to be turned to advantage of the industrial and commercial interests. As Pranab Bardhan puts, "In cases where licensing regulations have been directly aimed at them, the big industrial

---

[73] Sumit Ganguly (2002): 'India's Multiple Revolutions', *Journal of Democracy*, 13(1), p. 40.

[74] The term 'demand group' is used by Rudolph and Rudolph to apply to a form of interest representation employed by movements and groups involved in agitational and issue politics in India. They demarcate between organized interests and demand groups and use the term 'demand groups' to signal that this unit of Indian pluralism is different from organized interests in other industrial democracies. Formally organized interest exist in India and affect state-society relations and the policy process but they have not been as important as demand groups, a more spontaneous and less formed type of collective action. Lloyd I. Rudolph and Susanne Hoeber Rudolph (1998): *In Pursuit of Lakshmi: The Political Economy of the Indian State*, op. cit., p. 252.

[75] Stanley A. Kochanek (1987): 'Briefcase Politics in India: The Congress Party and the Business Elite', *Asian Survey*, 27(12), pp. 1278-1301; Pranab Bardhan (2005): *The Political Economy of Development in India: Expanded Edition with an Epilogue on the Political Economy of Reform in India*, op. cit., pp. 40-53.

[76] Pranab Bardhan (2005): *The Political Economy of Development in India: Expanded Edition with an Epilogue on the Political Economy of Reform in India*, op. cit., p. 41.

houses have often freely violated these regulations, created unlicensed capacities...and produced far in excess of the quantity permitted".[77] However, the industrial class in India was able to manipulate policy process in their advantage.

Second important functional interest has been the peasantry in India. Post-independence land reforms and green revolution in mid-1960s gave birth to a rich peasantry in India. The government has assured, for these rich farmers, substantial price support for farm products (from mid-1960s) and liberal provision of subsidised inputs including power and institutional credits. Except in few pockets, the exploited poor farmers and agricultural wage labourers were highly unorganised and often locked into dyadic and clientelist relationships with the rich farmers. Even though there was conflict of interests among the rich farmers, the poor farmers and agricultural wage labourers, it was limited to tenurial rights, minimum wages and agricultural prices. There was no serious conflict of interests on state policies affecting agriculture, like better subsidies. More often the poor farmers and wage labourers were mobilised and harnessed by rich farmers in large-scale rural movements which serve primarily the latter's class interest.[78] As Indian constitution has put agriculture under the jurisdiction of state governments, the peasantry had a nexus with the state governments. Although the power of the peasantry had not increased in the central structures of the state power in India, in relation to that of industrial capitalists,[79] they had dominated the state power in Indian states. However, despite its local dominance, it has not been successfully transformed into an organised force that could stake its claim to state power at the central level.[80]

The third group of functional interest was that of public sector professionals. By managing to direct educational investment away from the masses, they have been able to protect their 'scarcity rent', and by acquiring license-giving powers at the various levels of bureaucracy some of them have increased their capacity to multiply

---

[77] Ibid., pp. 46-48.

[78] Ibid.

[79] Partha Chatterjee (1999): *A Possible India: Essays in Political Criticism*, New Delhi: Oxford University Press.

[80] The politics of peasantry has a history in India, from its rise within the Congress movement in the 1930s, its presence at the local levels of electoral politics in the Nehru era, its visibility even in the central representative bodies in Indira Gandhi's reorganized Congress in the early 1970s, to its bid for central power under the leadership of Charan Singh (although the bid failed). Ibid.

their rental income.[81] They are relatively organised through various unions and have a nexus with the government as they formed a big vote bank. Strong organisations of the public sector employees and control over governments have resulted in organised corruption in India.

However, this phase saw an individualistic approach in policy-making process. Different sections of interest tried to maximise their group interests, often at the cost of the overall development of the country. The policy making agencies and public institutions established for implementation of the policies became dysfunctional during the period. The credibility of these institutions began to decline. All these developments resulted in a shift in the policy process in India, from a technical and professional model to a 'populist' model.

The third phase, beginning in 1991, saw the downsizing of the Indian state, due to political and economic liberalisation in 1990s. The role of the government has been reduced significantly. Since the early 1990s, a number of civil society organisations have emerged to fill the gap. These organisations have been involved with the governments in an effort to "mobilise and organise the poor with a view to empowering them, converting them from passive recipients of doles to active participants in planned development."[82] During this phase, Indian democracy instead of strengthening its own institutions for service delivery, actually liberated itself from obligations towards its citizens. The responsibilities of the government have been delegated to several other non-governmental institutions.[83] During this phase, the Indian state has been pluralised into a number of levels that includes and shares power with "sub-national governments, proliferating forms of network and partnership organisations, a variety of quasi-public and private organisations, NGOs and international agencies and other forms of supranational governance." This is considered to be a welcome development as it promises "an exit from bureaucratic,

---

[81] Pranab Bardhan (2005): *The Political Economy of Development in India: Expanded Edition with an Epilogue on the Political Economy of Reform in India*, op. cit., pp. 51-53.

[82] Neera Chandhoke (2005): "Seeing' the State in India', *Economic and Political Weekly*, 40(11), p. 1033.

[83] Ibid.

hierarchical and overloaded structures of decision-making, which are inept because they are unable to act either quickly or efficiently."[84]

This phase also experienced a severe political crisis, when not a single party has been able to secure absolute majority during last five general elections (over a period of fifteen years). An era of coalition politics has emerged in a country which used to have a single party dominant system. To meet the political crisis, several political parties with different electoral bases, regional focuses, and ideologies have come together to forge coalitions to compete for elections. This has resulted in conflict of interest within the government itself. The trend has also emerged at state level by late 1990s, leading to a non-coherent policy making and implementation both at the state as well as central level. The Indian political scene, during the phase, presents a paradoxical combination of party fragmentation amid ideological consensus on major matters of policy, especially in the economic realm.[85]

In the post-independence elections prior 1990s, the social status used to readily translate into political power. The 'upper-caste patrons' coming from a fifth of the populace, would tell their 'lower-caste dependents' how to vote, and thus, resulting in cabinets dominated by officials from the upper caste. However, this practice has changed over time; lower caste chief ministers are no longer rare and at least one national cabinet of Left Front government had almost no upper caste members.[86] With the widening of Indian democracy, more social classes are accommodated in the Indian electoral politics, making the politics more open. But, at the same time, it is claimed that the political leaders from the backward communities and hitherto oppressed classes are sometimes more corrupt. What is disturbing about this development is that the diminishing hold of elite control and the opening up of Indian democracy have been associated with "a loosening of the earlier administrative

---

[84] Neera Chandhoke (2003): 'Governance and Pluralisation of the State: Implications for Democratic Citizenship', *Economic and Political Weekly*, p. 2957.

[85] There is a two way consensus: While there is consensus on the necessity of market-oriented economic reforms in order to foster domestic competitiveness and attract foreign capital investment, there is also consensus on what its limits should be. Pratap B Mehta (1997): 'India: Fragmentation Amid Consensus', *Journal of Democracy*, 8(1), pp. 56-69.

[86] Susanne Hoeber Rudolph and Lloyd I Rudolph (2002): 'New Dimensions of Indian Democracy', *Journal of Democracy*, 13(1), pp. 52-66.

protocols and a steady erosion of the insulation of the decision-making process in public administration and economic management."[87]

The 1990s has also seen a rise of the Indian states in comparison to the central government. During the period state autonomy has increased owing to the emergence of state-based parties at national level as well as state level. The earlier command and control regime of the Congress over the state governments has declined in the phase. This transformation has been possible due to rise of the regional or state-based parties in national politics. As these parties were strengthened they demanded more power both at the centre and the state.

These political developments were taking place simultaneously with economic policy reforms in India. During the period, a set of economic policy reforms were introduced in India which opened up the Indian economy to the global economy. By making the states to compete among themselves for private capital, the reforms have provided the states autonomy in the economic realm. Thus, reforms have substantiated the autonomy of the states in India. This has lead to a variation in policy process at the sub-national level. And also, the states have become more resistant to the central government policies owing to their relative autonomous status. All these changes in 1990s have resulted in a severe crisis of confusion and conflict of interest in the policy process.

All these changes in Indian political economy, during last 59 years, have very well reflected in the policy process. The policy process has made a shift in chorus with the political and economic shifts in the country. In the next chapter, I will discuss how these political and economic changes have impacted on the policy-making process in the Indian electricity sector.

[87] Pranab Bardhan (2005): *The Political Economy of Development in India: Expanded Edition with an Epilogue on the Political Economy of Reform in India*, op. cit., p. 133.

Chapter 2

Policy Changes in the Indian Electricity Sector:

An Overview

During last one and half decade, India has been experiencing a set of economic policy reforms. These policy changes in Indian economy are well reflected in India's electricity sector. The sector has been revamped and restructured to improve the service delivery system and to attract private investment in the sector. By 1990s, the perceived availability of private capital and emergence of private sector service delivery models challenged the public utility approach.

The present set of policy changes altered the earlier course of management in the sector. Immediately after independence India adopted a public sector led development model for electrical developments in the country. The sector was nationalised to power the industrial development and to provide electricity to all. Development of the sector was carried on the basis of a planned development model. State Electricity Boards were created to do the business of electricity generation, transmission and distribution. But in 1990s, altering the existing policies, the sector was put back in the market. Private players were introduced in the sector to do the business of generation and distribution.

This leads to think why a sector which continued under public sector for more than 40 years, suddenly opened up for private players? Many explanations point out the crisis in the sector. By 1991, the sector was in a dire crisis of finance and capacity to meet the demand and was not able to satisfy the consumers. As crisis is an opportunity for policy change, it provided scope to the policy makers to go for a different paradigm of privatisation. This explanation is limited in the sense that it does not point out the nature of policy changes under taken, although to a certain extent it explains the timing of change. The question arises is that why the policy changes were introduced in 1990s, while the crisis was realised in 1980s? Why India opted for privatisation, while it could have gone for management reforms?

To answer these questions, the chapter looks into the policy process in the Indian electricity sector over a period of last five and half decades. During last five and half decades, India's electricity sector has passed through four phases of major policy changes: The first, following Independence in 1947, established public sector-led electrification, which emphasised on two objectives, i.e. to power industrialisation in India (economic objective) and to provide electricity to all as a right, at affordable rates, and to the level required for ensuring adequate livelihoods (social objective).

The second, beginning in late 1970s and early 1980s, established an era of subsidisation and rural electrification, which ignored the economic objective by focusing on the social objective. The third, beginning in the early 1990s, laid the groundwork for an increasing private presence in the sector. And the fourth begins in 2003 with the passing of the Electricity Bill 2003, which focuses more on the economic aspect rather than social aspect.

The chapter will discuss the major polices undertaken during this period; what were the basis of these polices? Who were the gainers and losers of these policies? How different political economic factors (those I have discussed in Chapter 1) have influenced the process of policy making and their implementation? What was the impact of external political economic environment and international experiences? And finally how the prevailing economic ideologies have shaped these polices undertaken?

Electrical Developments in India:

At the time of independence in 1947, India inherited an electricity sector with the total installed capacity of 1,363 megawatts (MW).[88] Only 1,500 villages were electrified in India at the time of independence. The per capita consumption of electricity in India was 14 units[89], while the corresponding figures were 806 for the United Kingdom, 1540 for the USA, and 300 for the USSR. Out of this very little electricity produced then, 44 per cent of the entire electricity and 46 per cent of the entire production was confined to three big urban areas, i.e., Calcutta, Bombay, and Madras. As one of the Constituent Assembly members K Santhanam put it rightly, the entire country was a "virgin field for electrification".[90]

Over the period, the total installed capacity of India has grown from 1,363 MW to 1,26,089 MW by the end of March 2006. In line with addition to installed capacity, total generation has also increased substantially. Number of villages

---

[88] Prayas (2004): *Know Your Power: A Citizens' Primer on the Electricity Sector*, Pune: Prayas, Energy Group.

[89] MoP (2005): *Rajiv Gandhi Grameen Vidyutikaran Yojana: Scheme for Rural Electricity Infrastructure & Household Electrification*, Ministry of Power, Government of India.

[90] GoI (1948): *Constituent Assembly of India (Legislative) Debates, Part II*, Delhi: Government of India.

electrified has grown from 3,061 (0.54 per cent) in 1951[91] to 4,39,165 (74% according to 1991 census) by February 2006. Per capita electricity consumption has grown from 14 units in 1947 to 606 units by 2005. But still the status of India's electricity sector is very low as compared to electricity sectors in other countries. There is also a wide disparity within India. While there are 5 states, which claim to have achieved 100 per cent village electrification, 24 states are yet to achieve the target. While southern states are doing well in terms of village electrification, the northern and central states are lagging behind. There is similar disparity in electrification across districts within states. 56 percent households (according to 2001 census) are still not electrified. While most of the unelectrified households are in rural areas, the urban households are little better off.

Electricity in Pre-independent India:

In the pre-independence period, electricity in India was governed by the Indian Electricity Act, 1910. This Act laid out the rules by which private firms were granted licenses by the state to supply power. The electricity sector in India, then, was composed of hundreds of private and a very few government-owned companies, located almost exclusively in cities and larger towns and industrial regions surrounding them. While most of generation business (74 percent of total generation) was controlled by government, the distribution business (80 percent) was largely under private hands.[92] Government owned generating stations (basically coal-based thermal plants and hydro-electric stations) were bigger, while the private players were generating electricity from diesel generators and were relatively smaller. Majority of these companies were British owned, there were a few prominent Indian players, notably the Tata conglomerate, BSES, CESC, and the Nixons, etc.

To regulate the generation, supply and use of electricity, the first legislation in India was the Electricity Act of 1887, which provided for the protection of person and property, from injury and risks, attendant to the supply and user of electricity for lighting and other purposes. The Act was repealed and replaced by the Indian Electricity Act, 1903 (Act 3 of 1903). Many practical, electro-technical and

---

[91] MoP (2005): *Rajiv Gandhi Grameen Vidyutikaran Yojana: Scheme for Rural Electricity Infrastructure & Household Electrification*, op. cit.

[92] GoI (1948): *Constituent Assembly of India (Legislative) Debates, Part II*, op. cit.

commercial difficulties were realised, during the period of 1903 to 1909, in the administration of the Indian Electricity Act, 1903. To deal with these difficulties the Indian Electricity Bill was introduced in the Central Legislature, to amend the law relating to the supply and use of electrical energy. The Indian Electricity Bill was passed by the Legislative Council on 18th March, 1910 and it became the Indian Electricity Act, 1910 (Act 9 of 1910) and it came into force with effect from 1st January, 1911.

When the Indian Electricity Act, 1903, was passed it was clearly recognised to be a somewhat tentative measure, and it was anticipated that amending legislation would be called for at an early date. Having regard to the experience gained in the practical working of the Act, the Government of India in 1907 came to the conclusion that the time had arrived for undertaking this amending legislation.

The Indian Electricity Act, 1910 was "an Act to amend the law relating to the supply and use of electrical energy".[93] The Act dealt with the supply and use of electricity as well as the rights and obligations of the licensees. The key issues addressed in the Act were issues of licenses, regulatory and safety aspects, rules for non-licensees, guidelines for electrical works, and guidelines for determination of purchase price and charges. The Act vests its administration in Local Governments, with whom rests the power to grant licenses; but the authority or the previous sanction of the Governor-General in Council is required in regard to so many matters[94] that the practical result has been a dual administration. The rule making power, and the delegation of the powers of the telegraph-authority to licensees, are reserved to the Governor-General in Council.

---

[93] As mentioned in the preamble of the Act. GoI (1910): *Indian Electricity Act, 1910*: Government of India.

[94] For example, in the case of cantonments and similar "places in the occupation of Government for naval or military purposes" the administration of the Act was in the hands of the Governor-General in Council, but these places are situated within larger areas, in respect to which the Local Government is empowered to grant licenses. It required separate, and not necessarily consistent, licenses granted by the Governor-General in Council and the local government, respectively, to the same licensee for the same purpose, in one and the same place Ibid..

During 1910 to 1940, under the guidance of this Act, many generating stations[95] were set up, mostly by the provincial governments. While electricity generation was taken care by the provincial governments, most of distribution licenses went to private hands. During 1910s to the 1940s, while cities and larger towns were becoming increasingly well electrified, smaller towns and villages in between were largely untouched by this new technology. The main reason for this disparity, as argued by A. Ayyanger in the Constituent Assembly, was the tariff provisions under licenses issued by the government: the electricity companies were obliged to supply power for agricultural purposes (which was mostly located in rural areas) at the rate of 9 pies, while in towns, for lighting and other purposes, they were charging at the rate of 4 annas per unit.[96] Another reason for this disparity may be the British Government's strategy to develop urban areas to facilitate British administration and trade in India.

Electricity Sector in Post-Independence India:

Before going the policy process in post-independence period, it is necessary to provide an account of the key players in the sector. Indian electricity sector has four different categories of consumers – industrial, commercial, domestic, and agricultural and the industrial consuming the maximum amount of power. Among these consumers, the industrial consumers form the strongest lobby in policy making process, followed by the agricultural consumers. The domestic and commercial consumers are quite fragmented, but still the concerns of domestic consumers are met, as they are the voters. In contrast to the international practices[97] and the economics of distribution costs, industrial consumers in India pay the highest tariff followed by the commercial consumers. While the agricultural consumers pay the lowest tariff,

---

[95] For example, Khopoli, Maharashtra (set up by the Tatas to supply Bombay), Sivasamundram, Mysore (power to Kolar gold fields), Mettur dam, Madras (power to Madras city), etc. are some prominent ones.

[96] GoI (1948): *Constituent Assembly of India (Legislative) Debates, Part II*, op. cit.

[97] Gilbert, Kahn & Newbery (1996) studying the international experiences in electricity sector claim that in most of the countries, the financial burden of investment in electricity is typically carried by smaller consumers, particularly the commercial class. "Most countries recognize an economic need to keep industrial rates relatively close to marginal costs. Politically, it is useful to provide some subsidies to residential customers. This leaves the financial burden with the commercials." Richard J Gilbert, Edward P Kahn David Newberry (1996): 'Introduction: International Comparisons of Electricity Regulation', in Richard J Gilbert and Edward P Kahn edited *International Comparisons of Electricity Regulation*, Cambridge: Cambridge University Press, p. 15.

domestic consumers pay a little more than the former. While the domestic and agricultural consumer's tariff is much bellow the cost to serve, the industrial and commercial consumers are highly cross-subsidised to fill the gap. This phenomenon of cross-subsidisation emerged much latter in the post-independence period, which I will discuss latter in this chapter. In the pre-independence period the industrial and agricultural consumers were paying less, while the domestic consumers were paying a high tariff.

From the beginning, the sector has been facing a challenge in balancing its social and economic obligations. The sector has to provide electricity for industrial development, while providing electricity to the masses in a fissiparous and diverse country like India. Until late 1960s, the balance was tilted in favour of industries, as power developments during the period was taking place in industrial regions and the industrial tariffs were set significantly lower than the other consumers. By the late 1960s, with the emergence of competitive populism, the balance shifted in favour of the social obligation- providing electricity for domestic and agricultural purpose. However, since 1990s, it has been attempted to restore the balance in favour of industries while protecting the interests of domestic and agricultural consumers. This has left the sector in a difficult position.

Over time, electricity has become an electoral commodity in India. As the necessity for electricity increased in India, politicians used it as a populist commodity. And recently elections are being won and lost on the basis of electricity provisions. Today all the party manifestos include an objective of providing steady and stable electricity supply at artificially low price. Political parties contesting in elections frequently promising for free power for agricultural consumption and on being elected these promises are most often kept.[98] Domestic consumers are also frequently protected from rational tariff hikes to meet the cost of supply. Since independence till

[98] In the last State Assembly election of Andhra Pradesh in 2004, the Congress party promised to provide free power to farmers and on being elected it has kept its promise. R K Pachauri (2004): *Power Politics: No Light at the End of the Tunnel. The Times of India*, New Delhi. argues that if this policy was to be pursued to the same level by some other states such as, Punjab, Madhya Pradesh, Maharashtra, Karnataka, Haryana, Uttar Pradesh and Gujarat, then an additional burden of around Rs 4,500 crore would be imposed on the state governments. Currently, for these selected states, agricultural tariff-related losses are of the order of Rs 14,000 crore. A further increase of Rs 4,5000 crore would seriously impair the ability of these utilities to provide power in the future to those very sections of consumers that they are pandering today.

now, policy making in Indian electricity sector- nationalisation of electricity sector in 1950s to unbundling, corporatisation, and privatisation policy of 1990s- has been shaped by prevailing dominant economic ideologies.

At the time of independence, the existing electricity market in India was neither efficient of lighting up India, nor to powering India's industrial development. Immediately after independence, it became necessary for India to develop a strategy to meet India's electricity needs. The Constituent Assembly of India, to meet this necessity, developed the Electricity (Supply) Act, 1948, whose stated objectives were to orient the sector to "provide for rationalisation of the production and supply of electricity, and generally for taking measures conducive to [electrical development][99]". The Act established two sets of public institutions- the Central Electricity Authority at the central level and State Electricity Boards at the state level- that became the nodal agencies in the sector. Although this legislation did not reserve electricity as an entirely public domain- a task accomplished by the Industrial Policy Resolution, 1956- it did set the stage for much broader government involvement in the sector.[100]

These public institutions managed the business of electricity till mid 1990s, when the private players were introduced owing to the failure of these public institutions. The monolithic state electricity boards were unbundled and corporatised.

First Phase: 1948 - Late-1960s

Consolidation of Public Power

In this section I will discuss the major developments in policy making for Indian electricity sector, viz., formation and adoption of the Electricity (Supply) Act, 1948, its implementation in different states (Orissa and Andhra Pradesh) and some important amendments to the Act. The salient features of the Electricity (Supply) Act, 1948, were formal establishment of the SEBs, CEA and Generating Companies; power and duties of the above entities with guidelines for works and trading procedure; approval process for generating stations; guidelines for licensee tariff; and procedures for finance, accounts and audit. Another important policy development,

[99] Subs. By A.O. 1950, for "the electrical development of the provinces of India".

[100] Sunila S Kale (2004): 'Current reforms: The Politics of Policy Change in India's Electricity Sector', op. cit.

which will be discussed in this section, is the Industrial Policy Resolution, 1956 (which made provisions for much broader government involvement in the sector).

After independence, India inherited an infant electricity industry with only 1,363 MW power and around 0.25 per cent of its villages electrified. There was a lot more to do. By then, the importance of electricity for industrialisation and other developments was realised. In response to the situation, the Constituent Assembly of India set out to create public institutions that would expand electricity generation and access in India. Along with that they produced the Electricity (supply) Act, 1948, which guided these public institutions. The Electricity (Supply) Bill, 1948 was originally prepared in 1945 by the then Labour Department of Government of India and since then up to 1948 it was under continuous revision by different committees. Important recommendations came from the Power and fuel Committee of the National Planning Committee. The final revisions of the bill, before presentation in the Constituent Assembly, was done by the Select Committee (i.e. the Legislative Drafting Committee), which made some important amendments to the Bill. Then in August 1948, the Bill was debated in the Assembly and passed with certain amendments.

Before we go into the details of the debates, we need to understand the selection and composition of the Constituent Assembly. The Constituent Assembly of India was dominated by one party in an essentially one-party country. As Austin has put it, "the Assembly was the Congress and the Congress was India".[101] The Assembly was not independent of the then government. The Assembly, the Congress and the government were like three points of a triangle, separate entities, but, linked by over-lapping membership. The Assembly was not institutionally representative of various class interests in India. The members of the Assembly were elected by the provincial legislatures, whose members were elected on the basis of a restricted franchisee established by the Sixth Schedule of the 1935 Act, which excluded the mass of peasants, the majority of small shop keepers and traders, and countless others from the rolls through tax, property and educational qualifications.[102] Though the

[101] Granville Austin (2003): *The Indian Constitution: Cornerstone of a Nation*, New Delhi: Oxford University Press, p. 13.

[102] Ibid.

Congress party ensured that members from all ethnic communities are represented in the Assembly, there were no criteria for representing members from different classes. However, the Constituent Assembly members have substantially represented the interest of every class and occupational community. K Santhanam, one member of the Assembly from Madras Province, said in an interview to Granville Austin that "there was hardly any shade of public opinion not represented in the Assembly".[103] And Austin seems to agree with the conclusion that the Constituent Assembly was representative of all kind of public opinions.

Corbridge and Harriss challenge these conclusions about the representativeness of the Assembly. They argue that the Congress was an organisation dominated by a 'social elite' group and it was not notably democratic in its own working.[104] The Congress assumed that the educated were the 'natural leaders' of the people and as Gokhle argued in his presidential address of 1905, the greater political right which they sought were being demanded "not for the whole population, but for such portion of it as has been qualified by education".[105] Even though, during 1920s and 1930s, the Congress moved from this position, as it became a social movement, it retained the elitist attitude which Gokhle expressed. "Many of the members of the Congress in the Constituent Assembly mistrusted party politics, and they were inclined, like the British, to set their conception of the state above those of any of its Constituent members".[106]

In regard to the Electricity (Supply) Act, 1948, although the Constituent Assembly has represented all kind of public opinion, the opinion of the farmers was less represented. The industrial stakeholders were consulted in the Simla conference during drafting of the Bill. But there was no such consultation of the agricultural stakeholders. Some members of the Assembly had emphasised on supplying electricity for agricultural consumption, at a subsidised rate. Some other had emphasised the necessity to supply electricity to the farmers. But still there was no

---

[103] Ibid.

[104] Stuart Corbridge and John Harriss (2004): *Reinventing India: Liberalization, Hindu Nationalism and Popular Democracy*, op. cit.

[105] Sumeet Sarkar (1983): *Modern India, 1885-1947*, Delhi: Macmillan.

[106] Stuart Corbridge and John Harriss (2004): *Reinventing India: Liberalization, Hindu Nationalism and Popular Democracy*, op. cit.

special representation of the farmers, which has resulted in the lack of innovative ideas for efficient electricity consumption in the agricultural sector.

Constitution of India has put electricity under the concurrent list[107] (item no. 38), that means both state and central governments have jurisdiction over the sector. Administratively, therefore, central government organisations and the states have traditionally regulated different aspects of planing, sectoral policy, financing and a fairly non-contentious division of labour. Thus, for instance, the 1948 Act demarcates tariff authority to the SEBs except when central generators supply electricity to one or more states, in which case the central government prescribes a tariff based on a negotiated power purchase agreement with the SEBs. The Act expected the SEBs to operate commercially and achieve a minimum 3 percent return on capital.

The Act had set the base for nationalisation of the electricity sector and established public institutions to carry forward the task of electrification. Although the Act set the base for nationalisation of Indian electricity, it did not argue for complete state control over the sector. That is something which was advocated in the Industrial Policy Resolution, 1956[108]. The Electricity (Supply) Bill of India was drafted on the

---

[107] Schedule VII of the Constitution of India contains three lists and the Parliament and the State Legislatures have the power to make laws on the subject matters contained in List I (Union List) and List II (State List) respectively. List III (Concurrent List), however, confers powers of legislation with respect to listed subject matters on both the Centre and the States. Under entry 38, List III, both the Parliament and the State Legislatures have been empowered to make laws on the subject of 'Electricity'. The Constitution has, however, given supremacy to Central Legislation, meaning thereby that if there is a direct conflict or inconsistency between a Central Act and the provisions of the State Legislation, then the law made by the Parliament shall prevail and the inconsistent provisions of the State Legislation shall be void [Article 254(1)]. However, if aforesaid provision has received Presidential assent, the State legislation can operate within the State [Article 254(2)]. Despite such Presidential Assent, according to the provision to Article 254(2), a provision of the State legislation would not sustain if it is repealed, modified or amended by a subsequent Central Enactment. GoI (2003): *The Constitution of India*: Universal Law Publishing Co. Pvt. Ltd.

[108] Industrial Policy Resolution, 1956 claimed that "the adoption of the socialist pattern of society as the national objective, as well as the need for planned and rapid development, requires that all industries of basic and strategic importance, or in the nature of public utility services, should be in the public sector". The resolution classified the industries into three categories: first, the future development of which will be the exclusive responsibility of the State; second category will be progressively State-owned and in which the state will, therefore, generally take the initiative in establishing new undertakings, but in which private enterprise will also be expected to supplement the effort of the State; and the third category will include all the remaining industries, and their future development will be left to the private sector. The resolution has put 'generation and distribution of electricity' in the first category of industries (17th and last item in the list). It also says that "all new units in these [first category], save where their establishment in the private sector has already been

broad lines of the Electricity (Supply) Act, 1922, in force in the United Kingdom. The Bill was discussed in the Constituent Assembly during 9th to 31st August, 1948, for four days. It was passed by the Central Legislature and received its assent on 10th September, 1948. It came on the Statute Book as the Electricity (Supply) Act, 1948 (54 of 1948).

Two important issues were raised and discussed in the Constituent Assembly were nationalisation of the electricity sector and autonomy of the proposed State Electricity Boards. While there were some members who supported nationalisation of the sector, some others opposed it on various grounds. On the other hand, some members argued for autonomous SEBs, while some others were in favour of an Electricity Department attached to the Energy Ministry in the State Governments. The discussion around these two issues, in many ways, anticipated the contemporary debates around the crisis in Indian electricity sector.

Before going into detail discussion of the nationalisation issue, I will summarise the provisions for nationalisation of Indian electricity, as mentioned in the Bill. The first provision was that all future electricity undertakings should be undertaken by the State, and it is only where the State for any reason is either unable or unwilling to take up that it may give it to private industry and on such condition as it likes, with a proviso that it may be resumed by the State whenever it likes. Second provision was that all the existing electricity undertakings may be immediately controlled and when they are not working satisfactorily they can be purchased by the Boards to be set up. And the final provision was that to the extent that private enterprise is allowed to run electricity undertakings they shall run them on the principle of public utilities and not as private undertakings. While presenting the Bill in the Constituent Assembly, N V Gadgil, then Minister of Works, Mines and Power claimed that "the Bill offers all the advantages of nationalisation without the main disadvantage, namely, the very heavy financial outlay required by the State. The provisions of the Bill will also enable acquisition on behalf of the State to be selective

---

approved, will set up only by the state". GoI (1956): *Industrial Policy Resolution*: Government of India..

in that Boards will tend to acquire only up-to-date plants- old and obsolete stations being gradually slow down without requiring any outlay".[109]

In supporting nationalisation, many members of the Assembly were concerned with overcoming existing patterns of electrification reflecting regional imbalances, a legacy of the diversity in development objectives and success among former princely states and colonial provinces. They contended that the state must involve itself in the sector until incomes rose sufficiently for rural citizens to afford electricity at its cost of supply. Providing electricity to these areas would be unprofitable, and no private entity would undertake the investment. Opponents of full nationalisation argued that India did not yet have sufficient technological expertise and skilled manpower to fully take over the private players.

Many members, keeping with accepted global practices, advocated complete nationalisation of the sector, which would have meant buying out all extant private power firms. The legislative drafting committee, called the Select Committee, was aided by British experts. Members of the Assembly, who argued in favour of public sector-led growth in the electricity sector, drew the ideology from the experience of US and UK. Prof. Shibban Lal Saxena, from United Province, argued that "we know that England has nationalised its electricity, coal and some other industries. In their Electricity Act they have provided for compensation to present manufacturers. I do not think England today is abounding in wealth. She has to keep her life going today with the help of America and yet although the country is in such bad days she has taken over the key industries. I think India is much more solvent than England and she can afford to take over these concerns and pay compensation to the owners of companies by spreading it over a number of years, during which the income from nationalisation will be higher than the amount of compensation that will be paid".[110]

Supporting the nationalisation and creation of SEBs, K Santhanam again from Madras Province argued that "if a Board is established, that Board will have to give an account year after year, e.g., what work it does, why it did not expand and so forth. And there will be competition between provinces and a healthy rivalry".[111] He also

---

[109] GoI (1948): *Constituent Assembly of India (Legislative) Debates, Part II*, op. cit., p. 38.

[110] Ibid., p. 54.

[111] Ibid., p. 52.

claimed that a 'uniform system of administration' in the sector is necessary to solve the problem of regional disparity in access to electricity. He said that the Board will be "subject to directions of the Provincial Government in all matters of policy".[112]

Opposing to the complete nationalisation measure, M A Ayyangar from Madras Province argued that "wherever the Government has not by itself undertaken the generation of electricity and distribution, it should be open to the Provincial Government to establish Corporations [SEBs], but there is no meaning in establishing an autonomous corporation when already 90 percent of the power is being generated by the Government and proceeds are going to the Government... It should be open to the Provincial Government to apply or not to apply any provision which insists or which directs the establishment of autonomous corporations".[113] He condemned the clause in the Bill that made it mandatory to establish SEBs. Advocating a competitive model (between the public and private enterprises), he said "let the three horses run side by side, private enterprise, work through a corporation, and State enterprise. Let us wait and see which one will prove ultimately beneficial to the public, let there be a kind of healthy cooperation and healthy competition".[114] Another member from Madras Province, T T Krishnamachari advocated for continuation of some major private players as they were too big and the government did not have much technical efficiency and human resources. He said that "there are powerful vested interests in one or two places which it would be unwise for us to displace now. Take the Tata interests; it would be very unwise straightway to displace it. It would be much better to get a corporation of that nature with its semi-impersonal character to help us in going ahead with our programme of developing electricity rather than tell the, "we are going to take you over", and find ourselves faced with all the difficulty that would ensue in regard to management and personnel. I do not think...that it is quite right to say that the Central Government is not faced with problems in regard to getting adequate personnel".[115]

---

[112] Ibid., p. 50.

[113] Ibid., p. 42.

[114] Ibid., pp. 43-44.

[115] Ibid., p. 53.

This model of development in Indian electricity was explicitly drawn on international experiences and prevailing economic development models. The Constituent Assembly debate shows that the model of nationalised electricity sector came from the centralised investment allocation and five-year plans of the Soviet Union[116], the United Kingdom's nationalised electricity system[117], and the massive public works of the United States Tennesse Valley Authority[118]. At each stage of the debates the Assembly members have referred to these three models of supporting the model in India. Consistent with the thinking of the time, there was near-universal agreement that the state should become the primary actor in the sector.

Another important factor for adopting such a model was the interest of industrialist capitalist class in India. The industrialist class, mainly under the leadership of some of the top business families from Western India, was reasonably strong at the time of independence. It supported the government policy of running a large public sector providing capital goods, immediate products and infrastructural facilities for private industry, often at artificially low prices.[119] In 1944, a group of industrialist produced 'A Plan of Economic Development for India', which is popularly known as the *Bombay Plan*. The industrialists, in that document, claimed that for industrial development, "in the initial stages attention should be directed to

---

[116] The initial five-year plans were created to serve in the rapid industrialisation of the Soviet Union, and thus placed a major focus on heavy industries including electricity. Predecessor of Stalin who implemented the first five-year plan in USSR, Lenin, claimed that "Communism meant Soviets plus Electricity".

[117] The British Electricity Authority (BEA) was established in 1948 with the nationalisation of UK's electricity supply industry, as a result of the Electricity Supply Act 1947. The BEA took over the operations of over 600 small power companies to form 14 area boards.

[118] Franklin Delano Roosevelt (FDR) signed the Tennessee Valley Authority (TVA) Act on 18th May 1935. It was one of the most ambitious projects of the New Deal in its overall conception. It's comprehensive nature encompassed many of FDR's own interests in conservation, public utility regulation, regional planning, agricultural development, and social and economic improvement of the 'Forgotten Americans'. One of the important objectives of TVA was to provide 'electricity for all'. Although nearly 90 percent of urban dwellers had electricity by the 1930s, only 10 percent of rural dwellers did. Private utility companies, who supplied electric power to most of the nation's consumers, argued that it was too expensive to string electric lines to isolated rural farmsteads. Anyway, they said, most farmers, were too poor to be able to afford electricity. The Roosevelt Administration believed that if private enterprise could not supply electric power to the people, then it was the duty of the government to do so. In 1935 the Rural Electric Administration was created to bring electricity to rural areas like the Tennessee Valley (http://newdeal.feri.org/tva/ last accessed on 21.05.2006).

[119] Pranab Bardhan (2005): *The Political Economy of Development in India: Expanded Edition with an Epilogue on the Political Economy of Reform in India*, New Delhi: Oxford University Press.

the creation of industries for production of power and capital goods".[120] They believed that "development of our [Indian] industries, both large and small scale, as also of agriculture and transport will be determined to a large extent by the development of electricity".[121] For this importance, they put electricity as the first item in the category of basic industries and wanted to put it in the public domain.

Ultimately, the legislation that was passed fell short of full nationalisation and instead represented a compromise between the government and private operators. Existing private licenses were to be honoured, with state governments allowed to decide about license extensions when they expired. Subsequently, some state governments, such as Andhra Pradesh, Orissa and Tamil Nadu, were quite aggressive in nationalising the sector fully while others, such as Maharashtra, continued to the extent the license period of private operators for decades, including into the current period.[122] This variation across states may be due to absence/presence of big private players in the states. Those states which had large private players they continued with them, only the small ones were taken over.

A second issue that emerged during the Assembly debate was creation of autonomous SEBs, a discussion that anticipated contemporary debates about the political interference in State Electricity Boards (SEB). Those who were concerned about the uneasy relationship between the SEBs and the state governments sound much like contemporary critics of the SEBs. In some regions, like Madras and Mysore, the provincial governments were already the primary owners in the sector. Electricity had become a primary tool to control resource-allocation and to generate revenues. Representatives from these regions therefore opposed the creation of SEBs, insisting that the same work could be done more efficiently within a department of the state executive branch. Supporters of the SEBs anticipated the problems of increasing interference by elected leaders, presciently envisioning a time when electricity would come to be a tool wielded to fashion and sustain political constituencies. These members argued that the SEBs should be given full autonomy.

---

[120] Purushotamdas Thakurdas, J R D Tata, et al. (1944): *A Plan of Economic Development for India*, India, p. 3.

[121] Ibid., p. 21.

[122] Sunila S Kale (2004): 'Current reforms: The Politics of Policy Change in India's Electricity Sector', op. cit.

Provisions for establishment of separate and autonomous electricity boards in India was influenced by UK's experience of separate Coal Board, Transport Authority and Electricity Commissioners and US's TVA project. The basic objective of establishing autonomous Boards in stead of Electricity departments attached to the Ministry of Energy, was to free the Boards from vagaries of ministerial change. In defence of autonomous boards, K Santhanam argued that "ministries may change, and changing ministers may have changing policies; but the day to day administration of industrial undertakings should be continuous and should not be disturbed by political considerations. It is on that sound principle that nationalisation in this country should proceed and unless that principle is adopted in this country all task of nationalisation will be moonshine. Industries will be started by one ministry and as soon as the ministry is changed it will be scrapped by another ministry".[123] In response to Santhanam's argument, H V Kamath from central Province argued that same argument can be applied to the boards as "when a new government comes in and lays down a new policy the Board will only carry out that policy".[124] He did not find any difference between 'departmental running' and 'extra-departmental management' of electricity in India. M A Ayyanger also argued on the same line. He argued that creation of autonomous boards may not make much difference[125], as the members of the Board are to be appointed by the government.[126] T T Krishnamachari also argued that existence of a Board would not have made any difference to the pace of electricity developments in Madras Province. He claimed that "the Department of Electricity in Madras is as good as any Board can possibly be, and the change that will be effected so far as the Madras portion of the structure is concerned would be practically a change in nomenclature rather than a change in either the personnel or in the management".[127]

Again, an uneasy balance was struck to appease two opposing camps. The legislation mandated that all of the states would eventually create autonomous

---

[123] GoI (1948): *Constituent Assembly of India (Legislative) Debates, Part II*, op. cit., p. 50.

[124] Ibid., p. 53.

[125] M A Ayyanger was representing Madras Province, where they had an Electricity Department under the Provincial Government. And the department was doing well as 90 percent of the industry in the province was owned by government.

[126] GoI (1948): *Constituent Assembly of India (Legislative) Debates, Part II*, op. cit.

[127] Ibid., p. 58.

corporations, but allowed states sufficient time- initially two years from the passage of the 1948 Act, but with the explicit promise of further extensions if they proved necessary- to establish these bodies.[128] All the states took full advantage of this provision, and many waited to establish their boards until the late 1950s and early 1960s.[129] Given the regional differences within the still unstable union, this kind of compromise was necessary to garner sufficient support to enact the bill into law.[130]

As a result of the 1948 Act, nearly every state and territory organised its own vertically integrated entity or SEBs. Most of the SEBs were financially structured entirely through state government loans and operated as extensions to the state's energy ministries. Though the SEBs were granted autonomous status in the Act, they were 'indebted in perpetuity' to the state governments for their financial dependence.[131] The SEBs had a status of autonomous bodies. Unlike other public administrations in India, the SEBs had progressively been granted a balance sheet, when the government's loans were converted into assets. However, they were not incorporated under Indian Company Act, 1956, a fact that contributes to granting them an intermediate status between a classical administration and a corporation. Each SEB reported to the Power Secretary of its State Government, who is the highest civil servant under the State Minister of Power.[132]

---

[128] "State Governments shall, as soon as may be after the issue of the notification under subsection (4) of section 1, constitute by notification in the Official Gazette a State Electricity Board..." GoI (1948): *The Electricity (Supply) Act, 1948*: Delhi: Government of India.

[129] For example, Andhra Pradesh State Electricity Board (APSEB) was created in 1959 and Orissa State Electricity Board (OSEB) in 1961.

[130] This state-led development model was quite popular during 1950s till late 1980s. It was accepted by all the stakeholders and defended by the government. Then Prime Minister Indira Gandhi, inaugurating a Round Table discussion on the Role of the Public Sector in 1966, argued that "we advocate a public sector for three reasons: to gain control of the commanding heights of the economy; to promote critical development in terms of social gain or strategic value rather than primarily on consideration of profit; and to provide commercial surplus with which to finance further economic development." She argued that there is no difference between 'public sector technology' and 'private sector technology'. The only difference lies in the fact of social control and social purpose in the public sector. Raj K. Nigam (1984): *A Concise Handbook on Government Policies for Public Enterprises*, New Delhi: Documentation Centre for Corporate & Business Policy Research, pp. 1-3.

[131] Navroz K Dubash and Sudhir Chella Rajan (2001): 'Power Politics: Process of Power Sector Reform in India', *Economic and Political Weekly*, pp. 3367-3390.

[132] Joel Ruet (2005): *Privatising Power Cuts? Ownership and Reform of State Electricity Boards in India*, New Delhi: Academic Foundation in Association with Centre de Sciences Humaines.

Over time, successive amendments to the act further eroded SEB autonomy by gradually diminishing the boards' freedom to set tariffs and by imposing greater political oversight in personnel decisions. An amendment in 1949 permitted the states to appoint their own chief engineers and other members of the government to become chairmen and members of the SEBs, which collapsed the interests of the boards and the state governments.[133] A 1956 amendment added a vaguely worded provision that the SEBs would take 'policy directives' from the state governments.[134] The amendment retracted the SEBs' ability to set tariff levels independently; instead the boards would have to secure government approval. All these amendments opened the door for electoral considerations to influence the tariff-setting process.

The 1948 Act provided that the State Governments shall transfer a cadre of engineers to the respective SEBs, to ensure the autonomy of the board. Though most of the states transferred a cadre of engineers on the day of formation of the SEB, there were a few states like Andhra Pradesh and Orissa which did not follow the provision. These State governments send the engineers to the Board on deputation. As long as they acted as according to the government's wish, they continued in their post; when they went against government's wish they were drawn back from the board. In fear of transfers, these engineers became puppets in the hand of respective State Governments. Thus, holding of a common cadre of engineers by the Board and the state governments strengthened government's capture over the board and helped the politicians to misuse the sector for electoral considerations. However, in 1976 Andhra Pradesh government transferred a cadre of engineers to the Board, but Orissa government continued it till reforms.[135]

---

[133] Sunila S Kale (2004): 'Current reforms: The Politics of Policy Change in India's Electricity Sector', op. cit.

[134] Section 78A, which was inserted by Act 101 of 1956 (w.e.f. 30.12.1956), states that "in the discharge of its functions, the Board shall be guided by such directions on questions of policy as may be given to it by the State Government." Section 10.5, which was inserted by the same amendment, says that "if the Board fails to carry out its functions, or refuges or fails to follow the directions issued by the State Government under this Act, the State Government may remove the Chairman and the members of the Board and appoint a Chairman and members in their place". GoI (1948): *The Electricity (Supply) Act,* op. cit.

[135] *Interviews* with senior level bureaucrats in Andhra Pradesh and Orissa, July 2005- May 2006, Bhubaneswar and Hyderabad.

However, most of the newly created SEBs were doing very well in terms of electrification, though some were lagging behind. Although the growth of electrification was not as fast as it happened in the next phase, the boards were making profit (earning more than the required 3 percent return). Governments were cooperative during this phase. They were providing regular financial subventions for expansion of the sector. Central government funding was also available.

Second Phase: Late 1960s and 1980s

Political Interference and Emergence of a Populist Paradox[136]

Decreasing autonomy of SEBs and increasing scope of political interference in SEBs' functioning was the main feature of this phase. Although the SEBs were doing well during initial years, by late 1960s they were being used for political considerations by the governments and politicians[137]. State governments' policy directives to the Boards, during this phase, were mainly governed by the interests of dominant political groups as a crisis was emerging in Indian electoral politics. To pass through the crisis, different political parties have been used the electricity sector, to appease targeted group of voters, as an electoral commodity along with other sectors.

Two important developments took place in Indian electricity sector during this period, which were really consequences of the shifts in Indian political economy, that led to failure of the SEBs. Firstly, further subsidisation of electricity tariff for agricultural consumers during late 1960s and 1970s is claimed as the dominant reason for financial debacle of SEBs. Second important development was rampant rural electrification without following any economic criteria and almost stagnation of domestic tariffs, obviously for gaining political mileage. While rural electrification increased domestic and agricultural consumption, lowering of agricultural tariffs and stagnation of domestic tariffs led to a wide gap between the cost and revenue.

---

[136] I borrow the phrase 'Populist Paradox' from Gerber, which means the alleged transformation of direct legislation in a democracy from a tool of regular citizens to a tool of special interests. It undermines the promise of popular policy making at the ballot box. Elisabeth R. Gerber (1999): *The Populist Paradox: Interest Group Influence and the Promise of Direct Legislation*, Princeton, New Jersey: Princeton University Press.

[137] I make a distinction between the interference of the governments and of the politicians, as the governments interfere through formal policy directives to the SEBs and the politicians through informal instructions to the SEBs' staffs. Latter in this chapter, I have discussed how it has been working in Indian electricity sector.

Till late 1960s the agricultural and industrial consumers were paying almost equal tariff for electricity in all the states. Punjab was the first state to lower the agricultural tariff by introducing a flat-tariff system following the 1969 mid-term elections.[138] The trend was immediately followed in other northern states like Uttar Pradesh and Haryana, while the southern states started it in late 70s. The emergence of powerful new farmers' organisations in 1960s and 1970s and associated political formations within the Indian states was an important contributing factor. They demanded increased support for agricultural inputs, particularly irrigation and fertiliser. Subsidised agricultural inputs (particularly electricity for the purpose of irrigation) has broad appeal because it seemed to be accomplishing two important political goals: achieving food security while increasing the profits of farmers who could thereby be organised into large vote banks.[139] For example, the Andhra Pradesh government started flat-rate tariff system on 1st November 1982 as an electoral strategy. The outgoing Congress government, led by K Vijaybhaskar Reddy offered a flat-rate tariff for agricultural consumption on the basis of capacity of the pumpsets, to create a vote bank of farmers. Though he lost the election, the party (newly formed TDP) that came to power never wanted to displease the farmers. Another reason often cited for flat-tariff system is the high transaction costs of such non-remunerative monitoring and meter installations for new connections.[140] However, in most of the cases the flat-rate tariff system was introduced by the Congress Governments to protect their vote-banks, although it was promised by the newly emerging regional parties. It happened in the states where the Congress hegemony was challenged by a regional party with a political base in the peasantry.

Though many scholars blame electricity subsidy for agricultural consumption for the financial debacles of the SEBs, that may not be the only reason. If that is the case, then how Andhra Pradesh State Electricity Board (APSEB), which has a substantial portion of agricultural consumption, could survive till early 1990s, but Orissa State Electricity Board (OSEB), which has a very insignificant agricultural

---

[138] Ruet, Joel (2005): *Privatising Power Cuts? Ownership and Reform of State Electricity Boards in India*, New Delhi: Academic Foundation in Association with Centre de Sciences Humaines.

[139] Navroz K Dubash and Sudhir Chella Rajan (2001): 'Power Politics: Process of Power Sector Reform in India', op. cit.

[140] *Interview* with Balaram Reddy, ex-Chairman of APSEB, October 21, 2005, Hyderabad.

consumption of 2-3 percent, financially collapsed in 80s? Another important reason is rampant rural electrification in 1970s and 80s without any plan of revenue realisation. The creation of Rural Electrification Corporation (REC) in 1969, which provided soft loans on the guarantee of State Governments, contributed to it. There were no criteria for selecting villages to be electrified. Initially revenue villages with a population of more than 1000 were to be electrified, then it was reduced to 500. As an ex-employee of OSEB told, this criterion was not strictly followed. There was a competition among the politicians to electrify their constituencies first. When a scheme is sanctioned the politicians used to ask the employees of the board to electrify villages in their constituency first, even though they do not fit into the population criterion. As the REC was providing loans for rural electrification on a guarantee from the State government, there was no fund constraint and also the governments were always ready for providing guarantee for these loans, as they were getting political mileage from this.[141]

This led to stretching of lines to far remote rural areas and in most cases a long patch of areas without a single consumer, which resulted in increased transmission losses. However, the SEBs have not reported transmission losses during 1970s. Even though they start reporting from early 80s, it does not show increase in loss level. As the line stretched for long distances and reached remote areas, it increased the scope for theft. There is no official reporting of thefts during 70s and 80s. It is claimed that most of the transmission and distribution (T&D) losses were covered up under the category of agricultural consumption, as by then agricultural metering was removed.[142]

Again for political reasons, the domestic tariff was artificially stagnated (though not reduced), even though the cost of generation was increasing. During 1980s, the new additions to generation were basically thermal plants and were more costly than the existing hydro-electric plants. So the cost to serve would have increased to a great extent. But tariffs were not increased proportionately to get the required return of 3 percent.

---

[141] *Interview* with R P Mohapatra, retired chief engineer, OSEB, November 15, 2005, Bhubaneswar.

[142] World Bank (2001): *India: Power Supply to Agriculture*, South Asia: Energy Sector Unit, South Asia Regional Office, World Bank.

Taken together, subsidised agricultural tariff, rapid rural electrification, increased power theft and pilferage, increased losses and irrational domestic price led to a wide gap between cost and revenue. Initially the state governments provided subventions to meet the gap. But since 7th Five-Year plan, these subventions are reduced.[143] To meet the gap, the SEBs were promoted, by respective state governments, to overcharge the industrial and commercial consumers, which led to emergence of cross-subsidy. For example, let's take the case of Andhra Pradesh. There was not much difference between industrial tariff and agricultural tariff (only 4 paisa per unit) in 1972 and the domestic tariff was more than the industrial consumers (more than double), while the commercial consumers were paying the highest tariff. This pattern of tariff was keeping with the international practices. While the industrial tariff was going up continuously, the domestic and agricultural tariffs were moving up very slowly and in some cases no increase.

The table 1 shows the widening gap between average cost to serve and average tariff at all India level. Almost all SEBs have been experiencing serious financial problems for several years. This is not surprising as the average revenue realised by the utilities per unit power sold, has been substantially less than the unit cost of power (See Table 1). These deficits have been incurred every year for over two decades in spite of mandatory provisions in the Electricity (Supply) Act, 1948 for a minimum 3 percent rate of return. Section 59 of the Act states that "the Board shall, after taking credit for any subvention from the state government under Section 63, carry on its operation and adjust its tariffs so as to ensure that the total revenues in any year of account shall, after meeting all expenses, leave such surplus as is not less than 3 per cent or such higher percentage as the state government may specify".[144] This provision has been grossly violated.

[143] *Interview* with Balaram Reddy, ex-Chairman of APSEB, October 21, 2005, Hyderabad.

[144] GoI (1948): *The Electricity (Supply) Act, 1948*, op. cit.

Table. 1: Average Cost of Power and Average Tariff

Year	Average unit cost of supply Ps/Kwh	Average tariff for sale of power Ps/Kwh	Deficit as paise per Kwh of supply	Deficit as percent of cost of supply
1980-81	41.9	32.3	9.6	22.9
1985-86	74.6	55.6	19.0	25.5
1990-91	108.6	81.8	26.8	24.7
1992-93	128.2	105.4	22.8	17.8
1994-95	163.4	128.0	35.4	21.7
1996-97	208.4	161.5	46.9	22.5
1998-99	242.3	192.9	49.4	20.4
1999-2000	280.9	207.8	73.1	26.0

Source: Sankar, T L (2004): 'Fiscal Impact of Electricity Boards' Over Dues on State Finance', in Edgardo M Favaro and Ashok K Lahiri edited *Fiscal Policies and Sustainable Growth in India*, New Delhi: Oxford University Press.

The most notable feature of the phase was growing political interference in the functioning of SEBs- its management and finance. We have discussed how interference in the tariff setting process has affected SEBs' finance. How interference was working in management of the boards? For a proper understanding of the political interference in the sector, it can be divided into two parts: firstly, interference thorough 'policy directions', that is legally allowed by the Section 78A of the Electricity (Supply) Act. Secondly, executive instructions, which works through an informal nexus between the politicians and the employees of the boards.[145]

The real problem is not with the policy directions, rather it is executive instructions which have affected the SEBs. Most often the executive instructions go against policy directions and often directed at implementation of policies. While the policy direction says to follow a criterion of population for village electrification and electrify the villages with more than 1000 population on priority basis, the executive instruction from politicians will be to electrify their constituencies first. For example, as an ex-employee of OSEB told, "just before the elections the politicians would come and ask to electrify the villages coming under their constituencies. In a particular case, immediately before elections, I was asked to put some instruments

[145] Ruet, Joel (2005): *Privatising Power Cuts? Ownership and Reform of State Electricity Boards in India*, op. cit.

(poles, wires, etc) in a constituency, so that the MLA of that constituency can claim that he has started electrification in the area and if he is re-elected he will complete it."[146]

The political interference was located at two levels: while the ministers had great control over generation- establishment of generating plants, the MLAs had control over distribution segment, often dictating which area would be electrified first.[147] The interference is not only limited to electrification projects, but also the politicians put pressure of establishment of new plants in their stronghold, even though the location is far from the source of fuel. This has led to increase in cost of generation. Another area of interference is human resources, i.e. employment, promotion and transfers. Politicians used to pressurise the boards to recruit unskilled workers, regardless of their requirement. This had reduced technical as well as managerial efficiency of the boards.[148]

Corruption was another factor contributing to the decline of SEBs.[149] Even though the laws allow punishing somebody who is found guilty of corruption, it has been very difficult to implement those provisions for two reasons. Firstly, it was very difficult to prove a charge, corruption was deep rooted in the sector and everybody was part of it. Secondly, even if a charge was proved, it was very difficult to punish. The employees had strong unions, which put pressure on politicians to protect their members.

However, by late 1980s, the SEBs were in a severe crisis of finance, capacity and management. State governments were heavily burdened with the fiscal deficits of the SEBs. The fiscal deficits of the SEBs have been contributing to gross fiscal deficit

---

[146] *Interview* with R P Mohapatra, retired chief engineer, OSEB, November 15, 2005, Bhubaneswar.

[147] *Interview* with Usha Ramachandra (ASCI), October 23, 2005, Hyderabad..

[148] *Interview* with ex-chairman's of OSEB and APSEB, July 2005-June 2006, Bhubaneswar and Hyderabad.

[149] *Interview* with the J B Pattnaik, ex-Chief Minister of Orissa (who implemented electricity reforms in Orissa), November 14, 2005, Bhubaneswar. He claimed that the root cause of OSEB's failure is corrupt practices of the Board's staff. "The SEB staffs started working for their personal benefits, which undermined the benefit of the board. It resulted in declining revenue collection and poor service quality."

of states.[150] On the other hand, the consumers were highly dissatisfied with the quality of supply. Industrial consumers were dissatisfied with low-quality power, high tariffs, and restrictions on private generation. Rather in 1988, they moved to the Supreme Court against cross-subsidisation. However, the Supreme Court gave its judgement in favour of the cross-subsidisation.[151] The domestic consumers highly dissatisfied with the low-quality power and frequent load-shadings, particularly during peak hours. The agricultural consumers were not happy with the quality of power and limited hour of supply. The government claimed that the power crisis is due to lack of sufficient generation capacity in India, ignoring high T&D losses and rampant power theft and pilferage. All these crises led to thinking on moving out of public monopoly system. At the same time, the global thinking was directed to topple the consensus on public power and set in motion fundamental changes in the sector.

Third Phase: Early 1990s to 2003

Politics of Electricity Reforms in India

By the beginning of 1990s, there was a broad consensus that the Indian power sector was in dire straits, and major policy changes are required to change its management. Given the broad consensus on the problem, the policy makers could have set back and prepared a new course of action with the existing institutions. This would have been possible through management reform in the sector, which had a group of supporters in the policy arena. Re-regulation of the sector to reassert the independence of SEBs from their political masters, devise mechanisms of accountability to match the assignment of independence would have given much better result.[152]

However, in the face of a severe crisis in the sector, the Central Government announced in 1991 that it would encourage private investment in the sector. This development in Indian electricity sector marked the beginning of the third phase of policy change, i.e. of electricity reforms. The reforms in Indian electricity sector took

---

[150] Sankar, T L (2004): 'Fiscal Impact of Electricity Boards' Over Dues on State Finance', in Edgardo M Favaro and Ashok K Lahiri edited *Fiscal Policies and Sustainable Growth in India*, New Delhi: Oxford University Press.

[151] *Interview* with Balaram Reddy, ex-Chairman of APSEB, October 21, 2005, Hyderabad.

[152] Navroz K Dubash and Sudhir Chella Rajan (2001): 'Power Politics: Process of Power Sector Reform in India', op. cit.

place again in two phases: the first phase introduced private players in generation; the second phase initiated structural reforms in SEBs and privatisation of distribution in some cases, and established independent regulators both at the centre and state level.

Reforms in electricity sector began in October 1991, when the Power Ministry of the Government of India began to publish a series of notifications seeking to encourage the entry of privately owned generating companies into the electricity sector. These government orders, some of which were later enacted in parliament to become the Electricity Laws (Amendment) Act, 1991. It radically revised prevailing legislation by permitting private entities to establish, operate and maintain generating stations of virtually any size and to enter into long-term power purchase agreement with SEBs. This Act amending the Indian Electricity Act, 1910 and the Electricity (Supply) Act, 1948 makes provision for: allowing private sector to set up local, gas or liquid fuel-based thermal projects, hydel projects and wind or solar projects of any size; allowing foreign investors up to 100 percent ownership of power projects subject to government approval; setting new price structure; new power projects are eligible for a five-year tax holiday; and duties on the import of equipment for power projects have been reduced considerably.[153]

To attract private investors, IPPs were offered a guaranteed 16- percent return on equity, with bonuses for improved capacity utilization, a fiveyear tax holiday, and low equity requirements equivalent to 20 percent of project costs. To further hasten implementation, the central government subsequently declared eight of the most promising projects 'fast track' projects with expedited clearance procedures, and provided government counter-guarantees and escrow accounts against nonpayment of dues by SEBs. These incentives had the desired effect. By mid-1995, project developers and financiers had put forward 189 project offers totaling over U.S. $100 billion, which would have increased capacity by 75 gigawatts.

The government initiative to introduce private players in electricity generation was welcomed by all. By the time, Indian business class was well developed. Indian capitalists could foresee an opportunity to enter into the electricity business, with the entry of private capital in the sector. The middle class consumer groups, for whom electricity is a basic necessity, found a promise of efficient power deliver. The

industrialists expected a reliable power supply. Although the mass was unaware of the developments, a few people who knew the things welcomed the move. There was hardly any opposition to the policy. The only interest which could have opposed the policies is the employees unions of the sector. Although the public utilities constitute one of India's largest employers, labour unions in the sector had not yet organized effectively to oppose privatization.[154]

But within a few years of its implementation, the IPP policy turned out to be a nightmare. Multilateral donors played a curious dual role in the IPP policy. While welcoming private electricity initiatives in principle, the World Bank delivered a strong critique of the highest profile IPP, the Enron project, in a confidential memo to the Government of India. The memo stated that the project was "not economically viable, and thus could not be financed by the Bank," but urged the government to "explore ways to sustain the interest of the project sponsors". That the World Bank expressed its concerns about the project is laudable; that it did so only in a muted fashion is problematic. The IPP policy itself was widely viewed as faulty, since it threatened to further weaken the fiscal situation of states. Since the World Bank was actively supporting SEB reform at this time, it could well have been more public with its views. While there is no direct evidence on this point, Bank staff may have faced pressures to reconcile an IPP policy they viewed as flawed with the Bank's enthusiastic support for India's liberalization efforts. As a result, an important moment for critical reflection on the IPP policy was lost.[155] The long-term impacts of the IPP policy were several and diverse, and are well illustrated by the high-profile case of the Enron project. First, key institutions responsible for long-term planning, and technical and economic clearance were weakened. Officials at well-functioning public agencies such as NTPC felt that the IPP policy created an uneven playing field in favor of foreign investors. Second, the reckless focus on capacity expansion excluded consideration of a more rational least-cost planning approach to electricity development. Finally, in its conception and implementation, the IPP policy offered

---

[153] GoI (1991): The Electricity Laws (Amendment) Act, 1991, Government of India.

[154] Sunila S Kale (2004): 'Current reforms: The Politics of Policy Change in India's Electricity Sector', op. cit.

[155] Navroz K Dubash and Sudhir Chella Rajan (2001): 'Power Politics: Process of Power Sector Reform in India', op. cit.

opportunities for graft and malfeasance. Projects were not typically selected through competitive bids, and power purchase agreements were kept secret even though they contained "take-or-pay" contracts involving public financial obligations for decades to come. While no accusations have been conclusively proved, some high-profile projects have been caught in a swirl of accusations concerning human rights abuses, flawed environmental clearances, and corruption.[156]

For all the excitements with which it was launched, the IPP programme significantly under-performed. By the mid-1990s, it was clear that a focus on private investment in generation was an insufficient, and possibly counter productive policy. Not all PPAs were controversial, nor did all fail as spectacularly as Enron's did. Nevertheless, the saga of Enron, clearly demonstrated the difficulties with expecting IPPs to solve the sector's problems. As long as private generating firms had to sell their power to insolvent SEBs, financial risks would remain intolerably high.

The second phase of reform thus sought to address the problem of political interference with the SEBs, which kept subsidies too high and collections too low for SEBs to pay their bills. It provided two laired solutions to the problems in the sector-unbundling and corporatisation or privatization of SEBs and establishment of independent regulatory commissions. These policy measures were intended to alter the relationship of the public utilities with the consumers as well as state governments.

These reforms were quite clearly drawn from the World Bank policies on private participation in electricity sector, which was rewritten in 1993. Its global reach and cheap capital made the Bank the primary vehicle for propagating the new privatization paradigm. In 1993, the World Bank launched its policies in India, in a conference at Jaipur jointly convened by the Government of India and the Bank, where most of the state power ministers were invited. In response to these ideas, various states started experimenting reforms after the mid-1990s. While most of the states have unbundled the sector, very few have privatized the distribution business. In large measure, these differences across Indian states reflect variations in the

[156] Desai, Ashok. 1999. "The Economics and Politics of Transition to an Open Market Economy: India." OECD Technical Paper. CD/DOC (99) 12.

balance of power among different social and economic actors in the state. Detailed overviews of two Indian states have been provided in following two chapters.

The second phase of reforms in electricity employed two strategies, which illustrates two strategies. The first one was to unbundled the monolithic SEBs and privatise the resultant units. The purpose was to improve the management in the sector and to introduce a commercial culture. The second strategy was to establish independent regulatory bodies and confer them with politically most sensitive function of tariff setting and licensing. The main purpose of establishing independent regulatory bodies was to 'depoliticise' the sector. The Central Government passed Electricity Regulatory Commissions Act in 1998, which made provisions for establishment of State Electricity Regulatory Commissions (SERCs) in each state and Central Electricity Regulatory Commission (CERC) at the centre. However, the differences in the legal frameworks governing the various SERCs are minimal, but their operations vary from state to state, in some cases including generation licensing and tariffs for particular categories.[157]

While almost all the states established regulatory commission within few years after the passing of the Electricity Regulatory Commissions Act, restructuring and privatisation have proceeded slowly. While the early reformers like Orissa and Delhi, has gone far to complete the process by privatising their distribution companies, the late reformers are not still able to do so. This is because of the emergence of opposition to the reforms, particularly privatisation. While Orissa started reforms and privatised the distribution companies, there was hardly any awareness about the reform process. But by the time other states started the process, the Orissa model had started bearing its result, which was not fruitful. This led strong oppositions to privatisation in other states.

I must mention that the opposition was against the privatisation process, not against other reform measures. It was because the consumers were suspicious that

[157] Some observers complain about a nexus between the regulators and the government. As the government does the final selection and the regulators are not financially independent enough to manage their business, they are inclined towards governments. Another reason mentioned by many interviewees is that the regulators are heavily drawn from the bureaucracy and having worked so long for the government, the regulators are obliged to the government and they think in line with the government.

privatisation would result in tariff hike and the farmers, who were benefited by artificial low tariffs, were more lively in the opposition process. Civil society organisations played an active role in the opposition to privatisation. Many organisations focused on the social and economic impacts of privatisation and joined together to gain public support for their cause. However, the presence of these organisations has generated awareness among the mass about the reform, predominantly about the negative implications. They have bridged the gap between 'elite politics' and 'mass politics' in power sector by involving the mass in the process.

The story suggests that the presence or absence of competent and organised consumer groups is a key variable in determining the success of electricity reforms. However, the reform measures initiated at state level could not be a success. Though the states attempted to focus on the central problems of distributions problems and losses, the result was far from satisfactory outcomes. It was because of hesitant attempts by the states. While the state governments agreed that there is a need to restructure the sector, they put on limitations on areas which may cost them politically.

Fourth Phase: 2003 onwards

The Electricity Act: A New Beginning

In response to the hesitant reforms at state level, the Central Government passed the Electricity Act, 2003 in May 2003, after a push and pull for two years among the policy makers. Passing of the Act marked the beginning of the fourth phase in Indian electricity sector. In contrast to the World Bank-led state reforms, the new Act represented the internalisation of the new global ideology of electricity at the central government level.[158] The new Act replaced all the existing legislation in the sector and prepared a ground for fundamental restructuring of the sector.

The critics argue that by focusing on private participation and open access in the sector, it creates a condition for electricity to be dealt as a commodity, rather than as a social good that the state is obliged to provide to its citizens. Many argue that implementation of the Act will create a situation like that existed in the pre-

[158] Sunila S Kale (2004): 'Current reforms: The Politics of Policy Change in India's Electricity Sector', op. cit.

independence period. The Act undermines, the objectives set by the Constituent Assembly of India and the objective for which the SEBs were created.

The Ministry of Power submitted a draft of the Electricity Bill to the Parliamentary Standing Committee on Energy in August 2001, the Committee debated the bill for 15 months. A number of changes were suggested to strengthen competition. For example, the revised legislation stipulated a firm timeline for the implementation of open access, meaning the ability of industry to buy power directly from private generators. After being passed by the committee, with notes of dissent from the Communist parties, the bill returned to the Ministry of Power in December 2002. The Ministry accepted only some of the Parliamentary Committee's suggested changes. Notably, timeline for the introduction of open access was again omitted in the bill. The new version of the bill was passed by the Indian Parliament on 25th May 2003. In contrast to the debate on the 1948 Act five decades earlier, the debate in lower house was brief- just over one hour- and sparsely attended.

Before going into its implementation, it is necessary to discuss the salient features of the Act and their implications. Under Section 7, any Generating company can set up a power station without obtaining clearance from CEA. Only Hydro Stations are required to obtain clearance from CEA. Section 9 allows the setting up of Captive Generating Plants and dedicated transmission lines. It further gives the generator the right to 'open access' to the destination of his use. Under this section there is every possibility of large and other industrial consumers switching over to captive generators located anywhere in the country – which will lead the distribution utilities into accelerated bankruptcy. In case an industrial consumer opts to purchase power from any generator through 'Open Access' he would be required to pay a 'subsidy surcharge'. However in case of captive generators there is no provision to pay subsidy surcharge. In other words the captive generators will be given liberty to use the state utility transmission system to deprive the state utility of its high revenue consumers. Section 38, 2(d) makes it obligatory to provide "non discriminatory open access". The implication is that the creamy (high revenue) consumers can choose the generator of their choice, which may be located anywhere in the Country. Section 42 provides the legal framework of privatisation of distribution. Section 44 has been added clearly on the experience of Orissa Cyclone and relieves the distribution license

from restoring power supply. Under this section 44 once power supply is disrupted due to cyclone, flood storm etc., the licensee is given the freedom not to restore power supply. This section is drafted to protect the licensee while totally ignoring on the power consumers whose power supply is disrupted. The electricity Act 2003 provides for the formation of an appellate Tribunal comprising the Chairman and 3 members. The Act makes provisions for privatisation of the distribution business. Section 132 specifies that if assets of Board are sold the priority on the sale proceeds would be to meet employees' dues (including retirement benefits). Under Section 167 the SEB constituted under Electricity (Supply) Act, 1948 will be deemed as a Sate Transmission Utility and a licensee. The Act permits stand alone systems for generation and distribution in rural and remote areas. It also makes provision for decentralized management of distribution through Panchayats, users associations, cooperatives or franchises in rural areas.[159]

While the Act is welcomed by the business community, for all its goods for them, it is opposed by some intellectuals and civil society organizations for its bias to the industrial consumers. By removing clearances, it makes it easier for the business class to set up generation business in India. But, owing to its negligence of social objectives, its implementation is halted in the states. Those states which have substantial industrial consumers are pressed to introduce the core provisions of competition, the others are moving slow in the direction.

The 2003 Act reflects, to a certain extent, professionalism in decision making. The Act was initially drafted by a group of professionals and included some provisions to make the sector commercially active and to checks the errors existing in the sector. The Act was mainly focused to introduce competition in the sector and provide a choice to those consumers who can pay regularly. It is claimed that the Act is biased towards industrial consumers. As an open competition is not possible in the Indian electricity sector, the 'open access' provision will facilitate only the industrial consumers, not the residential consumers. Although, the Act was drafted by professionals in the sector, it has been manipulated and the final version has been adopted by the government, i.e. the policy makers giving them ample opportunity to make additions and deletions. Some strict provisions made by the professionals in the

[159] GoI (2003): *The Electricity Act, 2003*, Delhi: Government of India.

bill were removed to make the Act politically acceptable to the states. The hard rules to introduce competition in the sector have been reduced. For example, an important issue i.e. a timeline for implementation of open access has been deleted to provide the states a choice to implement it soon to later. Again in comparison to the Electricity Regulatory Commissions Act, the new Act makes the regulators weaker by putting many controls over the regulators in the hands of governments.

However, implementation of the Act has been very slow in Indian states. As the Act provided certain timeline for unbundling, by now almost all the states have unbundled their electricity sectors and created a transmission corporation. But the critical provisions like 'open access' are hardly implemented in the states. Recently, a few states have started debating on the issue of open access. But it may take decades to implement these provisions to introduce competition in the sector, like it happened at the time of creation of SEBs. Another provision, which is going to be implemented, is the establishment of systems for distributed decentralized generation and decentralized generation. The central government is taking initiatives to implement these provisions in the states; rather many states have started working on it. Considering the failure of rural electrification during 1990s during the reforms period, the new Act has focused on rural electrification. To make the rural electrification programmes commercially viable, the Act has made the above provisions.

The Act no doubt presents a concerted effort to address the core issue of the distribution sector and its management, subsidy and metering problems. It also makes efforts to address broader public concerns such as rural electrification and consumer protection. However, the zero-sum trade-off between the core provision of open access, subsidies to agricultural and urban consumers, and the fiscal burden on the states have brought political tensions into sharp focus. These political tensions are expected to intensify later on.

Conclusion:

The policy changes in Indian electricity sector over the period of last 59 years have reflected political economic developments in India, dominant interests and prevailing ideologies. During the initial phase, the dominant interest in India that of industrialists supported the public control of the sector and it was guided by the ideology of state-directed development prevailing in the developed countries. This

resulted in putting up the sector under public control. In the second phase, India experienced emergence of various new interests and gradual growth of them. The new interests, particularly the peasantry, demanded subsidies and other social benefits from the state, which was responded by the states, r4esulting in an emergence of a populist paradox. The third phase, experienced a radical policy change in the sector with the introduction of private player, which was mostly guided by the presence of extern al player, particularly international development intuitions. This phase has reflected certain confusions in the policy making process. While the policies of reform were adopted, there was a little Indian thinking on it. The process was mostly guided by the World Bank and the IMF. This phase marked a return to the professional model of policy making keeping intact the populist measures. The fourth phase, of policy making has returned completely to the professional model. But the implementation of these policies has been halted owing to the nature of the policies and political conditions at the state level. While the policy choice level shows relative professionalism, the implementation level is crept to ensure populism.

Chapter 3

Political Economy of Electricity Sector:

The Orissa Experience

Orissa is one of the major states of the Indian Union, with a population of 36.71 million in 2001. It has the third lowest population density (236 persons per sq. km in 2001) among the major states of India, ahead of only Rajasthan and Madhya Pradesh. However, there is a significant inter-district variation within the state in this regard, with the district of Khurda having a population of 666 persons per sq. km at one end, and Kandhamal district with a population density of only 81 persons per sq. km at the other end. This has meant massive spatial concentration of the population. Coastal Orissa accounts for some 52 percent of the population of the state with an area share of 25 percent.[160]

Most of the average development indicators of Orissa are far below the national average. For example, per capita income in Orissa is US$ 131, while the national average is US$ 260. Over time the relative per capita income of Orissa has declined vis-à-vis all other low-income states. When compared to all-India values, Orissa's per capita income was three-fourths of that of all-India at the beginning of 1980s and became half by the end of 1990s. The contrast becomes even more stark when comparisons are made with the performance of states which experienced growth rates higher than the national average. For example, the per capita income of Orissa is one third that of Punjab. The percentage of population living below poverty line (BPL) is 49 percent in Orissa, while the national average is 36 percent. Most of these poor people live in rural areas (92.3 percent of the total poor in 1987-88). Economy is largely agriculture based with nearly three-fourth of the population dependent on it. The state is rich in mineral resources and has nearly one-fourth of India's coal reserves. Orissa has the misfortune to be ravaged by natural calamities- droughts during summer and cyclones and floods during the rainy season. This has been contributing negatively to the slow growth of Orissa's economy. [161]

Low population density and spatial concentration of population in Orissa has resulted in extension of electricity grid to remote areas which lack sufficient consumers. Long lines are stretched without any consumers leading to high transmission losses. And stretching of long lines also increases the potential for theft

[160] GoO (2004): *Human Development Report 2004*, Bhubaneswar: Government of Orissa.

[161] Ibid.

of electricity theft. It also increases the maintenance expenditure and also needs high investment to reach all people.

Although Orissa is an agriculture based economy, agriculture is not an economically profitable job. In most parts of Orissa, farmers grow one crop per year, predominantly, paddy. The coastal area presents a virtual mono-cultural landscape and the predominant crop, paddy, is grown in two-crop combinations with pulses, oilseeds, or jute. Paddy is also the most important crop in highland Orissa and is widely cultivated in river valleys. A large number of miscellaneous crops such as coarse millets, pulses, oilseeds, jute, and sugarcane are also grown. However, few parts of Orissa are irrigated through canals, very few through lift irrigation, and most of Orissa is dependent on monsoon. This has resulted in low consumption of electricity for agricultural purpose (6.24 percent of the total load). But the domestic consumption in Orissa is very high (49.12 percent of the total load), leaving a little for the industrial consumption (28.54 percent of the total load) (See Appendix 2.1).[162]

Even though domestic consumption is high in the state, most of the rural people in Orissa are not able to afford the service. Electricity still remains a commodity of luxury in many parts of Orissa. As the per capita income in the rural areas is very low, thus capability to pay for electricity, most of the people opt for theft rather than having a legal connection. Orissa accounts for high level of electricity theft, particularly taking place in the populated coastal belt. Lack of demand for electricity and lack of capability to pay for it has made electricity a less priority commodity in Orissa.

Although Orissa had a very little electricity at the time of independence, overtime, the sector had a substantial growth. However, the growth rate has been relatively slow in comparison to other major states of India. The installed capacity of the state has increased from 3000 KW (Kilowatt) in 1948 to 3489.335 MW (Megawatt) (including GRIDCO's share from Central Sector - 690.460 MW) recently, making it one of the power-surplus states (See Appendix 2.1). Much of the electricity generation in Orissa is done from hydel sources, more than two-third of the total generation. It makes the cost of power in Orissa much less than the other states.

[162] OERC website, www.orierc.org, last accessed on 23.06.2006.

All these features make the electricity sector in Orissa distinct from other states. Over time, Orissa's electricity sector has been reflecting the policy changes that took place at the national level. However, in 1990s, Orissa became the first state to restructure its electricity sector and has gone for complete restructuring and privatisation of the electricity business. This leads to think why a state which was developing gradually prior to 1995 suddenly reformed its power sector without waiting for others to do it. What were the rationale and pressures behinds this development? How has the sector in Orissa performed since the creation of the Orissa State Electricity Board (OSEB)? What were the different policy changes that took place during the period? To answer these questions the chapter looks into political economy of power sector development in Orissa. The chapter seeks to identify the dominant interest in the sector and how they have influenced policy formulation and implementation in the sector. How electoral politics of the state has impacted on the management of the sector? Finally, the chapter seeks to find out how the external players have emerged in the sector and influenced policy making in the sector?

Electricity in Pre-Independence Orissa:[163]

In the pre-independence period, electricity could reach a very few pockets of Orissa, particularly the urban areas. Orissa was one among the states, who did not have a department of electricity prior to independence. So there was zero contribution from the state to the sector. The state had only few private licensees in few urban areas of Orissa, like Cuttack, Puri, Balasore etc. The licensees were generating electricity through diesel sets and distributing in limited areas. The terms and conditions of supply of these electricity licensees were determined on the basis of the Electricity Act, 1910. There were no thermal or hydel power plants, even though the state is rich with coal mines and rivers. It may be because of the fact that the British government did not have much interaction with the state. So the technology of producing electricity through thermal and hydel power plants could not come to Orissa. As it is discussed in the chapter 2, electrification in British India was meant to facilitate British administration and trade in India, so the British government was not

[163] Due to lack of documented information on the period, the section is based on *Interviews* with several people in Orissa, who have some idea about the period.

much interested in electrification of Orissa, as it did not have much trade interest in the state.

The licensees could not supply to other areas due to lack of resources, and lack of demand also, as the cost of electricity was too high. The operation areas of licensees were limited covering parts of townships. There was no big Indian private player also. The small licensees were making a little profit from the business as the business was too small. The same licensee was doing the business of generation and distribution. Then electricity was used only for the domestic purpose as there were no industries and agriculture in Orissa was dependent on monsoon. The well-to-do people were only able to afford it, making electricity a commodity of luxury and status symbol.

OSEB Monopoly and Electricity Sector in Orissa (1961-1995):

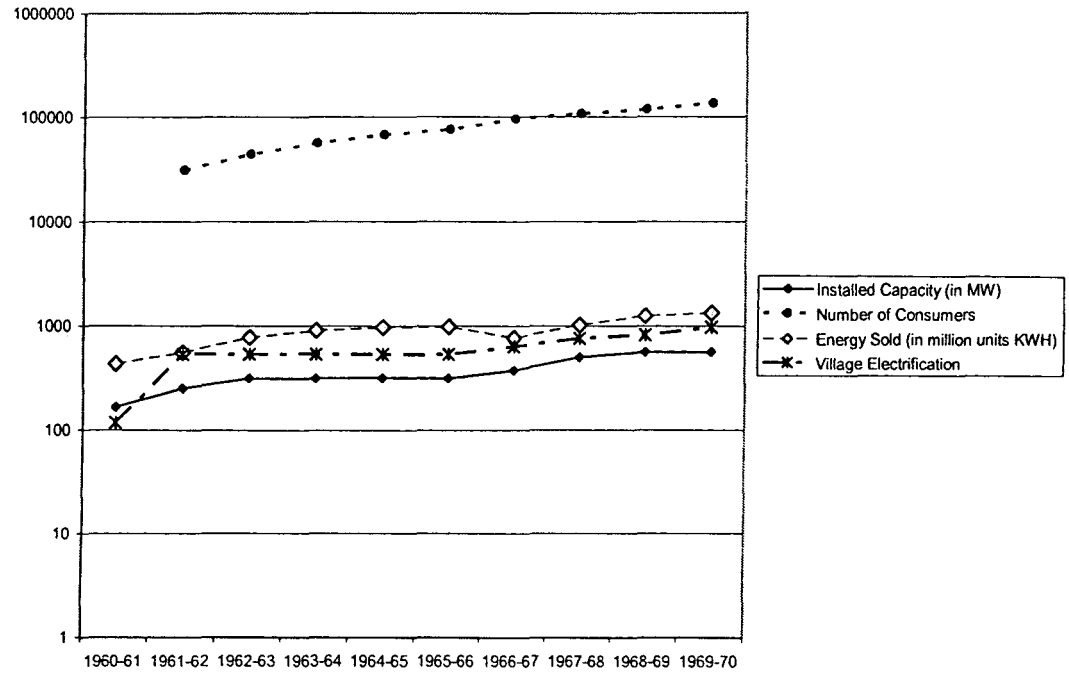
Orissa had a very little capacity of electric power at the time of independence, about 3000 KW. The state had to begin to build the sector. Even though the Electricity (Supply) Act, 1948 provided initially two years from the passage of the Act, but with the explicit promise of further extensions if they proved necessary- to establish these State Electricity Boards (SEBs). In the Constituent Asembly, the representative from Orissa, B. Das claimed that a state like Orissa should not establish the board immediately as it does not have much capacity. However, a department was created under the Government of Orissa to develop and mange the sector in Orissa.[164] The Government of Orissa took thirteen years to create Orissa State Electricity Board (OSEB).

Finally, the OSEB was created on 1st March 1961. The board had to start from the beginning. It had to establish generating stations and supply power to the consumers. The board had an enormous task to electrify Orissa, as neither any part of Orissa was really electrified nor there was sufficient capacity to electrify the state. During the first decade of its operation, the OSEB was growing very slowly (See Fig 1). During the decade, installed capacity increased from a mere 167.32 MW to 564.26 MW, number of consumers increased from 31013 to 134877, amount of energy sold

[164] GoI (1948): *Constituent Assembly of India (Legislative) Debates, Part II*, op. cit.

increased from 435.581 million units to 1331.279 million units, and number of villages electrified increased from 118 to 970.[165]

Fig 1: Power Development in Orissa During 1960s



Source: OSEB (1979): *Administration Report 1978-79*, Bhubaneswar: Orissa State Electricity Board.

By 1970-71, the OSEB could only electrify only 1877 villages. But it was commercially viable and making profit with the required rate of return. During this phase the state government has funded for the creation as well as management of the board, making the OSEB indebted to the state government for its financial needs. There was certain amount of central assistance for the development of the sector in Orissa. During creation of the board, Orissa was given special assistance from the centre for power development, as it was considered a lagging state.

Immediately after creation of the OSEB, the Government of Orissa passed a legislation to adopt the Orissa Electricity (Duty) Rules, 1961, which made it mandatory for the consumers to pay a fixed amount of electricity duty. The electricity duty was collected by the licensee and went to the government treasury for development of the sector. The second important legislation passed by the Government of Orissa during this period was the Orissa State Electricity (Supply)

[165] OSEB (1979): *Administration report 1978-79*, Bhubaneswar: Orissa State Electricity Board.

Rules, 1962. The Act dictated the provisions for management of the Board and made it mandatory for the OSEB to submit annual financial statements[166], annual statement of accounts and annual reports[167] and specified the format of submission. The Act made the OSEB more accountable to and dependent on the Government of Orissa.

A major shift took place in the decade starting from 1971. OSEB started massive rural electrification, directed by the state government. The rural electrification programme was facilitated by the establishment of Rural Electrification Corporation Limited (REC), a public sector enterprise created on July 25, 1969 with the objective to finance and promote rural electrification projects all over the country. It provides financial assistance to State Electricity Boards, State Government Departments and Rural Electric Cooperatives for rural electrification projects as are sponsored by them.[168] The REC provided soft loans to the boards on the guarantee of State Governments.

There were no criteria for selecting villages to be electrified. Initially revenue villages with a population of more than 1000 were to be electrified, and then it was reduced to 500. As an ex-employee of OSEB told, this criterion was not strictly followed. There was a competition among the politicians to electrify their constituencies first. When a scheme is sanctioned the politicians used to ask the employees of the board to electrify villages in their constituency first, even though they do not fit into the population criterion. As the REC was providing loans for rural electrification on a guarantee from the State government, there was no 'fund constraint' and also the governments were always ready for providing guarantee for these loans, as they were getting political mileage from this.[169]

---

[166] Section 55: "The Board shall submit to the Government each year an annual financial statement for the ensuing year in the form as may be specified by the Government not later than such date in the month of February as the Government may specify in this behalf." GoO (1962): *The Orissa State Electricity (Supply) Rules, 1962*, Bhubaneswar: Government of Orissa.

[167] Section 59: "The Board shall, as soon as possible after 31st day of March, in each year but not later than the 30th September, submit to the Government an annual report of the Board's operation during the financial year ending on 31st March and the activities, if any, which are likely to be undertaken by the Board in the next financial year." Ibid.

[168] REC website http://recindia.nic.in/, last accessed on 03-07-2006.

[169] *Interview* with R P Mohapatra, retired chief engineer, OSEB, November 15, 2005, Bhubaneswar.

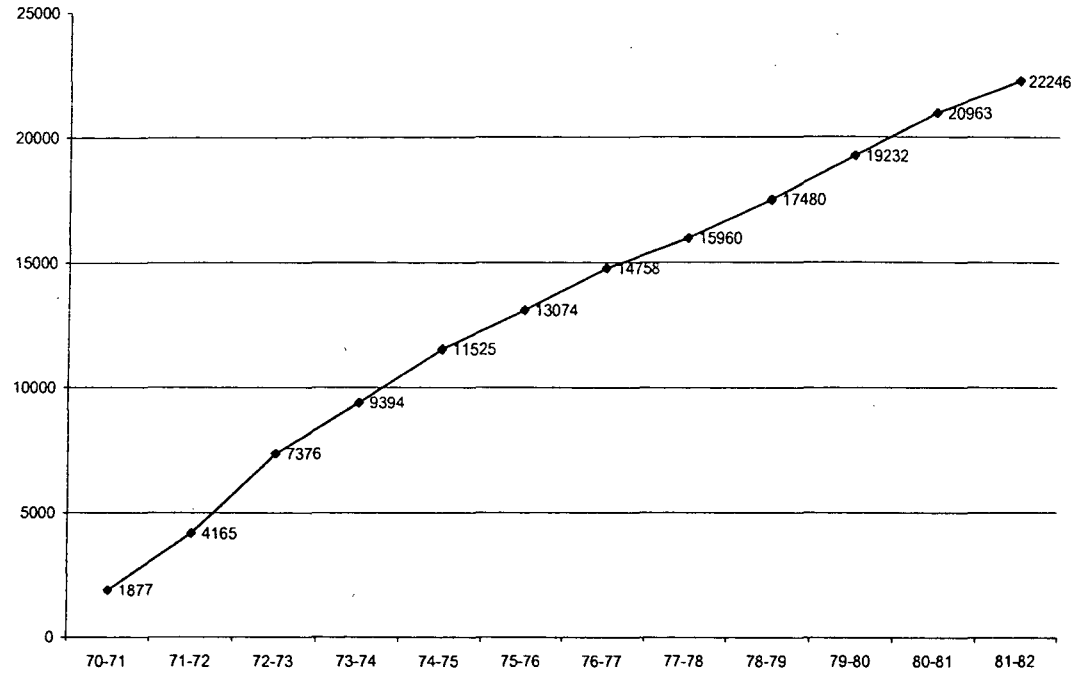
Both the models of government interference (i.e. policy directive and executive instruction) worked in the case. While the policy directive said electrify the rural areas following the criterion of population, executive instructions from politicians demanded to electrify their constituency on priority basis, even though that does not fit into the population criterion. Political interference was not only limited to electrification matters, but also it extended to day-to-day management of the board. One important area of interference was human resources, i.e. employment, promotion and transfers. Politicians used to pressurise the board managers to recruit unskilled workers, regardless of their requirement. This had reduced technical as well as managerial efficiency of the board.[170]

However, within a period of one-decade (1970s), the number of villages electrified in Orissa increased from only 1877 in 1971 to 19232 in 1981, more than 10 times (See Fig. 2). The policy making elites in Orissa provide a socio-economic development argument for this extension of electricity to rural areas. They claim that the 5th Five Year Plan had added a new dimension to rural electrification. It was realised that mere rural electrification for the purpose of providing a few light points in the villages and utilising electricity for extending human comforts is not the aim of rural electrification. The supply of electricity was, therefore, diverted towards making an appreciable contribution for the socio-economic growth of rural population. Therefore, the utilisation of the electricity for the purpose creating additional employment, additional food production and for agro-based cottage industries, besides the normal usage for providing the source of human comforts was given great stress.[171]

[170] *Interviews* with ex-chairmans of OSEB, November 17, 2005 and February 18, 2006, Bhubaneswar.

[171] OSEB (1985): 'Rural Electrification in Orissa', *OSEB News*, June-September.

Fig 2: Village Electrification in Orissa



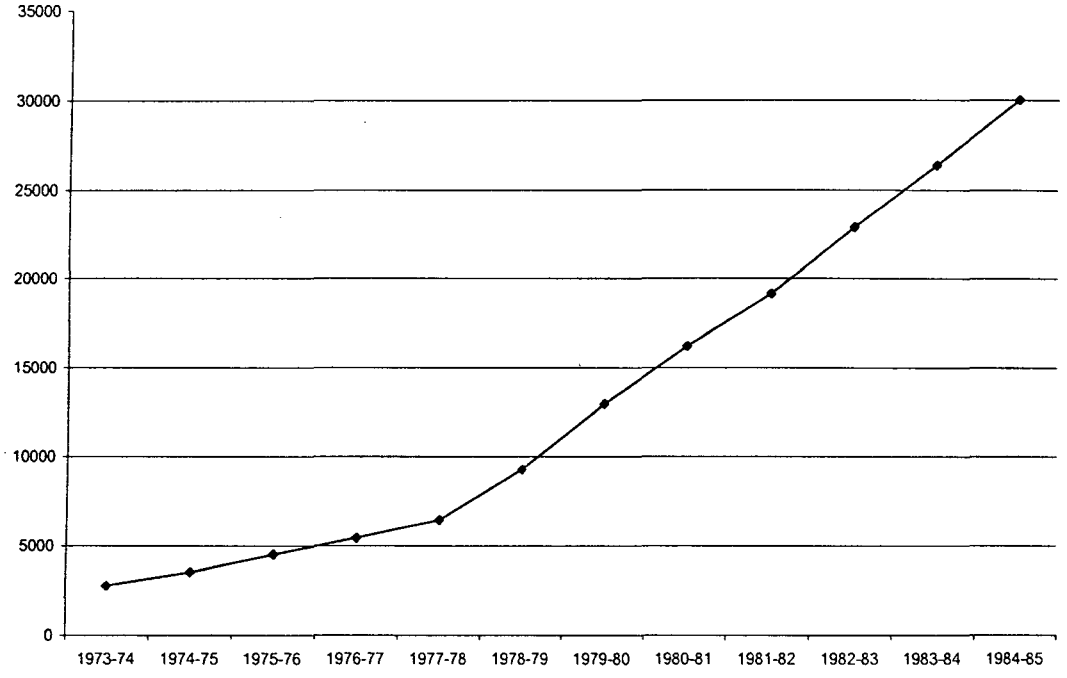
Source: OSEB (1982): *Administration Report 1981-82*, Bhubaneswar: Orissa State Electricity Board.

Thus with this end in view, the Lift Irrigation was considered one of the best aspects of rural utilisation of electricity since it contributes to the employment of the rural population round the year, increasing food production by introducing 2nd and 3rd cropping pattern and also for development of small scale industries which were ancillary to the agricultural development.[172] Although a great stress was put on energisation of irrigation pumpsets, Orissa could not achieve much unlike other states (see Fig 3). This may be due to three important reasons: firstly, Orissa did not have a rich peasantry which would have benefited by irrigation facility. So there was a very little demand from the peasantry for electricity for irrigation. Secondly, as green revolution was not introduced in Orissa, there was very little instance of commercial cropping, which would have required a lot of irrigation. However, lack of commercial cropping has led to reduced need for irrigation and thus electricity. Finally, farming in Orissa is limited to paddy and pulses, which are usually done in rainy season with monsoon water. And where ever farmers do second cropping, they depend on canal

[172] Ibid.

irrigation facilities. So there is a very little use of ground water which would have required electricity.[173]

Fig 3: Energisation of Irrigation Pumpsets in Orissa (1970s)



Source: OSEB (1985): 'Rural Electrification in Orissa', *OSEB News*, June-September.

Though this figure shows a rapid increase in numbers of pumpsets enersiged during a decade, it is not as high as other states. For example, in Andhra Pradesh the number of pumpsets energised in 1984-85 was 6,36,003, while the corresponding figure in Orissa was 30,002.

The shift in the power sector coincided with a political crisis in the state. Like other states, the Congress Party in Orissa was challenged by a strong leader within the party. Biju Pattnaik, a strong and vibrant leader of the Congress party who had been the Chief Minister of Orissa during 1961 to 1963, resigned from congress party in 1970 and formed a new party called Utkal Congress. In 1971 elections the Utkal Congress party could manage to win only 33 seats. Latter Biju Pattnaik joined hands with Bharatiya Lok Dal in 1974 and became the president of the local branch. He also was the opposition leader. Later he played a major role in formation of the Janta Dal

[173] *Interview* with Sovan Kanungo, former Chairman of the Committee on Power Sector Reform in Orissa, February 23, 2006, Cuttack.

in 1976.[174] By late 1970s, under the leadership of Biju Pattnaik, Janata Dal emerged as a local party in Orissa.[175]

Since his separation from the Congress Party, Biju Pattnaik had been focusing on local needs of people. On the other hand, the Congress party, to face the opposition from the regional parties, had created a 'punishment regime' to hold its electoral base. The party provided some economic benefits to the people (voters) to vote in favour of the party. Defecting from the party would mean loosing those economic benefits.[176] These economic benefits include supply of public goods, which included electricity. As a strategy the Congress party through its control over state governments, expedited public service delivery in all the states to have a popular support. The State Electricity Boards were victimised for the purpose and were asked to electrify as much area they can do. There was pressure from the central government. However, money was not a concern, as REC was already set up to finance (through loans) the rural electrification of states. During the decade of 1970s, the OSEB had drawn loans of Rs. 1456.892 lakhs from the REC for rural electrification.[177]

As told by a retired officer of OSEB, "during 1970s, if you would have visited rural Orissa, you could have seen many villages with a transformer at the outpost, but no extension of lines into the village as there was hardly any demand for electricity."[178] In those cases, people used to pull their own lines from the transformer and steal the electric power. The governments' attitude towards the electricity board was not commercial; different governments used the board for social objective, obviously for political reasons. They sustained the belief that electricity is a fundamental right, and must be supplied irrespective of ability to pay. And on the other hand, they had the feeling that bureaucratic management of the board is superior to professional management.

---

[174] http://www.123orissa.com/ accessed on 04.07.2006.

[175] Sanjay Kumar (2005): 'Janata Regionalised: Contrasting Bases of Electoral Support in Bihar and Orissa', in Rob Jenkins edited *Regional Reflections: Comparing Politics Across India's States*, New Delhi: Oxford University Press.

[176] Sunita Parikh and Barry Weingast (2004): 'Partisan Politics and the Structure and Stability of Federalism, Indian Style', presented at a conference on *Empirical and Formal Models of Politics*, Centre in Political Economy, Washington University.

[177] OSEB (1985): 'Rural Electrification in Orissa', *OSEB News*, op. cit.

[178] *Interview* with a retired OSEB officer, February 21, 2006, Bhubaneswar.

However, this rampant rural electrification in 1970s had following negative consequences:

- Firstly, due to extension of transmission lines to larger areas, most often without consumers, transmission losses increased manifold. However, the board did not report on transmission losses during 1970s.[179] It also increased maintenance expenditure, as it required more staffs.
- Secondly, it increased the scope for theft and pilferage. As the transmission line (LT) extended over the rural areas without any insulation, it became easy to directly hook from the line.[180]
- Thirdly, another trend of non-payment of bills, as a consequence to rampant theft, emerged during the period. Most of the legal consumers did not pay their bills and argued that if people can hook and use it free of cost why should we pay for it. As a result the collection efficiency of the board declined substantially during the period.
- As the board could not make profit from rural electrification, it could not repay the loans it had drawn from the REC. It had to pay interest on the amount, which largely contributed to the financial debacle of OSEB.
- Finally, although the number of consumers and quantity of electricity consumed by them increased substantially, OSEB's revenue did not increase proportionately to the ever increased expenditure (See Table 1). The table bellow shows that growth of revenue has not kept pace with that of gross operating expenses. The latter increased not only in volume, but also in terms of percentage to total revenue earned from 66 percent in the initial year 1962-63 to 90.19 percent during the year 1978-79. Further, whereas the gross operating expenditure during 1978-79 has shown a growth of 13.1 times over the base year 1962-63, the corresponding growth rate of total revenue is hardly 9.6 times during the same period. This shows that board's revenue has not

[179] The board started reporting on transmission and distribution losses from mid 1980s. But, as it is claimed, the reporting was flawed and did not represent the actual loss level.

[180] The theft was not only limited to the electric power, but it gradually extended to include the wires, as it could be sold at the price of aluminium. For which, the Government of Orissa had to adopt the Orissa Electric Supply Line Material (Unlawful Possession) Rules, 1989.

been able to register adequate growth rate in comparison with its rising trend of expenditure.[181]

Table 1: Revenue and Expenditure of OSEB during 1960s to 1970s (Rs. In lakhs)

	1962-63	1966-67	1970-71	1973-74	1974-75	1977-78	1978-79
Total revenue earned	442	643	1206	1867	2331	4036	4241
Gross operation & maintenance expenditure (excluding depreciation and interest)	292	490	726	1177	1749	3005	3825
Percentage of gross operation and maintenance expenditure to total revenue	66	76.20	60.20	63.04	75.00	74.45	90.19

Source: K C Mishra (1980): 'Importance of Revenue for the Electricity Board', *OSEB News*, 10(1), pp. 5.

Another important development has taken place during 1980s that is emergence of the concept of cross-subsidisation from industrial consumers. The 1970s saw rampant increase in domestic consumers, who already pay much less than the cost to serve, resulting in the decline of board's revenue. Still the government insisted to stagnate the domestic prices, which lead to a major financial shortfall. To fill the gap the government advocated increasing the industrial tariff. For which, the Government of Orissa made an amendment to the Electricity (Supply) Act, 1948, which was applicable only for OSEB. On 15th May 1981, the Orissa Assembly passed the Electricity (Supply) (Orissa Amendment) Act, 1981, which inserted the Section 49- A, that says "Notwithstanding anything contained in this Act [the Electricity (Supply) Act, 1948] or in any agreement, undertaking, commitment or concessions made before the date of commencement of the Electricity (Supply) (Orissa Amendment) Act, 1981 by the Orissa State Electricity Board or the Government of the State of Orissa, or in any judgement or order of any court, it shall be lawful for the said Board to revise, from time to time, the tariffs fixed for the supply of electricity to

[181] K C Mishra (1980): 'Importance of Revenue for the Electricity Board', *OSEB News*, 10(1), pp. 5-6.

persons other than licensee and to frame uniform tariffs for the purpose of such supply."[182]

This amendment provided opportunity to the board to increase industrial tariff frequently, while keeping the domestic and agricultural tariffs stagnated. As a retired officer of OSEB told, after 1981 industrial tariff increased every year. However, frequent increase in industrial tariff resulted in reduced collection from the industrial consumers. They were not willing to pay for the theft and domestic consumers. Thus, the bigger and regularly paying consumers become defaulters, contributing to financial decline of the board. By the time reform took place, one of states biggest industry, Indian Metals and Ferro-Alloys Ltd had an arrear of around Rs. 25 crores.[183]

However, by mid 1980s, the problem was realised in the sector. In an address to the house journal of OSEB, then chairman of the board wrote, "If the prevalence of two deficiencies of the state power sector can be corrected to certain extent, the situation will improve. The first one is low plant load factor of Talcher Thermal Power Station and the other one is T & D loss and pilferage; the quantum of which is considered adhoc." He further asserted that "we have to maximise efficiency in power system operation and reduce power loss. Loss reduction far cheaper alternative than capacity addition with transmission provision. So, as a first step towards the goal, we have to evaluate acceptable loss of system and then isolate the losses- technical and non-technical."[184] But there was a little thinking on the issue of restructuring of the sector. It took another decade to start the reform process.

Conceptualising the Electricity Reforms in Orissa:

Orissa was the first state in India and also in South Asia to implement a comprehensive power sector reform programme. It was part of a broader national mandate to revitalize the state electricity boards to make them financially healthy and commercially viable organisations. Prior to reform, the responsibility for power sector management and development in Orissa was vested in following organisations:

---

[182] GoO (1981): *The Electricity (Supply) (Orissa Amendment) Act, 1981*, Bhubaneswar: Government of Orissa.

[183] *Interview* with a retired OSEB officer, February 21, 2006, Bhubaneswar. Due to non-availability of data for Orissa, the rate of increase is not presented here. However, in the next chapter, while discussing the sector in Andhra Pradesh, I have presented information on industrial tariff increase.

1. Department of Energy, Government of Orissa;
2. The Orissa Power Generation Corporation (OPGC); and
3. Orissa State Electricity Board.

The Department of Energy administered the electrical power sector on behalf of the Government of Orissa. It was responsible for electrical power projects planning and development in the states of Orissa. Department of Energy also owned some of the hydro power generating stations which supplied power to OSEB, for distribution to consumers.

OPGC was created by the Government of Orissa in 1984 to construct and operate thermal power plants in Orissa. It executed and operated thermal power plants of 4* 210 MW capacities in Orissa. It sold the electricity generated in its thermal power stations to OSEB for distribution to consumers.[185]

OSEB was the main body responsible for power sector development in the state. OSEB was owned by the Government of Orissa and was vested with the responsibility for public power supply in the entire state as well as for related state level regulation. OSEB obtained the required power for distribution either from its own generating stations, generating stations owned by the department of energy, or from other power generators. By using its transmission and distribution network it supplied power to the end consumers.[186]

The most important single factor that persuaded the State Government to undertake the reform of the electricity sector was the deteriorating financial and operational health of the Electricity Board. There was not enough money for fresh investments or even for the repair and maintenance of the assets already created. There was a wide gap between the demand for energy and its availability resulting in the imposition of statutory power cuts (under S.22B of the I.E. Act, 1910) year after year. While all over the country the main thrust at that point of time was to increase the installed generation capacity and to improve the plant load factor (PLF) of the

---

[184] *OSEB News*, June-September, 1985.

[185] *Interview* with Jaydev Mishra, First MD of OPGC, August 17, 2005, Bhubaneswar.

[186] A. Thillai Rajan (2000): 'Power Sector Reform in Orissa: An Ex-Post Analysis of the Causal Factors', *Energy Policy*, 28.

existing plants, the performance of OSEB's only thermal station at Talcher was extremely unsatisfactory, with PLF hovering around 30%. The mounting transmission and distribution losses owing to theft and mismanagement, a skewed tariff heavily weighted against industries, cash shortages of the Board exacerbated by the increasing inability of the State Government to provide subsidies, rampant indiscipline, overmanning, corruption and political interference had combined to make OSEB terminally sick. It was clear that mere cosmetic changes would no longer do.[187]

Following the New Economic Policy of 1990, the Ministry of Power, Government of India formulated and published a policy in October 1991 to encourage private sector participation in the electricity generation, supply and distribution as a means of supplementing Government's inadequate resources. This Policy brought about several changes in the legal, financial and administrative framework within which the electricity business is conducted. Constraints in foreign equity participation were reduced or eliminated. Licensing and approval procedures were simplified. Rate of return for investments made in the sector were made more attractive. There was a feeling of optimism that in the changed investment-friendly environment, there would be no dearth of funds coming into the electricity sector.

At that time, the World Bank was the single largest participant in the power sector of the developing countries. Apart from funds directly provided by the Bank, the Bank also leveraged many times the Bank's own funds from other sources like multilateral and bilateral agencies, commercial banks and private investors. Approximately two-thirds of the Bank's energy sector lending was in the electricity sector. In the late 1980s, the total bilateral and multilateral aid to the electricity sector averaged about US$ 10 billion annually. However, the Bank had become increasingly concerned about the poor performance of the State level utilities in India which had received Bank assistance, though they were happy about the performance of the national agencies (NTPC and PGCIL) and the private utilities which had availed Bank funds. In order to rectify the situation, the Bank attempted to improve the performance of OSEBs by direct involvement at the State level and by having close relationships with the SEB's. Even this did not result in any noticeable improvement in the performance of the SEBs. Eventually the Bank suspended disbursement of

[187] *Interview* with M Y Rao, Ex-Chairman of OSEB, February 21, 2006, Bhubaneswar.

loans to States like Delhi, Uttar Pradesh, Karnataka and Kerala and threatened suspension of loans to some other States.

This experience also prompted the Bank to formulate a new set of policies in 1993 for power sector lending. According to this policy, the Bank would provide loans only to those utilities, which satisfy the Bank's guiding principles on the following matters.

Structural reforms involving dismantling of the vertically integrated monolith organisations like SEBs into separate entities dedicated to generation, transmission and distribution and the corporatisation of such entities.

(i) Electricity pricing to be related to the costs, with subsidies to any particular group to be specifically targeted and provided for by the Government in a clear and transparent manner.

(ii) Creation of independent and autonomous bodies to regulate the electricity sector and to set tariffs so as to insulate the electricity business from political pressures and provide a measure of comfort to private investors.

(iii) Induct private sector management skills and encourage private investment in the sector in the context of reduced availability of funds from Governmental sources.[188]

These principles which would govern World Bank's policy for involvement in the Indian power sector were formally announced in October 93 at a conference in Jaipur. The Bank reaffirmed that their support to NTPC, PGCIL, Power Finance Corporation and for Government's renewable energy programme. The thrust of the Bank's assistance programme would be structural adjustment lending to support the boldest and most deserving State-level power sector reforms and expert assistance in the design and implementation of Government's medium term reform agenda. In money terms, the support from World Bank was indicated to be in the region of US$800 million annually subject to improved performance of the existing Bank power portfolio. The Bank was also confident that with the Government's pursuit of

[188] World Bank (1996): *Staff Appraisal Report- Orissa Power Sector Restructuring Project*, Energy and Infrastructure Operating Division, Report No. 14298-IN, 1996.

bold power sector reforms, substantial funds could be raised from other sources which could match the projected volume of the lending by the Bank. These guiding principles, to a large extent, shaped the course of electricity reforms in Orissa.[189]

While the factors mentioned above provided the Government with a very strong motive for reforms, what actually nudged them to take the plunge was the cancellation of World Bank's loan for the Upper Indravati Project. The foundation stone for the 600 MW Upper Indravati Hydro Electric Project was laid in 1978 and the State Government was able to obtain a commitment for World Bank assistance to the tune of US$300 million for the Project. But by the early 90s, the Project had ran into serious problems on account of issues like resettlement of the oustees, natural calamities and suspected flaws in the design of the Project. The execution of the Project also turned out to be very slow, with the performance of some of the contractors being adjudged as poor by the World Bank. As a result, in 1991 the Bank cancelled the unused part of the assistance which came to a little over 50% of the promised US$300 million. This put the State Government in a quandary and compelled Government to initiate actions that would attract money from other sources including the private sector to complete the Project.[190]

In September 1993, Government of Orissa launched the Orissa Power Sector Reform Project and constituted a High Level Committee to ensure its speedy and timely execution. This was followed in November 1993 with the State Government confirming their commitment to power sector reforms and seeking the Bank's assistance in the implementation of the proposed reforms. The World Bank suggested that a multi disciplinary team of foreign and Indian consultants with proven experience in managing similar reform programmes would be necessary to assist the Government in pushing through a comprehensive reform project like the one which was under contemplation. Payment to the consultants was to be met out of a Bank loan of US$10 million and a grant of GBP35.5 million from UK Governments Overseas Development Administration (now the Department for International Development or DFID). Following consultations with the Bank, the State Government

---

[189] *Interview* with Nageswar Pattnaik, Journalist, August 16, Bhubaneswar.

[190] GoO (2001): *Report of the Committee on Power Sector Reform in Orissa*, Bhubaneswar: Government of Orissa.

entered into an agreement (in September 1994) with the following consortium of international consultants led by KPMG to assist the State Government in the reform project.[191]

Simultaneously with these developments, the State Government notified a Steering Committee chaired by the Chief Secretary to give policy direction to the power sector reforms and to make their recommendations to the State Government. The members of the Steering Committee were the Secretaries to Government connected with the reforms (Energy, Finance, Law), Chairman of OSEB and the Reform Project Director. A Reform Project Directorate under a senior Chief Engineer supported by a small core support staff was created to take charge of the day to day activities concerned with the reform project. A Task Force chaired by the Energy Secretary oversaw the working of the Reform Project Directorate and provided guidance to the several Working Groups, which were constituted to study and make recommendations on the different aspects of the Power Sector Reforms. These Working Groups consisted of international consultants, local consultants (many of them retired Chief Engineers of OSEB) and serving officers of OSEB / State Government. This composition ensured that the Working Groups have access to all the relevant documents and their recommendations are based on a thorough knowledge of the ground realities - legal, administrative, political and social.

The first phase of the Reform Project work started in July 1994 when the State Government notified the following nine Working Groups to study different aspects of the power sector reforms, identify the basic strategies to be adopted and make suitable recommendations by Feb 1995.

(i) Planning

(ii) Metering

(iii) Commercial, Financial and Asset Valuation.

(iv) Power Purchase Agreements (PPAs)

(v) Technical Interface Requirements.

(vi) Tariff

[191] Government of Orissa (2001): *Report of The Committee on Power Sector Reforms in Orissa*, op. cit.

(vii) Legal and Regulation

(viii) Distribution

(ix) Human Resources Development

Some of these Working Groups were required to deal in areas completely new to the State Government and OSEB. The PPA Working Group, for example, had to draw heavily upon the expertise of foreign consultants. The same was true of the Working Group on legal and regulator matters which was responsible for drafting the Electricity Reform Act keeping in view the provisions in the Indian Electricity Act 1910 and the Electricity Supply Act 1948. The work involved extensive consultations with the State Government on the one hand (Ministry of Law, Ministry of Energy) and the Government of India on the other hand (Ministry of Law, Ministry of Power and the Central Electricity Authority). Since electricity is under the concurrent list of the Constitution and the Reform Act was expected to prevail over several provisions of the existing electricity laws, it would also need presidential concurrence before it was brought into force.

Some of the Working Groups drew largely upon the expertise of the Officers of the State Government and the Electricity Board with some assistance from the Consultants. For example, the Distribution Working Group had to identify the factors on the basis of which OSEB's distribution business could be split up into separate independent distribution entities, which would then have to be corporatised. The Group was required to study the relevant factors to be taken into account while recommending the split-up (e.g. the present consumer strength and consumer mix, load growth, anticipated changes in the consumer mix, likely tariff increases, the size and configuration of the distribution entities and their sustained viability). The Interface Working Group was required to work in close coordination with the Distribution Working Group because it had to map interface points between the transmission entity and the distribution entities on the one hand and the interface points between the different distribution entities on the other hand. The Metering Working Group was responsible for fixing the specifications and numbers of the meters to be provided at the interfaces between the generation and transmission entities, between transmission and distribution entities and the interfaces between the different distribution entities. The HRD Working Group collected data about the

individual employees of Electricity Board and made recommendations about requirements of funds needed for their terminal liabilities such as pension, provident fund, gratuity etc. The Group assessed the manpower availability and highlighted the areas where there was excess manpower. (The excess ranged from about 5% to 10% in the Hydel Stations to almost 50% in some of the distribution Divisions). The Group also brought out the areas where there was shortage of specific skills despite the overall excess in numbers and recommended a training scheme to upgrade the skills of the employees. A Voluntary Retirement Scheme (with its financial implications) for those who could not be trained or redeployed was also formulated. The Commercial and Financial Working Group was responsible for preparation of detailed lists of the assets of the Electricity Board with a view to fixing their value at the time of the transfer of the assets from OSEB to its successor entities. This Working Group which received substantial support from consultants also worked on the capital structure of the OSEB's successor entities and their cash flows so that they would be viable. During this period, the consultants made several presentations before the Chief Minister, Groups of Ministers and senior Officers of OSEB / State Government to explain to them the need for and the scope of the reforms.[192]

The implementation of the reforms started during the second phase (March 95 to Aug.96). During this phase, the original 9 Working Groups were reconfigured into 7 Working Groups which were then shifted from the Reform Project Directorate into the various wings of OSEB so that the blue-prints prepared in the first phase could be implemented. On 1 April 1996, the Electricity Reform Act was enacted after receiving the presidential assent, OSEB was split up into Gridco and OHPC under a Transfer Scheme framed under the Reform Act and the OERC was constituted.

Following intense discussion involving the World Bank, State Government and Gridco, the mode of privatising Gridco's distribution business, the terms and conditions under which the World Bank would be willing to support Gridco, and the State Government's Power Policy Statement were finalised during this period. Both Gridco and the State Government were suspicious of a "Big-Bang" privatisation. Gridco's distribution business had in the meanwhile been configured into 4distribution Zones and it was decided that one of the Zones could be given under a management

[192] *Interview* with B B Das, Chairman, Working Group on Tariff, February 27, 2006, Bhubaneswar.

contract. As regards the other 3 Zones, it was agreed that there may be advantage in privatising them in the Joint Sector Venture mode in a sequential manner so that errors made in the privatisation of the first Zone would not be repeated when the next Zone is privatised.

The World Bank assessed the financing requirements of Gridco at US$ 997 million to be raised from the following sources.

Table 2: Sources of Funding for Electricity Reform in Orissa

Source of funds	**Rupees (Million)**	**US$ (Million)**
Internal resources	9816	222
Grant		
ODA grant transferred to State Govt. as equity to Gridco.	2260	63
ODA grant transferred to Gridco as GoO grant	1265	34
Loans:		
World Bank	14419	350
State Government	960	26
ADB	2025	57
Other sources	10605	246
Total of Loans	**28008**	**678**
Grand Total	**41348**	**997**

Source: World Bank, *Staff Appraisal Report- Orissa Power Sector Restructuring Project*, Energy and Infrastructure Operating Division, Report No. 14298-IN, 1996.

Table 3: Details of investment

Item	**Rupees (Million)**	**US$ (Million)**
Capital investment	35370	840
Interest during construction	2060	49
Reform expenses	2754	74
Repair and maintenance expenditure from ODA grant	400	12
Increase in maintenance inventory	765	22
Total investment	**41348**	**997**

Source: World Bank, *Staff Appraisal Report- Orissa Power Sector Restructuring Project*, Energy and Infrastructure Operating Division, Report No. 14298-IN, 1996.

The World Bank also laid down the following preconditions for disbursement of the loans.

- Government of Orissa to issue a formal Power Policy Statement to the World Bank and take steps to implement the Policy according to a the agreed time frame.
- Registration and transfer of assets from OSEB to Gridco and OHPC.
- Government of Orissa to formally approve the reform legislation and submit the draft Bill to Govt. of India for clearance.
- The Distribution Management Contract which was being negotiated with BSES for one of the Distribution Zones of OSEB should be awarded.
- Notification of the Electricity Reforms, Regulatory Commission, appointment of its Commissioners as well as some of the core staff and notification of the working regulations of the Commission.
- Gridco and OHPC will offer to private investors a certain percentage of their shares by stipulated dates. In the case of Gridco, it was 10% by March 2001 and 33%; by March 2003. In the case of OHPC, it was 10% by March 2000 and 33% by March 2002.
- Corporatisation of Gridco's distribution system into four distribution subsidiaries and their privatisation in phases. By December 2000 all the 4 zones were required to be privatised. For this purpose, privatisation would mean transfer of 51% of Gridco's shareholding to private parties.
- The borrower (Government of India) shall bear the exchange risk and ensure that Orissa will release to Gridco, OHPC, the private distribution companies and the electricity end users, the proceeds of the loan within 3 working days of the receipts of the funds from the Borrower.[193]

These conditions were accepted by GoO and an agreement to this effect was signed in the World Bank office in Washington in April 1996. A grant of GBP 12 million from ODA / DFID financed the two major consultancies during this period, namely, the Reform Consultant and the Institutional strengthening Project (ISP) Consultant. The former was responsible for the preparation of the Reform legislation,

[193] World Bank (1996): *Staff Appraisal Report- Orissa Power Sector Restructuring Project*, op. cit.

regulatory framework, and the transfer scheme and the financial basis of the disaggregated sector while the ISP Consultant was required to assist with the Organisation Structure, personnel policy, work practices and financial system of OSEB and the successor entities along with staffing norms and labour surplus. DFID selected all the Consultants - PricewaterhouseCoopers were engaged as the ISP Consultant, McKenna (later on Cameron McKenna) provided legal inputs and the merchant bankers BSW (later on CSFB) provided the merchant banking expertise while Merz and McLellan provided the engineering expertise for the Project Management Unit (PMU) which prepared the specifications for the capital works, tendered them out and monitored their progress.

During the third phase covering the period 96/97 to 2000/01, the management contract awarded to BSES with effect from October 96 in respect of the Central Zone comprising the Electrical Circles of Bhubaneswar, Cuttack and Dhenkanal was terminated in April 97 because of their non-performance. It was also decided that instead of privatising the 4 Distribution Zones in a sequential manner, all 4 should be privatised at one shot through a process of international competitive bidding. Several factors contributed to this decision which was at variance with the earlier decision to go in for a sequential privatisation. The most important reason was the continued hemorrhage of the distribution set up. Another reason was that a period of prolonged uncertainty should be avoided since it would lead to demoralisation of the staff and fall of productivity. The preparation of the documentation and the process of inviting bids and selecting the successful bidders would be very time taking and expensive and it would be best if the process is completed at one stroke instead of dragging it over a long period. It was also hoped that offering all the 4 Zones for privatisation would stimulate investor interest, bring in better bids and wider participation.

Accordingly, 51% of Gridco's shareholding in all its 4 distribution subsidiaries were sold to private parties with effect from 1 April 1999. When one of the parties viz. the TEC-Viridian consortium backed out of their bid for Cesco, negotiations were held with an AES led consortium and the deal with them was concluded with effect from 1 September 1999.

In May 1997, ODA / DFID agreed to finance the third phase covering the period 96/97 to 2000/01 under a grant of GBP 75 million. Out of this, GBP 52.5

million was towards working capital, stores material, staff rationalisation and a Load Despatch and Communication Project (LDCP). The remaining GBP 22.5 million was for technical assistance consultancy. Assistance from DFID and World Bank were planned to complement one another. While World Bank assistance was in the form of loan chiefly for capital projects, DFID assistance was entirely a grant with the bulk of it being treated as State Government's equity participation in Gridco. Under Government of India's terms of additional central assistance, 30% ODA grant would be passed on to Government of Orissa as grant and the remaining 70% as loan with 12.5% interest. To maintain a balanced capital structure for Gridco, ODA assistance for R & M items and for staff rationalisation would be passed on to Gridco as Government of Orissa's equity which would be required to earn a rate of return.[194]

Components of Electricity Reform Programme in Orissa:

The Orissa power sector reform programme comprised the following components:

1. *Restructuring of OSEB by corporatisation and commercialisation*: This involved unbundling and structural separation of generation, transmission and distribution services to be provided by separate companies.
2. *Privatisation*: Through private sector participation in hydro generation and grid corporation, and privatisation of thermal generation and distribution.
3. *Competition*: Procurement of new generation through competitive bidding.
4. *Separate Regulation*: Development of an autonomous power sector regulatory commission.
5. *Tariff reform*: Reforming of electricity tariffs at the bulk power, transmission and retail level.[195]

The power sector in Orissa changed significantly after reform. OPGC, the existing thermal generation corporation, was privatised as part of the reform programme in 1997. OSEB was vertically unbundled into separate companies for generation, transmission and distribution. All the hydro power generating plants of

[194] Government of Orissa (2001): *Report of The Committee on Power Sector Reforms in Orissa*, op. cit.

[195] World Bank, *Staff Appraisal Report- Orissa Power Sector Restructuring Project*, Energy and Infrastructure Operating Division, Report No. 14298-IN, 1996.

department of energy and OSEB were vested with Gridco. The Gridco was responsible for transmission, coordination of system planning and operation and bulk power procurement. Though the Government of Orissa initially owned Gridco and OHPC, they were gradually expected to attract private participation.

Four distribution zones were created for power distribution in Orissa. As a first step towards privatising distribution, Gridco entered into a management contract called Distribution Operations Agreement, with BSES, a private sector utility, to take over the power distribution in one of the distribution zones (CESCO) in October 1, 1996. According to this arrangement, the private utility was responsible for distribution of energy, maintenance of the distribution system and collection of electricity dues in the central zone. Though the initial distribution agreement was for a period of 3 years from October 1996, Gridco cancelled the agreement in April due to drawbacks in certain contractual provisions in the Distribution Operations Agreement.[196]

After the failure of the distribution agreement method for introducing private sector participation in distribution, the Government of Orissa decided to privatise distribution forming the four zones as separate distribution companies. The four companies were incorporated as subsidiaries of the Gridco in November 1997 and four new managing directors were appointed for these four companies during March 1998.[197] Privatisation was introduced in distribution by offering 51% of the equity in these companies to private investors. The investors were selected through international competitive bidding process on the basis of their financial and technical capability, track record and commitment to improvement of electricity distribution system. Though the investors were to be given full managerial autonomy, they were required to honour the terms and conditions of employment of employees of the distribution companies. After privatisation Gridco would hold 39% of the equity in distribution companies, while 10% of shares was for the employees. The privatisation process for the distribution companies was completed in the first half of 1999.

---

[196] A. Thillai Rajan, 'Power Sector Reform in Orissa: An Ex-Post Analysis of the Causal Factors', op. cit.

[197] Gridco, *The Gridco Newsletter*, March 1998.

New legislation was enacted to govern the power sector of Orissa after reform. An autonomous regulatory commission, called Orissa Electricity Regulatory commission was constituted for power sector regulation in the state. To ensure autonomy of the regulatory commission, the commission members were chosen on the basis of their ability, integrity and standing who had adequate knowledge and experience in dealing with problems relating to engineering, economics, commerce, accountancy, law or administration. The commission was constituted to ensure the operational, managerial, financial autonomy of the new utilities in Orissa's power sector to promote transparency, efficiency and economy. After the constitution of the regulatory commission, the role of Government of Orissa was restricted to policy making and planning for the sector. Many issues that were earlier under the purview of the government, like power tariffs, were brought under the purview of the regulatory commission. Though the government of Orissa still had the powers to direct subsidies through reduced tariffs, it needs to compensate the licensee to the extent of those subsidies. But, however, the Government of Orissa has never done so after reforms. The government has not provided a single rupee to the sector after 1996.[198]

Opposition to Reforms:[199]

The potential opposition groups to any public sector enterprises are the consumers of the enterprise, who may fear an increase in tariff, and the board employees, who may fear loss of job. However, there was no opposition from the consumer side till the first tariff hike. It was because of ignorance of the consumers. The domestic consumers were hardly aware of anything about reforms. Some of them who knew about reforms were expecting that reforms will solve the problems in power supply industry. Some of the educated middle class people expected that privatisation of would increase job opportunities. So these group of people were in support of reform, although not openly.

The industrial consumers expected that they will get a relief from exorbitant tariff hikes after reforms and privatisation. They were hopeful that at least the service

[198] *Interview* with Members of OERC, February 17-18, 2006, Bhubaneswar.

[199] This section is built on interviews with several stakeholders in the sector- the labour unions of OSEB staffs, domestic consumer groups, and industrial consumers.

quality will improve after privatisation. For this reason, they pushed for reforms at their level. The only opposition that came during the reform process was from the employees. They were afraid of a potential job loss. But the Government of Orissa ensured that there will be no job loss due reforms and the terms and conditions of service will be same as it was under the OSEB.[200] That is how the opposition from the employees was curbed. However, some people working with the consultancy firms assisting in the reform programme claim that there were cases of pay offs. The union leaders were paid to call off their strikes.[201]

However, the first opposition from the domestic consumers emerged after the first tariff hike in 1997, which increased the domestic tariff by more than 10 percent. But, the agitation was limited to few pockets and it could not mobilise into a strong movement.

Outcomes of the Reform:

The government claims that reform has been successful in Orissa. They substantiate the claim by citing the absence of power cuts after reforms. They claim that service conditions have improved a lot after reforms.[202] It is true that service conditions have improved in Orissa and power cuts have been reduced. But it is not the direct impact of reforms. The amount of money spent on infrastructure building, during reforms, has resulted in better service conditions. The private distribution companies, after their take over, have not invested a single rupee in the sector. And on the other hand, Orissa has been a power surplus state. Earlier the board used to sell its power to other states to generate revenue as it was not getting sufficient revenue from the consumers. Now the consumers are paying for the electricity survive they get. So the distribution companies have money to operate and that is why, they are able to supply regular power to the consumers. However, it is true that the private companies are more efficient in bill collection. But, still private companies claim that they are not getting enough money from the business. This claim is challenged by many people.

---

[200] *Interview* with J B Pattnaik, former Chief Minister of Orissa Government, February 22, 2006, Bhubaneswar.

[201] *Interview* with people worked with Price WaterHouse Coopers, February 2006, Bhubaneswar.

[202] Interview with several MLAs and MPs from Orissa, July 2005-February 2006, Bhubaneswar and Delhi.

However, the commercial culture in the sector has not improved. Still the consumers are not treated properly. Although, many institutions are set up to attend consumer grievances they are not effective at all. Still there is rampant corruption in the sector. Commercial losses have not reduced at all. Though official they project to have reduced the losses, actually the loss level is more than 50 percent. The establishment of Orissa Electricity Regulatory commission has some positive results. One of the positive results is that the tariff for any category of consumers has not increased during last five year, while the industrial tariff has been reduced to a certain extent.

Conclusion:

Drawing on this discussion, I claim, policy making in Orissa's electricity sector is not determined by interest group influence or demand of dominant groups. To a large extent it is determined by electoral politics of the state and the external political economic factors. Electricity is still treated as a commodity of luxury and status. There is a very little demand for this commodity in rural areas. Neither people need this commodity for agriculture in Orissa. So people do not form a strong demand group in terms of electricity needs.

The decision to electrify rural Orissa during 1970s was an electoral decision, not a response to popular demand for electricity. Due to lack demands at the consumers' end, the rural electrification programme could not be financially viable, contributing to financial debacle of the OSEB. Again in mid 1990s, the decision to restructure the sector was not a demand from the people neither a consensus emerged within the board itself. It was something imposed by the World Bank, the major lending agency for the Orissa government.

However, there was hardly any opposition from the consumers to this reform process. It is because of their ignorance about reforms. Reforms in Orissa's power sector happened so suddenly and in a non-transparent way that consumers did not get a chance to react to the process. But still there was some opposition to the reforms from the employees. It was because of their doubt over the terms and conditions of employment under a private regime. However, the government suppressed that opposition by ensuring the employees same terms and conditions of service under the private regime.

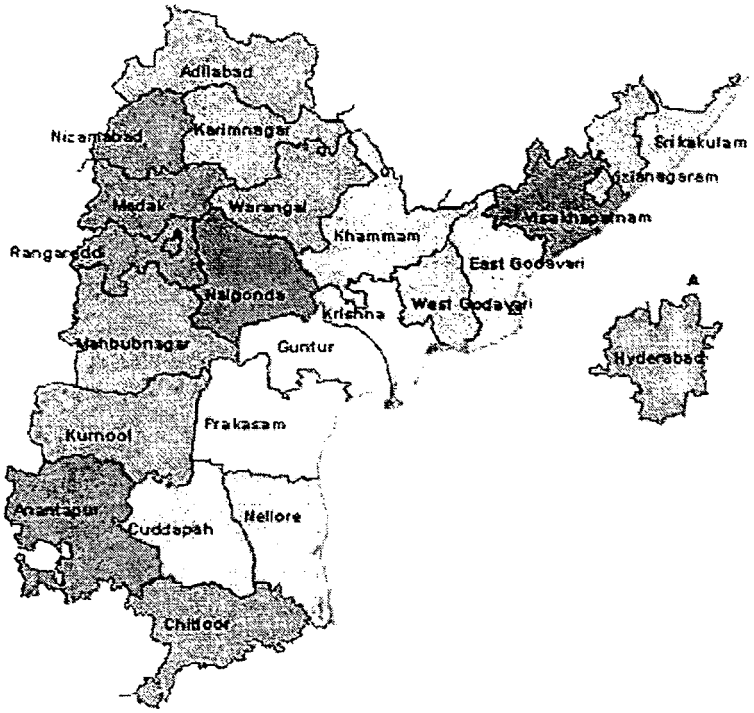
While the reform was initiated by the Janata Government in the state led by Biju Pattnaik, it was sustained and carried forward by the next Congress Government led by J B Pattanaik. It has to do with the politics of the state and the country. The major reason for adopting reforms under the Janata government was to get the loans from World Bank for maintenance of the sector, which was under a dire financial crunch. Although the same was a reason for Congress governemnts continued consent to the reforms, another important reason was the Congress Party's commitment to reforms at centre. As then Chief Minister of Orissa told, "We are in a federal state and the state government in a federal state can't go against the Central government's decision."[203]

[203] *Interview* with J B Pattnaik, former Chief Minister of Orissa Governemnt, February 22, 2006, Bhubaneswar.

Chapter 4

Political Economy of Electricity Sector:

The Andhra Pradesh Experience



The state of Andhra Pradesh is situated in the South Eastern part of India spreading over an area of 275, 045 Sq Km. It is the fifth largest state in Indian Union having a population of about 70 millions. It is the biggest among the South Indian states both in area and population. It has a population of 73 millions of which 73% live in rural areas. About 35% of the state's domestic product comes from primary sector (i.e.) agriculture, forestry etc., 19% from secondary sector (manufacturing sector) and 45% from tertiary sector (services sector). The per capita electricity consumption in the state is about 470 KWh per annum in FY 1999.[204]

Andhra Pradesh was formed on 1st November 1956 under the 1956 States Reorganisation Act. With the break-up of the native state of Hyderabad, and the nine districts of Telengana, along with the capital city of Hyderabad, were merged with the Andhra State formed in October 1953. The Andhra area comprises of three sub-regions namely, North Coastal Andhra, South Coastal Andhra and Rayalaseema. Among these three sub-regions, South Coastal Andhra waas more developed. These three regions differ considerably in terms of socio-economic and demographic indicators with Telengana lagging behind the others.

The economy of the state is basically agrarian. Net sown area accounts for 40 percent of the geographical area. Rayalaseema districts were not as backward as northern coastal Andhra, but were not as developed as south coastal Andhra districts. Because of the low rainfall, these districts were very often subjected to droughts and famines. The percentage of irrigated area is low. The Telangana area at the time of formation of Andhra Pradesh was most backward, oppressed and exploited, with medieval feudal set up and with autocratic and hated rule of Nizam. Telangana area can be divided into two sub-regions, north Telangana and south Telangana. Rainfall is higher in north Telangana than in south Telangana.

With the spread of paddy cultivation in the coastal districts, cotton and groundnuts cultivation in Rayalaseema and dry parts of coastal districts a number of agro-processing industries like rice and oil mills, cotton ginning and pressing mills have come up. Such mills were started in urban centers. Since the end of 19th century and the early 20th century a number of urban centers have grown along the railway lines and canals. Due to failure and neglect of the rulers, the state was lagging behind

[204] P S Rao (2003): *History of Modern Andhra*, New Delhi: Sterling Publishers Private Limited.

some states of our country in development. In some important indicators the state is lagging behind even the all India averages.

Industries were established in Sirpur-Kagaznagar, Ramagundam, Warangal, Singareni collieries in Khammam district. In Hyderabad Lalaguda railway workshop and some other industries were established. In Bodhan two of Nizam sugar factories were established. Under the Nizamnagar project irrigation was developed to some extent. Between the two regions of Telangana, north Telangana was more developed when compared to south Telangana.[205]

Andhra Pradesh is recognised to be one of the developed states of India. The estimates of rural poverty for Andhra Pradesh is too low (12 percent) in comparison to other states. The economic status of Andhra Pradesh shows that the people in the state can afford to pay for electricity, rather they are able to do so. There is a demand for reliable electricity supply, even in rural areas. Most of the farmers of Andhra Pradesh are dependent on electricity for the purpose of irrigation. So there has been a strong lobby of farmers in the sector.

On the other hand, Andhra Pradesh has a relatively less number of villages (26568 nos), thus the population is concentrated. It makes easier to supply electricity to people. That is why, Andhra Pradesh is one of the few states to achieve 100 percent village electrification. And also Andhra Pradesh has achieved a good rate of household electrification, thus reduced the scope theft in rural areas. The electricity sector of Andhra Pradesh is considered to be one of the best sectors in India. It has been ranked at the top many times.

Better economy of Andhra Pradesh makes electricity a necessity in the state. Unlike Orissa, in Andhra Pradesh, there is demand for electricity. It is so because of two reasons: firstly, the state hosts a good number of industries. Secondly, the state was covered under Green Revolution, which introduced commercial cropping in the state. So the farmers in the state require electricity for the purpose of irrigation, while that demand is almost absent in Orissa. And presence of a good number of industrial consumers has been contributed to financial stability of the sector in Andhra Pradesh.

---

[205] Y.V.Krishna Rao and S.Subrahmanyam ed. (2002): *Development of Andhra Pradesh: 1956-2001, A Study of Regional Disparities*, Hyderabad: Pragati Offset Private Ltd.

Electricity in Pre-independence Andhra Pradesh:

Andhra Pradesh became a separate state much after independence. Although the state has included some parts from almost all the neighbouring states, the major portion of the state came from the Madras province. Madras province was the best performer, in terms of electricity service, in the pre-independence period. The province had 90 percent of electricity generation by the government itself from hydel sources, and distribution was also undertaken by the Government in most cases. Electricity had reached many parts of the province in the pre-independence period. As the government was controlling most of generation and distribution, the major focus was to supply electricity to farmers and industries for the development of the province.[206]

However, Andhra Pradesh inherited a good and well established electricity sector from the Madras province, by the time of state creation. This historical legacy of power development in the region has helped the growth of the sector in the state.

APSEB Monopoly and Electricity Sector in Andhra Pradesh (1959-1998):

APSEB was formed in the year 1959, only three years after creation of the state, and was responsible for all the three functions of the power sector, namely, generation, transmission and distribution of power. APSEB witnessed stupendous growth during the four decades of its existence. In 1998, during the last year of APSEB, the installed capacity in the state was 7341 MW comprising of 5612 MW of its own capacity, 897 MW of share from central sector, 273 MW from joint sector and 560MW from private sector. The peak demand met in 1998-99 was 6480 MW. The length of T&D lines was of the order of 608000 KM of which EHV lines (220 KV & 132 KV) comprise of 18783 CKM. The total number of consumers was about 11millions of which 1.8 millions are agricultural consumers.[207]

APSEB's power plants made a name for themselves for their enviable performance. The thermal stations are noted for their high PLFs year after year. The average PLF during 1998-99 was 77.64% which is the highest in the country. Despite the significant growth of the power system, APSEB has been finding it increasingly

---

[206] GoI (1948): *Constituent Assembly of India (Legislative) Debates, Part II*, op. cit.

[207] *Interview* with M. Thimma Reddy, October 24, 2005, Hyderabad.

difficult to meet the growing demand for power in the state. Its addition of 1791 MW of new generation capacity in the 8th plan, was the highest among all the states in the country Despite severe financial strain it was facing, the APSEB could commission the 2x 250 MW of KTPSV in record time. Similarly the two units of Stage - II of AP Gas Power Corporation Ltd., were added in record time. The first two fast track plants in the country, the 216 MW Jegurupadu power plant of GVK Industries and the other of 208 MW of Spectrum power plant, Kakinada have come up in the state. Still the state is finding it difficult to cater to the unrestricted demand for power. Power shortages are experienced in terms of energy and peak demand year after year. Power cuts mainly to HT Industries had become necessary. Beside peak load restrictions, regulation of hours of supply to irrigation pumpsets had to be imposed in summer months. The unmetered flat rate tariff for supply of power to agricultural consumers is one of the main factors contributing to the difficulties of the power sector. The tariff causes acute financial loss to the state Electricity Board as it is way below the ever increasing cost of supply. Besides this it encourages profligate consumption, necessitating substantial power cuts on HT consumers, whose tariffs are well above the cost of supply. The growing agricultural consumption in the face of stagnant HT consumption has been causing severe two-fold financial difficulties to the Board. Agricultural demand side management has thus acquired great importance in balancing the need for equitable apportionment of available supply resources among the various classes of consumers vis-à-vis the pressing irrigation needs of farmers.

Power cuts on industry besides capital and other subsidies to captive generation have resulted in growing dependence of industrial consumers on captive generation. The captive generation capacity in HT industrial sector in the year 1997-98 was about 1700 MW, which generated 3774 GWh amounting to more than half of APSEB's HT Sales.[208]

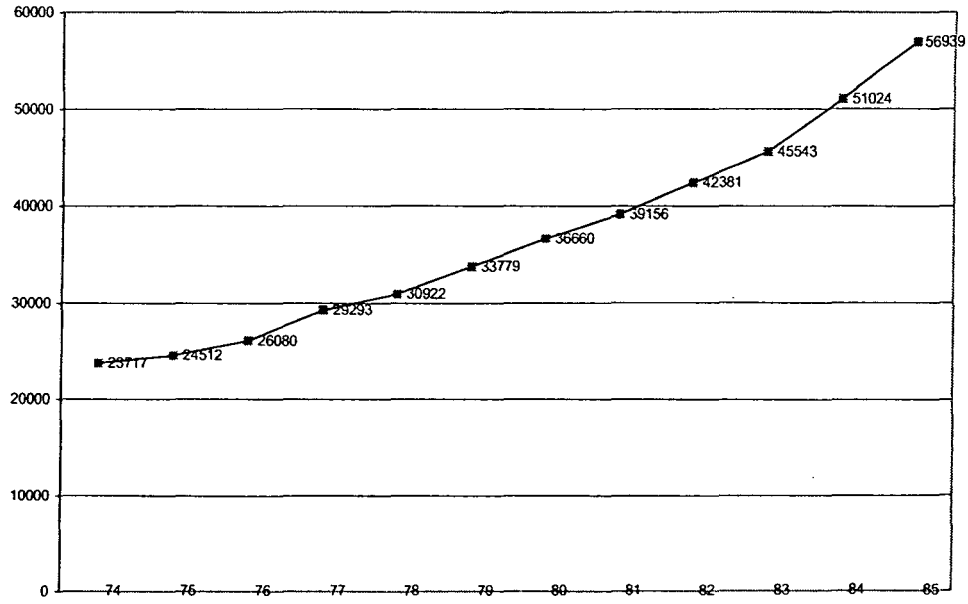
After creation of the APSEB, the sector was doing well in the state. Andhra Pradesh has good reputation for power development. Since the beginning till now, very often, the sector in Andhra Pradesh has been at the top of ranking by the government and various agencies. APSEB was one of the few boards, which were making profit till 1993. However the problem started somewhere in late 1970s and

[208] *Interview* with M. Thimma Reddy, October 24, 2005, Hyderabad.

early 1980s. The decade from 1975 to 1985, saw spurge in rural electrification and enrgisation of irrigation pumpsets. The latter is claimed to be the reason for APSEB's failure. It is true that agricultural tariff subsidisation has contributed a lot to financial debacle of the sector in Andhra Pradesh, but that is not the only reason. The other important reason has been rural electrification leading to high loss level and increased theft and pilferage.

Like Orissa, here in Andhra Pradesh villages after villages were electrified without following any criterion for revenue realisation. Again here there was a pressure from the Central government to electrify rural areas to create a vote bank of rural people in opposition newly emerging local leadership. Though the growth in electrification was not like Orissa, number of villages and towns electrified increased from 23717 in 1974 to 56939 in 1985, over a period of one decade (See Fig. 1).[209]

Fig 1: Electrification in Andhra Pradesh (Towns, Villages, Hamlets and Dalitwadas)



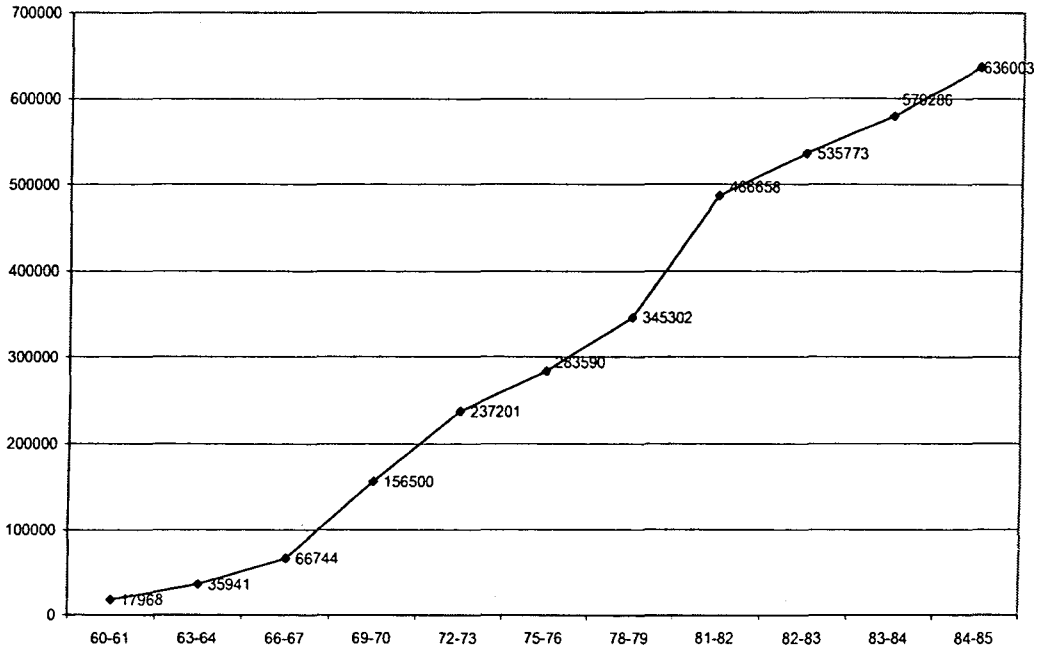
Source: APTRANSCO (2003): *Power Development in Andhra Pradesh (Statistics) 2002-2003*. Hyderabad: Transmission Corporation of Andhra Pradesh Ltd.

Although there was a very little demand for electricity for domestic consumption, there was high demand for electricity for the purpose of irrigation due to green revolution and farming of water-intensive crops in Andhra Pradesh. A political class of peasantry had also emerged in the state supporting the demand for

[209] Due to non-availability of data for rural electrification in early 70s, I have taken the period from 1974 to 1985.

electricity for irrigation. As a result thousands of irrigation pumpsets were enrgised during the decade. There was a significant increase in number of pumpsets energised since late sixties, by APSEB, from 66744 in 1967 to 486658 in 1981 (See Fig. 2).

Fig. 2: Energisation of Agricultural Pumpsets in Andhra Pradesh



Source: APTRANSCO (2003): *Power Development in Andhra Pradesh (Statistics) 2002-2003*. Hyderabad: Transmission Corporation of Andhra Pradesh Ltd.

Rapid rural electrification and energisation of agricultural pumpsets were political decision in the state. There was a central government pressure, which was channelled through the Congress led government in the state. However, populism in Andhra Pradesh's electricity sector emerged during mid 1970s, later than Orissa. It is because the Congress had a strong hold in the state till the point. Beginning from mid 70s, the Congress hegemony in the state was challenged by some rural elites. But that opposition to the Congress could not transform into a political party. It is only in 1981, N T Ramarao provided a platform to the resentment and for a new party-Telegu Desam Party.

The Congress party itself was going through a crisis in the state due to over interference of the Centre. The state had four Chief Ministers during 1977-1981. In response to the political crisis and local resentment against the Congress, the latter introduced populism in state policy process. This was resulted in use of APSEB for competitive populism. Initially, the plan was to bring electricity to the rural poor.

Latter the concern was to make it affordable to the poor, not by improving income capacity of the poor, thus paying capacity, but by reducing the tariff.

Rapid rural electrification and energisation of pumpsets during the decade resulted in high T & D losses, increased maintenance expenditure and increased theft. On the other hand, the board was not able to realise the amount it was spending for generation, transmission and distribution. However, it could mange through state government subventions. Initially this subvention from state government was adequate to fill the gap between revenue and cost. But as the gap widened, the government was not able to finance it substantially. Moreover, the subventions from the state government declined from the 7th plan owing to increased demands from other social sectors.[210]

This led to stretching of lines to far remote rural areas and in most cases a long patch of areas without a single consumer, which resulted in increased transmission losses. However, the APSEB has not reported transmission losses during 1970s. Even though it started reporting from early 80s, it does not show increase in loss level. As the line stretched for long distances and reached remote areas, it increased the scope for theft. There is no official reporting of thefts during 70s and 80s. It is claimed that most of the transmission and distribution (T&D) losses were covered up under the category of agricultural consumption, as by then agricultural metering was removed.[211]

Another important development of the phase was flat rate tariff system for agricultural consumption. Again on 1st November 1981, the outgoing Congress government in Andhra Pradesh introduced a flat rate tariff system for agricultural consumption based on the capacity of the pumpset. Which reduced agricultural collection another 50 percent which was already very low. However, the Congress party could not come to power. But the new government by the newly formed Telgu Desam Party happened to be more populist and retained the tariff system.[212]

---

[210] *Interview* with Balram Reddy, Ex-Chairman of APSEB, October 21, 2005, Hyderabad.

[211] World Bank (2001): India: Power Supply to Agriculture. South Asia, Energy Sector Unit, South Asia Regional Office, World Bank.

[212] *Interview* with Tata Rao, Ex-Chairman of APSEB, May 17, 2006, Hyderabad; T L Sankar (2003): "Power Sector: Rise, Fall and Reform', *Economic and Political Weekly*, March 22.

Again for political reasons, the domestic tariff was artificially stagnated (though not reduced) (See Table. 1 for domestic tariff in Andhra Pradesh), even though the cost of generation was increasing. During 1980s, the new additions to generation were basically thermal plants and were more costly than the existing hydro-electric plants. So the cost to serve would have increased to a great extent. But tariffs were not increased proportionately to get the required return of 3 percent.

Taken together, subsidised agricultural tariff, rapid rural electrification, increased power theft and pilferage, increased losses and irrational domestic price led to a wide gap between cost and revenue. Initially the state government provided subventions to meet the gap and latter it proved inadequate. To meet the gap, the board started overcharging the industrial and commercial consumers, which led to emergence of cross-subsidy. It is clear from the table 1 bellow, there was not much difference between industrial tariff and agricultural tariff (only 4 paisa per unit) in 1972 and the domestic tariff was more than the industrial consumers (more than double), while the commercial consumers were paying the highest tariff. This pattern of tariff was keeping with the international practices. While the industrial tariff was going up continuously, the domestic and agricultural tariffs were moving up very slowly and in some cases no increase.

Table. 1: Electricity Tariff in Andhra Pradesh during 1970s and 1980s

Period	Industrial (H.T.)		Commercial		Domestic		Agricultural	
	Tariff (Paisa)	Index	Tariff (Paisa)	Index	Tariff (Paisa)	Index	Tariff (Paisa)	Index
1972	16.06	100	45.00	100	33.00	100	12.00	100
1973	17.67	110	49.50	110	35.00	106	12.00	100
1975	19.57	122	58.00	129	39.00	118	16.00	135
1976	23.17	175	75.00	167	40.00	121	23.50	199
1978	31.07	194	77.90	173	42.90	130	21.00	175
1980	36.17	225	84.00	187	43.00	130	21.00	175
1981	41.17	256	90.00	200	43.00	130	21.00	175
1984	56.06	349	95.00	211	45.00	136	8.00	66
1987	91.47	569	110.00	244	50.00	152	6.00	50

Source: APSEB (1988): *Statistical Data*. Hyderabad: Andhra Pradesh State Electricity Board.

The table above shows that during a period of 15 years, industrial tariff had increased by more than 5.5 times, while the domestic tariff has increased only by 1.5 times and the agricultural tariff has declined by 50 percent. It also shows that till 1978, all the consumer categories used to have tariff hike regularly though in varying degrees. But since 1978, from the time the state faced a political crisis, the domestic tariff and agricultural tariff were stagnated while industrial tariff was going up rapidly. In 1981, at the melting point of the political crisis, the agricultural tariff was reduced significantly by introducing flat-rate tariff system.

Still, until 1993 the APSEB was making surplus. Generation was good and transmission also, but the board was doing badly at the distribution end. There are two factors, which led to financial decline of the APSEB in the 1990s:

- *AP Gas Power Corporation Ltd:* This is a public-private venture started during NTR government (in 1991). The public shares are owned by some industries and all these industries sifted to this plant. Thus industrial consumers of the board declined to 24% of total selling leading to reduction in revenue realisation. Since then it has been stagnated.[213]

- *Sree Shailam Hydro Project (on Krishana River)*: Erstwhile APSEB chairman N. Tata Rao approved this project and government supported it. When it was planned in 1986, estimated expenditure was 400 crores but when it was completed in 2003 the total expenditure was 3,850 crores. It has total 9 turbines each of 150 MW capacity. The project was financed on the loan from JBIC & OECF. Though there was opposition to this project from the people (due the controversy over Krishna river water), the government wanted to carry forward it. Now after its completion it has never produced power other than flood time. And moreover, the loans have to be repaid immediately after the completion of the project. The sector has to bear that repayment without any revenue generation. Moreover, huge amount was invested on turbines, which were purchased from outside. And these were purchased before the completion of project, so huge interest on that amounting to Rs. 770 crores.[214]

---

[213] The Regulators claim that industrial consumption has increased in recent years. *Interview* with regulators, APERC, October 19, 2005.

[214] *Interview* with Raghu, Employee, APTRANSCO, October 18, 2005, Hyderabad.

However, the government was concerned about the situation and appointed high power committee to review the situation. Unlike Orissa, there was some thinking within the sector and board. It is only after the initiation of reforms, the World Bank came in and captured the whole process through providing loans and aids as it happened in Orissa.

Conceptualising the Electricity Reforms:

It can be said that the reform process in AP started with the constitution of a high level committee under the chairmanship of Hiten Bhaya to suggest reforms to be introduced in the power sector. This committee was constituted in January 1995 and submitted its report in June 1995. The important proposals made by the Hiten Bhaya committee include, fixing of tariff structure to cover production costs, to separate generation, transmission and distribution activities and keep them in the hands of different companies, to keep these companies as subsidiaries of APSEB, to run them on commercial lines, to privatise power distribution companies gradually, to retain the Board only as a holding company in charge of long-term sector planning, supervision and co-ordination of the subsidiaries, monitoring of reform implementation and provision of policy advice to be with the government, setting up a regulatory commission to fix tariff structure, keeping licensing powers with the state government.[215]

The World Bank team which subsequently assessed the sector pointed out that though the measures proposed by the Hiten Bhaya committee are in the right direction, they are not comprehensive and need to be further developed. According to them some shortcomings of the Hiten Bhaya committee are:[216]

1. The proposal that ABSEB continue as a holding company for the new companies would continue to expose APSEB and consequently its subsidiaries to political pressure and the power sector would not be insulated from short-term political expediencies. This would undermine the main objective of the reform programme.

---

[215] GoAP (1995): *Report of High Level Committee: Guidelines on Restructuring and Privatisation of Power Sector and Power Tariff*, Hyderabad: Government of Andhra Pradesh.

[216] World Bank (1999): *Project Appraisal Document on Andhra Pradesh Power Sector Restructuring Programme*, Report No. 18849 IN.

2. The committee defines the role of the regulatory commission narrowly: to deal with retail tariffs. The responsibilities of the commission should be broadened to include regulation of the bulk supply tariffs, distribution tariffs, and connection charges. In addition, the regulator should also grant licenses to all transmission and distribution companies and enforce them.

3. The committee recognised the need for new legislation only for the establishment of the regulating system. Unbundling APSEB and creating separate companies are major changes that could be achieved only through new legislation dealing also with transfer of assets, staff and interests.

4. The committee's recommendation that all power generating assets be transferred to a single company that will also procure power from independent producers. This model would limit competition, reduce expected efficiency gains, and make the regulator regime too complex to administer.

The only way out of the present predicaments in the power sector in the opinion of the World Bank team is to implement all encompassing reforms. Some important components of the reform proposed by the World Bank are:[217]

1. Define a structure for the sector consistent with privatisation of distribution and private sector development in generation.

2. Corporatise the power utilities and ensure that they operate without governments–interference.

3. Create an independent and transparent regulatory system for the sector with broad range of responsibilities including granting licenses and enforcing them.

4. Enact comprehensive reform legislation to establish the new regulatory framework and implement the restructuring measures.

5. Increase the tariff rate to agriculture to at least 50 paise/kWh in the near term. Continue to adjust tariffs to cover costs and reduce cross subsidies.

The government of Andhra Pradesh released its power sector policy statement on June 14, 1997. According to it the aims of the state government are:[218]

---

[217] ibid.

[218] GoAP (1997): *White Paper on Power Sector*, Hyderabad: Government of Andhra Pradesh.

1. Providing operational, managerial and functional autonomy to APSEB/ other successor utilities to enable it/them to operate along commercial lines.

2. Besides separating policy regulatory functions from the management functions of the APSEB, ensure the establishment of a regulatory framework that would ensure cost optimisation with securing operational efficiencies in generation, transmission and distribution of energy, collection of related revenues.

3. Ensuring that while Government may continue to direct and determine the overall policy framework for the power sector as a whole, it withdraws from regulatory functions.

4. Promoting increasing participation of the private sector in power industry.

5. Supporting progressive privatisation of distribution network under conditions and phasing that are sustainable.

6. Removing dependence of electricity utilities on Government budgetary assistance for achieving prescribed statutory financial returns.

To achieve the above aims the government's strategy to restructure power sector as follows:[219]

1. In Andhra Pradesh considerable generation capacity is being established in the private sector.
2. Under the reform while the transmission will be handled by the APSEB, which itself will be converted into a corporate body under the Indian Companies Act, 1956.
3. For purposes of distribution the State shall be separated into distinct distribution areas, each of which would be administered by a separate distribution company which would be sustainable, both technically and financially, on an autonomous basis. In the first instance, all such distribution companies would function as wholly owned subsidiaries of the APSEB. Based on further technical studies, steps would be taken to gradually privatise distribution.

[219] GoAP (1997): *White Paper on Power Sector*, op. cit.

4. Even prior to initiating the structural reform of the APSEB, an autonomous regulatory commission should be established to ensure fair play and equity between the separate entities that interact in the generation, transmission and distribution entities and consumers. Such commission should be set up under an appropriate statute, which will assure the independence of the Commission, as also the non-interference in the functioning of the commission, by the State Government.

The policy statement delineates the role and functioning of the proposed Electricity Regulatory Commission. The activities of the commission among other things constitute promoting efficiency and economy in generation, transmission and distribution of electricity by establishing appropriate norms, undertaking licensing of companies providing services in all the areas of the power sector, duly prescribing performance standards. It also advises the state Government. Introduction of tariff structure that will progressively reduce cross subsidisation and to see that no sector shall pay less than fifty per cent of cost of supply of electricity within three years of setting up of the commission is also the duty of the regulatory commission. If the State government decides to deviate from this tariff, the financial implications of such deviation were to be explicitly provided by the State Government in the State budget.

A comparison of reforms undertake by the Andhra Pradesh state government in power sector and reform proposed by the World Bank shows the influence of the World Bank on Andhra Pradesh state government's policy formulation. The activities undertaken by the state government are only carbon copy of the measures proposed by the World Bank. Though the state government claims that it is not doing anything beyond hearing the advice of the World Bank, this policy paper shows that it is following the measures proposed by the Bank in letter and spirit.[220]

The enactment of the Andhra Pradesh Electricity Reforms Act of 1998 is a watershed in the power sector reforms in Andhra Pradesh, The speed at which this Act to restructure APSEB was passed in the Andhra Pradesh Legislative Assembly stunned many an observer. The Telugu Desam government introduced the Bill on April 27, 1998 and the same sailed through all the motions in one day and it was

[220] Prabhakar T. Reddy (1997): 'Restructuring of APSEB: Some Important Issues', *Economic and Political Weekly*, 32(39).

passed on April 28, 1998. In order to facilitate smooth passage of the bill the entire opposition was suspended from the Assembly. Out side the Assembly the agitation called by the Boards' employees was suppressed ruthlessly.

The contents of the Bill also highlight the influence of the World Bank on AP government's policy making.[221] This passage of the bill along with other measures taken by the AP government impressed the World Bank so much that sanctions in the wake of nuclear explosions have not come in the way of sanctioning new loan worth Rs. 2200 crores to the AP government under Andhra Pradesh Economic Restructuring Project and Rs 4400 crore loan for the Andhra Pradesh Power Sector Restructuring Programme. The A P Power Sector Restructuring Programme (APPSRP) is being implemented parallel to the structural and fiscal reform programme: AP Economic Restructuring Project (APERP). Both the Bank and the Government of Andhra Pradesh (GoAP) considered the reform in the power sector as the single most important aspect of structural and fiscal reform in the state. This reform programme, covering a 10-year period, aims at establishment of a new legal, regulatory and institutional framework, functional un-bundling of the system, corporatisation of sector entities, privatization of the distribution business, tariff reforms to achieve reliable, high quality and cost effective electricity supply, higher customer satisfaction.

Consequent to the enactment of the reform Act the AP Electricity Regulatory Commission was set up. Initially APSEB was bifurcated into power Generation Corporation (APGENCO) and Transmission Corporation (APTRANSCO). As a next step power distribution was separated from APTRANSCO and four distribution companies (DISCOM) were set up. For the present all these companies are under the government ownership. These will be privatised gradually.

Salient Features of the Reform Model:

The ultimate objective of the reforms is for the government to withdraw from power sector as an operator and regulator of utilities and to have commercially operated, largely privately owned utilities functioning in a competitive and appropriately regulated power market. The reforms aim at removing dependence of

[221] *Interview* with several bureaucrats in power sector of Andhra Pradesh, 2005-2006, Hyderabad.

electricity utilities on Government budgetary assistance, and ensuring that while Government may continue to direct and determine the overall policy framework for the power sector as a whole, it withdraws from regulatory functions.

Under the new dispensation, unlike the pre-reform days, power generation, transmission and distribution will be separated. In each segment there will be multiple operators. This is meant to bring in competition in to the sector. Another important feature of the reform model is the regulatory mechanism. Establishment of a regulatory framework is meant to insulate the power sector from external influences, to reduce the interference of the state government, minimise the politicisation of key sector decisions (for example on tariffs). The new Reforms Act enjoins the Regulatory Commission to promote competitiveness and progressively involve the participation of private sector.

Under the new dispensation electricity is treated as a commodity, but not as a development input. This is reflected in the tariff policy that this reform model brings in. Bringing in power tariff that equals cost to serve and remove cross subsidies is the essence of it. The new model looks down upon the subsidies as the main culprit in distorting the rational functioning of the economy. It expects the agriculture sector to pay for the electricity services full cost of supply as the industry can no longer bear higher tariffs. As an initial step it intends to increase the tariff rate to agriculture to at least 50 paise/kWh. And these tariffs will continue to be adjusted to cover costs and reduce cross subsidies. According to this reform programme no sector shall pay less than fifty per cent of cost of supply of electricity within three years of setting up of the Electricity Regulatory Commission, and it is the duty of this Commission to see that tariff is fixed in this manner. APTRANSCO shall adjust tariffs and take other measures so as to produce revenues from all sources sufficient to cover all expenses that include a return on equity. If the State government decides to deviate from this tariff, the financial implications of such deviation were to be explicitly provided by the State Government in the State budget.[222]

The reform process is supposed to engender competition and as a result improve efficiency leading to cheaper power supply. But the way the reforms are being carried out in AP make these happen impossible. In order for competition to be

real transmission/distribution companies should be free to buy power from whichever source is cheap. But Power Purchase Agreements (PPAs) entered in to with several IPPS by the state government and APSEB/APTRANSCO, which stipulates the power purchase costs, constrain the freedom of these transmission and distribution companies. Further, the contents of these agreements also impose exorbitantly high power purchase costs. In the case of distribution also scope for competition is very limited. For each distribution zone there will be only one distribution company. The consumers of that zone will have no choice but to buy power from that company only. In the absence of bench marking the performance consumers cannot be assured of efficient and cheaper supply of power.

With additional power demand at 2002 projected at 8000MW the government/Board entered into PPAs for generation of additional power of more than 9000MW. Later additional power demand projection was scaled down to 3500MW. But in response to the changed estimation of power requirement PPAs were not altered. If all the companies which have entered into PPAs set up generation stations by 2005 as agreed there will be surplus generation capacity of about 4400MW to 7250MW. If one were to follow these agreements, consumers will be forced to pay for this surplus/unused power also.[223]

The end result of the reforms will be replacement of public sector monopoly by private sector monopoly, which is far more dangerous. One of the important aspects of the reforms is that there should be no political/government interference in the working of the sector. But the scene in AP is totally opposite to it. Here the state government is not only interfering in the day to day work of the Corporations, but also influencing the decisions of the APERC.

The AP Electricity Regulatory Commission was formed in 1998. It has one chairman and two members. While the present Chairman is a retired IAS officer, one of the members was a serving engineer of the erstwhile APSEB and another is a retired tax official. According to the Act the chairman as well as members will be appointed by the state government from the persons selected by the Selection Committee. This Committee consists of a retired chief judge of any high court or a

---

[222] *Interview* with Geeta Gouri, Director Tariff, APERC, October 24, 2005, Hyderabad.

[223] *Interview* with Raghu, employee, APTRANSCO, October 23, 2005, Hyderabad.

retired judge of Supreme Court as Chairman, and Chief Secretary of the state government, Chairman of the Central Electricity Authority as members and Secretary of the Energy Department of the state government as the member secretary.

The APERC is constituted as a quasi-judicial body. It is supposed to act independently and keep politics out of the functioning of the power sector. The APERC is brought into the picture to shoulder the regulatory function in the state, which hitherto has been done by the government. As a part of its regulatory work the Commission issues licenses to the companies involved in transmission and distribution of power, it stipulates the standards of performance for these companies, it addresses the disputes between different stakeholders in the sector including consumers, and more importantly decides the bulk and retail tariff for power supply. It is the responsibility of the APERC to protect the interests of different stakeholders. The Act stipulates that it has to consult the stakeholders who are going to be affected by its decision. It is also its responsibility to see that the sector works in transparent, economic and efficient manner.

As the Reforms envisage an important work of the Commission is to insulate the power sector from political interference. It was pointed out that the root cause of the crisis engulfing the power sector is the pervasive politicisation of most decisions affecting APSEB's operations and expansion, and the resulting lack of commercial orientation in its functioning. Subsidies are spiraling up because of political interference in the running of APSEB. The only way, according to them, to reduce subsidies and consequently losses is to keep APSEB, power sector away from political interference.

Power tariff is being seen as an area of decision -making wherein rationality needs to be brought in on urgent basis. Especially consumers now look up to regulatory commissions to protect them from the earlier unjust practice of burdening them with the costs of distortions and perversions in the functioning of the state electricity boards (SEBs) such as theft, corruption, mismanagement, and inefficiency. Recent experience with the tariff formulation shows that the APERC is seriously lacking in bringing rationality prevail in decision making. Rather the Commission is interested only in carrying out the dictates of the World Bank and the state government. Bringing in rationality in tariff-related decisions requires rigorous and

detailed analysis of costs and revenues of utilities. This, in return, requires full information on calculation of costs and revenues as well as data and information on key aspects of functioning of the utility, which have implications for costs and revenues of the utility made available to the public, that too well in time. It is the duty of the Commission to see that this happens. In the recent case, while the APTRANSCO submitted their Annual Revenue Requirement, on the basis of which new tariff are decided, in December 1999, it was not made public until April 2000, in spite of several requests to make them public. Further, public were given less than three weeks time to make submissions. In the mean time public faced difficulties in obtaining these documents.

Added to this, though the Commission claims to have conducted public hearings–only 24 members of the public are allowed to appear before the Commission.[224] They restricted entry on the pretext that there is no space to accommodate many. Ironically there was enough space to accommodate hordes of government, APTRANSCO and World Bank officials and their consultants. Even press was not allowed in to venue. The proceedings before the APERC on tariff revision are to be transparent if it is to be meaningful and productive. But the experience with the proceedings shows that they are not at all transparent. 83% of the proposed revenue goes towards power purchases by the APTRANSCO. The documents supplied by the licensee do not contain all the details, particularly, Power Purchase Agreements (PPA). Without the knowledge of the fixed costs, variable costs, penalties, incentives, heat rate, nature of capital, debt equity ratio, etc., it is not possible to judge the expenditure requirement. While these documents are made available to the Commission the same were kept away from the public. This was brought to the notice of the Commission. But the Commission did not give a serious thought to it. The whole exercise shows that it is neither transparent nor participatory.

Initially the Commission decided to hike tariff by 15%. This is the rate stipulated by the World Bank and demanded by the state government. This is borne out by the news headlines carried by the Eenadu (Telugu daily, mouthpiece of the present Telugu

[224] *Interview* with N. Shreekumar, civil society activists, October 25, 2005, Hyderbad.

Desam government) in its May 27th, 2000 edition.[225] The news item also mentioned that because of problems with the computers the Commission has delayed the announcement by a day. On the next day all the newspapers including Eenadu carried the news that power tariff is hiked by 20%. In the intervening period some thing different from problems with computers happened. The Telugu Desam led state government has the inkling that there will be public opposition to hike in tariff. To appear popular it has to bring down hike. If the announced hike is 15% and if it is reduced by some percentage points in response to public demand it will be violating one of the important conditionalities of the Bank. So, in order to save it self from the devil and Deep Sea it has made the Commission to declare the hike as 20%. After a few days as if in response to the public demand the hike was brought down from 20 to 15%. It is another matter that public were not fooled by this drama, and protests continued. This shows that the Commission allowed itself to be used as a puppet. Independence is the last word that will come to our mind in this context.

In its day to day functioning the Commission proved itself to be as bureaucratic as any other government department. Rarely one will get response for repeated requests made to the Commission to give some clarification or information. Even if some information is readily available one has to follow cumbersome process to lay hand on it. Since its inception the Commission has brought out many regulations. However, for the public there is no way of knowing about them. Recently the Commission has opened its web site. Hope that it will serve some useful purpose. At the same time it is wrong to think that the Commission is inaccessible to all. The Commission has passed exemptions in favour of many companies, which in turn will adversely affect the APTRANSCO. Few outside the commission and beneficiaries know about these exemptions.[226]

Above all the Commission's stance towards PPAs is even more dubious. It is unwilling to make these agreements open to the public. On its own it is desisting from examining them on the pretext that all these agreements were entered before its formation. It is also unwilling to talk about the PPAs that are revised after its

---

[225] *Interview* with M. Thimma Reddy and N. Shreekumar, civil society activists, October 24-25, 2005, Hyderbad.

[226] *Interview* with Loksatta members, May 12, 2006, Hyderabad.

formation. The experience with the Commission until today show that it is more interested in carrying the dictates of the state government and the World Bank conditionalities, rather than making the whole process transparent and participatory. Its present functioning defeats the very purpose of its formation, i.e., keeping politics away and let rationality reign.[227]

Opposition to Reforms:

It can be said that the stand taken by the protagonists of the reforms, who consist of the World Bank, the state government and the Electricity Board has three elements. They contend that the state's power requirement is huge and it cannot be met without a massive mobilisation of private financing. In the case of AP they point out that by the year 2002 additional power of 8000MW is needed, and to generate and distribute it Rs. 56,000 crore are needed. In the present financial situation the state government is not in a position mobilise that much amount. The only way is to turn to the private sector. Then, substantial expansion of supply through private power producers is not possible without restoring the creditworthiness of energy off-takers. In order to attract private capital into the power sector, the sector needs to be reformed/restructured completely.

These protagonists observe that the power sector crisis is represented by the growing losses of the electricity board, and in order to save the Board from losses the state government provides subsidy. In turn these subsidies are eating in to scarce government funds, As a result of diverting the funds to meet the needs of the power sector social sectors like education and health are suffering. As it is no longer advisable to neglect these sectors, so subsidising of power sector must be stopped. In the absence of public funds flowing into the sector as the government is starved of funds, there are no alternatives to turn to private sector to mobilise funds. And in order to attract the private sector there is need to reform the power sector. At a more fundamental level the protagonists of the reforms locate the ills of the sector in the lack of competition and private sector involvement is sought to infuse competition into the sector. Hence the reforms. It is no exaggeration to say that the APERC just parrots the government's analysis.

---

[227] *Interview* with Raghu, employee, APTRANSCO, October 23, 2005, 2005, Hyderabad.

There appears to be no effort on its part to address these issues independently. Further, the Commission tries to shield it self by claiming that as stipulated by the new Electricity Reforms Act it is duty bound to promote privatisation and competitiveness. The Regulatory Commission sees its role as creating favourable conditions for private sector investments and assisting the state government in implementing the reform agenda.

The recent people–s movement against the power tariff hike saw all the opposition parties on one side and the ruling TDP on one side. This does not mean that all of the opposition parties are opposed to the reforms. One can say that while all the left parties are opposed to the World Bank led reforms in the liberalisation, privatisation, globalisation (LPG) mode, other parties are in support of the reforms. Only in the face of people–s vehement opposition to power tariff hike they mouthed some anti-reform statements.

It is significant to note that the present power sector reforms are being taken up in the background of the liberalisation process that started in 1991 at the national level as a precondition to the IMF/WB bail out of India form the BOP problem. At that time Congress was in power at the Centre. As the power policy of the centre changed, following it in AP NT Rama Rao–s Telugu Desam government also entered into Memorandums of Understanding (MOUs) with many companies overnight. Some of these MOUs entered the stage of PPAs. A good number of PPAs are also signed/altered during congress led governments– regimes in the state.

The state government and the electricity board entered into tripartite agreements with trade unions in the Board to carry out reforms in the sector. Significantly, it is the Congress/INTUC affiliated APSEB employees– Union - 327 which first signed the tripartite agreement on behalf of the Board employees. This union leaders contended that these reforms will protect the interests of the employees and also these are in keeping with the reforms unleashed by the P.V.Narasimha Rao led Congress government at the centre. The TDP affiliated TNTUC, which does not have much membership, also signed the agreement.[228]

The major trade union APSEB Employees Union - 1104 along with the Engineers Association opposed the reforms of the sector. They called for agitation against tabling of the reform Bill in the Assembly in 1998. Later the state government

[228] M. T. Reddy (2000): 'Development in the Power Sector in Andhra Pradesh', unpublished paper.

could manipulate the Engineers Association and see that it withdrew from the agitation and signed tripartite agreement against the wishes of the engineers. The Employees Union 1104 went ahead with the agitation. Once the Bill was passed in the Assembly this Union also has no other alternative to sign the tripartite agreement. When the state government came out with a policy paper the Engineers– Association criticised it saying that it is based on wrong and misleading projection of future power requirement and capital needed to meet that requirement. It also pointed out that there are avenues to improve the functioning of the board. It also recommended formation of a consortium at the national level with BHEL, NTPC and SEBs to pool resources. The then office bearers succumbed to the manipulations of the government and signed the agreement. The new office bearers who succeeded them again raised the banner of revolt. They led a three month long agitation from April to June 2000 against privatisation of the board. In the face of the Association–s opposition to government's reform programme the establishment is trying to shore up a rival Association, which is promoted by those who initiated the tripartite agreement on behalf of the engineers of the Board in the past.[229]

These days it is difficult to find analysis of any problem, including electricity that is critical of the state government in the local press including the English press. It is a widespread belief that the Chandrababu Naidu led state government has effectively kept the media in its control. Yes we do find news reports on the conditions of the power supply or people–s movements against power tariff hike. That is all.

Farmers are the most agitated community in the state in the context of the ongoing changes in the power sector, for al the ills in the power sector are attributed to their power consumption. Many of the farmers– organisations argue that the sector does not consume the quantity of power attributed to it. This is because the duration in which they are supplied power and quality of power is such that consumption of that much power is practically impossible. They contend that the number of pump sets, their capacity and the duration during which they are used are over estimated. Given the contribution made by the well irrigation to agriculture in the state, the number of families dependent on it and its contribution to food security they argue that there is

[229] ibid.

need to continue supply of subsidised power. In this context, they also demand that power produced in the hydroelectric stations be allotted to the agriculture sector.

People's Monitoring Group on Electricity Regulation (PMGER) emerged from a two-day workshop organised by the Centre for Environment Concerns, Hyderabad on 15th and 16th of November 1999 on power sector reforms in AP. The workshop was facilitated by members of the PRAYAS, Pune; and attended by more than 50 participants drawn from domestic consumers, farmers, farm workers, power sector employees, environmentalists, academicians, and NGO activists. The PMGER is making efforts to utilise the space available for people–s participation in the present dispensation under the APERC.[2.30]

Lok Satta, is an organisation working for democratisation of public institutions, formed Citizens Organisation for Regulated Electricity (CORE). Some former Chairmen of APSEB and some retired government officials are its members. According to it as result of several years of criminal neglect, rampant corruption and rank incompetence, the once much acclaimed APSEB and its successor organisations are now facing severe financial crisis. It also locates the source of crisis in huge system losses, government–s failure to provide subsidies, and failure to adopt rational policies to encourage energy saving in agriculture. In addition there has been interference in day to day functioning and routine executive decisions. Pilferage, hefts and corruption continued unchecked on account of political patronage and lack of political will to improve the system. Lok Satta believes that the real issues in power sector are better management, more transparent policies and decisions and reduction of expenditure and losses now and in the future. It shows that increasing tariffs in themselves provide no solution in the long term without addressing the fundamental problems plaguing the power sector. According to it the real answer to the crisis lie in effectively dealing with T&D losses, transparent and fair policy in the case of PPAs to protect consumers from arbitrarily high tariffs, and decentralisation of power distribution.

Conclusion:

The case of Andhra Pradesh is different from that of Orissa in many ways. While in Orissa there was no demand of electricity neither for domestic consumption nor for agricultural consumption, in Andhra Pradesh there was a demand for

[230] *Interview* with M. Thimma Reddy, civil society activist, October 24, 2005, Hyderabad.

agricultural connections. This was an effect of green revolution in the state. But in rural Andhra Pradesh there was limited access to electricity and a very little demand for it.

Electoral politics of the state has played an important role in policy making for the sector. During 1970s, a number of agricultural connections were provided to gain electoral support of farmers. As the result of green revolution in the state, a group of rich peasantry had emerged in the state and they were politically assertive with a support from the marginal and landless farmers. Their basic demand was subsidised agricultural inputs. In response to these demands the state government provided a flat-rate tariff system, neglecting the financial viability of the board. In that period the peasantry formed a dominant group in the state.

However, by 1990s, the equation changed in the state. The industrialists emerged as a dominant interest. They found an interest in privatisation. They expected that with the opening of the sector for private players they will have a chance to enter into the business of electricity. However, their interest was limited to generation business only, but not in the distribution business which is highly loss making. May be for that reason, the government of Andhra Pradesh was not able to privatise the distribution companies.

There was opposition from the employees, but that opposition was suppressed like Orissa. There was some opposition from the consumers, but that was more to the tariff hike, less to reforms and privatisation. However, the opposition by consumers have been suppressed by force.

Unlike Orissa there was internal thinking about restructuring the sector in Andhra Pradesh. However, it was mainly influenced by the Orissa experience. Latter the Word Bank came into the process to assist in the process. Since then the bank dominated the process with its control over the finance required for restructuring.

Conclusion

Thus far, I have discussed the shifts in the policy process in India, with reference to the Indian electricity sector. I argued that the policy process in India is influenced by developments in political economy. The policy options available to the policy makers are determined by various political economic factors like social classes, organised groups, international political economic environment, political structure and electoral politics. I discussed how these factors influence policy choices and implementation of those policies. While discussing four phases of policy change in India electricity sector, I argued that the policy changes are, most often, made keeping with the international practices and prevailing economic ideologies. And during last two decades, international development institutions have played a big role in the process. To substantiate these arguments, I have provided two case studies of Orissa and Andhra Pradesh. In this concluding section, I will summarise the key arguments made thus far and make a comparison of Orissa and Andhra Pradesh to show how the Indian states vary in terms of policy making.

During last five and half decades, Indian electricity sector has passed through four different phases of policy changes. These changes in the policy process reflect the trends of change in Indian political economy. With the developments in Indian political and economic environment, the policy spaces available for the issues concerning electricity have also changed over time. And at each point of time, these policy changes are outcome of interaction between the state, the government and the society in Indian. These policy changes are governed by the interest of dominant groups, changing electoral politics and political structure of the country, and the international political and economic environments. The new policies are always shaped by the economic ideologies prevailing in India and abroad as well. However, all these policy changes are always favourable to the rich in Indian society.

The first phase of policy change was initiated immediately after independence, when the framers of Indian constitutions put the sector under public control. There was a move from the market led development in the sector to a state led development. However, during the period of market led development, the state had ample scope to involve in the sector and invest for development. But there were hardly a few cases where the state have really involved in the sector and invested for development of the sector. Although there were some supporters of a healthy competition among the

private players and the public sector, the decision was taken in favour of a public sector led development. This decision was made keeping with the Nehruvian socialism and state-led development model. At that point of time, the state lead development model was prevailing in most parts of the world. Indian decision makers have cited three examples of international practices in support of the model and have drawn a lot from the models, viz. planned investment and five-year plans in USSR, Nationalisation of electricity sector in United Kingdom, and public works by the Tennessee Valley Authority in USA. However, India opted for a public sector led development in the electricity sector and nationalised the sector. This policy change was backed and supported by the dominant interest- industrialist- in the country. The rationale for this change was to facilitate industrialisation process in India and to provide electricity to all at an affordable price.

The policy change established public institutions like State Electricity Boards in each and every state and Central Electricity Authority at the central level to manage the development and monitor the process. This policy change was implemented properly in every state, owing to the political stability existing then in the country. There was coordination among the central government and the state government and also a consensus to implement the change. So the implementation process was smooth. And the newly created State Electrify Boards were doing well in terms of electrification and electrical developments.

The problem in the sector started with the beginning of the second phase of policy change in late 1960s. This time the policy change was made at the state level, but it was directed by the central government, always under the Congress rule. At this phase policy was directed towards rural electrification and subsidisation of electricity for agricultural and domestic consumers. This phase beginning from 1967 to late 1980s saw a rise of regional political forces. During the phase regional leaders emerged at state level with regional agendas and promised economic leftism. To face the challenge from these regional forces, the dominant Congress party used the populist mechanisms to keep hold on its rural vote-bank. For this purpose the party used the electricity sector as a whole and the state electricity boards in particular. Beginning from late 1960s, state by state under Congress governments introduced a new mechanism of agricultural subsidy- flat-rate tariff system for agricultural

consumption (based on the capacity of pumpsets). As it is, the agricultural consumers were paying much less than the cost to serve and introduction this new pricing system reduced agricultural tariff substantially, contributing to the financial decline of the boards. Initially the state governments provided subventions to meet the gap. But over time the gap widened so much that government subventions were not sufficient for the purpose. Another aspect of the agricultural subsidy was that there was a growing demand by the rich peasantry (emerged through Green revolution) for subsidised inputs for farming, including electricity for irrigation.

The second development that took place during the period was rampant rural electrification. The Electricity (Supply) Act, 1948 made provisions to provide electricity to everyone, but at the same time it asked the boards to make a minimum rate of return at 3 percent. Making use of this provision, the Congress regime again plunged into rampant rural electrification without considering the economic viability of the projects under taken. A lot of political interference took place in the process of rural electrification; the politician fought to electrify their constituencies on priority basis. However, there was hardly any demand for village electrification; it was a Congress strategy to create a vote-bank of rural mass. The rural electrification schemes resulted in high investment without any return, theft of electric power in rural areas, as most of the rural people were not able to afford to pay for electricity services.

These two developments during late 1960s to early 1980s lead to a third development of cross-subsidisation from industrial consumers. While the agricultural subsidy was resulted in decrease in boards' revenue, rural electrification emerged as a loss-making venture for the boards. Altogether these two developments widened the gap between revenue and expenditure of boards. Initially, the state governments provided subventions to fill the gap. But latter, governments were not able to meet the ever widening shortfall, owing to increase in spending for other social sectors. It increased the financial crisis in the sector. The state governments directed the boards to increase the industrial tariffs to meet the shortfall. During 1980s, the industrial tariff was hiked very frequently. To get rid of the exorbitant electricity tariff, many large industrial consumers shifted into captive generation, resulting in reduction of

boards' industrial consumption, for which the boards were paid regularly. Some industrial consumers, who continued with the boards, opted not to pay regularly.

Altogether these developments during late 1960s to late 1980s lead to a crisis in Indian electricity sector. Though the crisis was realised during the mid 1980s, there was hardly any thinking on restructuring or reforms. By the early 1990s, the perceived availability of private capital and emergence of private sector oriented service delivery models challenged to the public utility approach. In the 1990s, Indian electricity sector entered into another era of policy change- the era of privatisation. The return of Indian electricity sector into a market led or private sector led development model was an outcome of changes in Indian political economy and the vibrant presence of external players (international institutions). During the phase India experienced a set of economic policy reforms as well as a transition in the electoral politics. These two developments opened up Indian economy as well as politics. Again a consensus emerged among the policy makers. While there was a consensus on the necessity of reforms, there was also a consensus on the possible limits to the reforms.

However, this phase experienced a variation among the states; some states going for full privatisation and some halted in between. This was because of state specific factors. The period experienced a variation in state politics across Indian states and some states have experienced a mushrooming of civil society organisations and consumer forums in opposition to reforms, while some other states lack those kinds of institutions. However, after more than a decade of experimentation, it became clear that the problem and its solution lies less in the ownership, and more in how the sector is governed.

In realisation of the fact, the Indian electricity sector again had another set of policy changes with the adoption of the Electricity Act, 2003. These set of policy changes reflect a return to the professional model of policy making. It focuses more on better management of the sector. But, with the developments in India politics, now it has become very difficult implement these policies in India. While a few states have implemented some portions of the Electricity Act, many states have to implement it. This variation and halting implementation of the Act is an outcome of pluralisation of the Indian state. With an emergence of various organisations and institutionalisation

of these organisations during 1990s, it has become difficult to generate a consensus at the implementation level. Prevailing political fragmentation in the country has made this consensus a difficult task.

To sum up, the policy making process in Indian electricity sector shows that the policy process in India has itself gone through a transformation: from a 'professional' model during independence to a 'populist' model during 1970s and 1980s and again to a mix of professional (at the level of policy choice) and populist (at the level of implementation) model in 1990s. The present model of policy making is less professional compared to that of 1950s and 1960s as the policy making authority is fragmented within. However, a common feature of each policy change in India is that it is always in favour of the dominant interest and is guided by the capitalists. While during 1950s to 1970s, it was the Indian capital that governed policy making, during late 1980s and most explicitly in 1990s, it is the external capital that is governing policy making in India.

Another notable feature of policy making process in India is the shift of capture from policy choice stage to implementation stage. While during 1950s to 1970s, policy choice was governed by different political economy factors, during 1980s and 1990s these factors have shifted their attention to implementation level. This has resulted in halting implementation of policies devised after a long debate. Those interest which could not influence at the policy choice stage, they oppose the implementation of those policies.

In the previous chapters, I argued that policy-making process is governed by various political economic factors. Presence/absence of these factors make a difference in the policy process. Here I will make an assessment of these political economic factors in Orissa and Andhra Pradesh and briefly present their influence over the policy process in electricity sector at different stages.

During the first phase of policy change, APSEB was established before the OSEB, even though Andhra Pradesh got separate statehood much after Orissa. The question arises, why Andhra Pradesh was able to establish its state electricity board only after 3 years from the creation of the states, while Orissa took another two years? It is because, prior to its creation, most parts of Andhra Pradesh was under Madras province, which had done fairly well in terms electrical developments, in the pre-

independence period. Madras province was one of the few provinces, which had a separate department for electricity under the provincial government, and 90 percent of the sector in the province was under government control. After its separation, Andhra Pradesh had inherited that portion of electricity system coming under the Andhra region. So, by the late 1950s, Andhra Pradesh had some electrical capacity under the government control for which it established APSEB to manage the sector. On the other hand, till independence, Orissa did not have much capacity and had no contribution from the government. May be for this reason, Orissa had to wait till 1961 to create a board.

Although both Orissa and Andhra Pradesh are agricultural states, the latter introduced flat-rate tariff system for agricultural consumption in 1982. But Orissa continued with tariff based on metering. It is argued that there was a strong demand from farmers in Andhra Pradesh, for subsidised electricity to power the irrigation pumps. And this demand was absent in Orissa. The absence of demand for subsidised electricity does not mean farmers in Orissa do not need electricity for irrigation. Nor it means the government of Orissa was less populist. Rather it implies that the farmers in Orissa were not organised like in Andhra Pradesh. That is why, while agricultural consumption of electricity is increasing in Andhra Pradesh, with all its ill impacts, Orissa has an insignificant and stagnated agricultural consumption.

Another reason for subsidisation of electricity tariff in Andhra Pradesh was the contemporary electoral politics in the state. In June 1981, N T Ramarao formed a new regional party (Telgu Desam Party). Not being from a political background, to form a political base, he made several populist election promises, including free electricity to farmers. To face the challenge from a newly emerging party, which was gaining popularity, the Congress government in the state announced flat-rate tariff system. Although, the congress faced a similar challenge in Orissa, it was from Biju Pattnaik, who defected from the Congress itself. And Pattnaik had been Chief Minister from the Congress party and also had a mass base. So it was not necessary for him to make an appeal to a particular community.

Although Andhra Pradesh entered into a populist paradox during 1970s and 1980s, the electricity sector in the state has been financially sustainable till early 1990s. While being less into populism in the sector, Orissa's electricity sector had fall

during 1980s. It is because of the support and regular subventions provided by Government of Andhra Pradesh, which was not possible in part of the Orissa government, owing to its financial status. The Government of Orissa has not provided a single subvention to the sector, since the beginning of reform on 1st April 1996, while Government of Andhra Pradesh still continues with the subventions.

Lack of organisational capacity in Orissa was again realised during reform phase. There was hardly any opposition to the reform in Orissa's electricity sector. Although there was suspicion about impact of reforms and the tariff was expected to go up, there was no mobilisation against reforms. The policy makers in Orissa claim that they achieved the success, because they could abolish the lift-irrigation system by replacing it with 'Pani Panchayat', prior to electricity reforms. So there was no scope for farmers' agitation against reforms. However, that is not the real fact. The farmers in Orissa did not have much interest in the sector, as very few of them are dependent on irrigation. On the other hand, there was strong opposition to privatisation in Andhra Pradesh and the opposition became more vibrant after the first tariff hike after reforms. The opposition was so strong that it became difficult for the government to implement the final stage of reforms, i.e. privatisation of distribution.

Although there was some agitation during first tariff hike in Orissa, it could not mobilise into a movement. Another reason for strong opposition to privatisation in Andhra Pradesh and its absence in Orissa is presence of civil society organisations in Andhra Pradesh and absence of them in Orissa. During reforms in Andhra Pradesh, a number of civil society organisations have worked together to monitor the reform process. They have also contributed to generating awareness among the mass about reforms. The situation was completely different in Orissa, where there is not a single civil society organisation working on reforms or privatisation in power sector. Absence of these organisations has resulted in ignorance of the mass in Orissa. This has lead to an unchallenged implementation of reforms in Orissa.

Orissa even does not have consumer forums. Although there are a quite few in urban areas, they are very much inactive. Thus, there is absence of consumer intervention in the policy process. Whereas Andhra Pradesh has strong consumer forums of domestic as well as agricultural consumers. These forums form a strong lobby at the political level and also they have access to the regulatory process. Finally,

there is a gap between the work cultures in both the states. While Andhra Pradesh has a professional work culture, which has improved in the sector after unbundling and corporatisation, Orissa still continues with public sector mentality. Having all other factors common in both the states, these differences have resulted in better performance by the sector in Andhra Pradesh.

Appendix

Appendix 1.1: A Statistical Overview of Indian Electricity Sector

Indian Electricity Sector at the Time of Independence:

Installed Capacity	**1,363 MW**
No of villages Electrified	**1,500**
Per capita electricity consumption	**14 Units**

Source: GoI (1948): Constituent Assembly of Indian (Legislative) Debates, Government of India; MoP (2005): *Rajiv Gandhi Grameen Vidyutikaran Yojana: Scheme for Rural Electricity Infrastructure & Household Electrification*, Government of India.

Indian Electricity Sector at Present:

1. Total Installed Capacity:

Sector	MW	%age
State Sector	70,394	55.8
Central Sector	40,464	32.1
Private Sector	15,231	12.1
Total	1,26,089	
CPP (connected to Grid)	14,636	

Fuel		MW	%age
Total Thermal		83,272	66.0
	Coal	68,488	54.3
	Gas	13,582	10.7
	Oil	1,202	1.0
Hydro		32,726	26.0
Nuclear		3,900	3.1
Renewable		6,191	4.9
Total		1,26,089	

2. High Voltage Transmission Capacity:

Capacity	MVA	Circuit KM
765/800 KV	–	1,696
400 KV	86,442	69,668
220 KV	1,48,077	1,10,083
HVDC	3,000	5,872

3. Per Capita Consumption of Electricity:

(Year 2004-05) 606 KWH / Year

4. Rural Electrification:

No. of Villages (Census 1991)	593,732
Villages Electrified (30th May 2006)	439,472
Percentage of villages electrified	74%
Rural Households (Census 2001)	138,271,559
Having access	60,180,685
Percentage of Households electrified	44%
Potential Energisation of Pumpsets	1,95,94,000
No of Pumpsets Energised	1,47,05,924
Percentage of Pumpsets energised	75.1%

5. Power Situation (April 2006-June 2006):

	Demand	Met	Surplus/ Deficit
Energy	168,152 MU	152,514 MU	-9.3 %
Peak Demand	95,583 MW	83,309 MW	-12.8 %

Source: Ministry of Power Website, http://powermin.nic.in/, last accessed on 22.07.2006; CEA (2006): *Monthly Report*, New Delhi: Central Electricity Authority.

Appendix 1.2: A Chronology of Events in Indian Electricity Sector

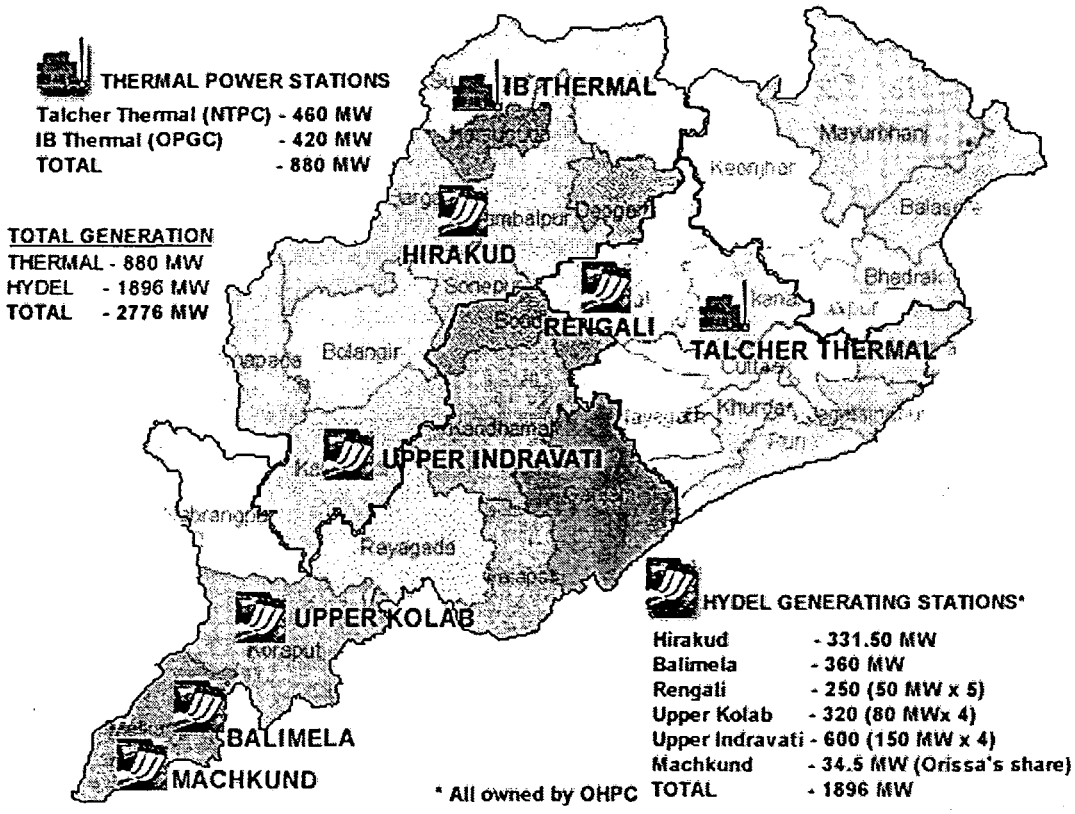
1879	Electric lighting demonstrated in Calcutta on 24th July, 1879 by P W Fleury & Co.
1887	The Electricity Act of 1887
1897	First generating station was set up near Darjeeling. A 130 kW hydroelectric station
1899	The first thermal generating station set up in Calcutta
1899	With electric lights, fans, Calcutta became the first electrified city in India
1903	The Indian Electricity Act, 1903 (3 of 1903)
1910	The Indian Electricity Act, 1910
1947	Installed capacity of 1363 MW (74% with the government), around 10 lakh consumers in 1500 locations (80% distribution in private hands).
1948	The Electricity (Supply) Act, 1948 was adopted on 10th September, 1948.
1956	Industrial Policy Resolution. Generation and distribution to be undertaken by the government and CEA to co-ordinate the sector. SEBs to be set up. Five private distribution licensees continued.
1982	Flat rate tariff for agricultural consumption was introduced in Andhra Pradesh for the first time on 1st November, 1982.
1991	Private capital was introduced in electricity generation.
1998	The Electricity Regulatory Commission Act, 1998 was adopted, making provision for establishment of Central Electricity Regulatory Commission and State Electricity Regulatory Commissions.
2003	The Electricity Act, 2003

Appendix 1.3: Salient Features of Selected Electricity Regulations in India

The Indian Electricity Act, 1910	➢Issue of licenses ➢Regulatory and safety aspects ➢Rules for non licensees ➢Guidelines for electrical works ➢Guidelines for determination of purchase price and charges
The Electricity Supply Act, 1948	➢Formal establishment of SEBs and CEA ➢Power and Duties of the above entities with guidelines for works and trading procedure ➢Approval process for generating stations ➢Guidelines for licensee tariff ➢Procedures for Finance, Accounts and Audit
The Indian Electricity Rules, 1956	➢Mainly technical guidelines and rules for works
The Central Electricity Authority Rules, 1977	➢Defining the functions and duties of CEA
The Central Electricity Authority Regulations, 1979	➢Lays down desired operational details for smooth functioning of CEA
The Electricity Wires, Cables, Appliances And Accessories (Quality Control) Order, 1993	➢Quality control ➢Certification of manufacturers ➢Guidelines for storage, sale and distribution
Policy on Private Participation in Power Sector, 1991	➢The main objective is to attract private investment ➢Up to 100% foreign equity participation permissible
The Electricity Laws (Amendment) Act, 1991	➢Increased authority of the regional load dispatch centers (RLDC) ➢Grid Integration
The Electricity Laws (Amendment) Act, 1998	➢Formal establishment of central and state transmission utilities as public companies ➢Independent standing for transmission
The Electricity Regulatory Commissions Act, 1998	➢Establishment of CERC with provision for establishment of SERCs. ➢Guidelines for tariff and guidelines for supply and service
The Electricity Act, 2003	➢Replaced all the existing legislations ➢Introduces competition ➢Open access ➢Removal of clearances for generating plants ➢Promotion of decentralised distributed generation and decentralised distribution ➢Separate transmission corporation

Appendix 2.1: A Statistical Overview of Orissa's Electricity Sector (As on 01.04.2003)

Generation Scenario:



Source: OERC website, www.orierc.org, last accessed on 23.06.2006.

Other Sources of Generation:

GRIDCO's share from Central Sector- 690.460 MW

Distribution Scenario:

Overall Orissa Status

Category	Consumers (%)	Load in MW (%)
Domestic	1672555 (84.80%)	1815.684 (49.12%)
Commercial	184173 (9.34%)	265.288 (7.18%)
Irrigation	50067 (2.54%)	230.765 (6.24%)
Industry	23232 (1.18%)	1055 (28.54%)
Others	42421 (2.15%)	329.879 (8.92%)
Total	1972448 (100%)	3696.616 (100%)

Distribution Zone-wise Status (Load in MW)

	CESCO		NESCO		SOUTHCO		WESCO	
Category	**Consumers**	**Load**	**Consumers**	**Load**	**Consumers**	**Load**	**Consumers**	**Load**
Domestic	655284	796.309	345026	372.454	372630	286.872	329615	360.049
Commercial	75054	139.335	28958	33.781	41261	39.172	38900	53
Irrigation	10159	86.1	10057	47.127	7851	42.538	22000	55
Industry	8046	329.784	5065	205.716	4185	102.655	5936	416.98
Others	28421	122.875	3630	27.68	6488	88.267	3882	91.057
Total	746964	1474.403	392736	686.758	432415	559.504	400333	976.086

Source: OERC website, www.orierc.org, last accessed on 23.06.2006.

Orissa' Peak demand Projection (CEA):

By end of 9th Plan (2002)	2317 MW
By end of 10th Plan (2007)	3024 MW
By end of 11th Plan (2012)	3928 MW

Source: GRIDCO website http://www.gridco.co.in/, last accessed on 21.07.2006.

Rural Electrification Status:

Village Electrification		**Pumpset Energisation**		**Household Electrification**	
Total no of inhabited villages (1991 Census)	46989	Estimated ultimate potential	1214000	Total no of households	6782879
No of Villages electrified	37347	No of pumpsets energised	74625	No households electrified	1312744
% of villages electrified	79.8			% of households electrified	19.35

Source: REC website http://recindia.nic.in, last accessed on 21.07.2006.

Appendix 2.2: A Chronology of Events in Orissa' Electricity Sector

1st March 1961	**Creation of Orissa State Electricity Board (OSEB)**
14th October 1961	The Orissa Electricity (Duty) Act, 1961 (Orissa Act 14 of 1961)
19th March 1962	The Orissa State Electricity (Supply) Rules, 1962
15th May 1981	The Electricity (Supply) (Orissa Amendment) Act, 1981 (Orissa Act 19 of 1981)
22nd March 1982	The Orissa State Electricity Board (General Conditions of Supply) Regulations, 1981
14th November 1984	Establishment of Orissa Power Generation Corporation Limited
27th June 1989	The Orissa Electric Supply-Line Material (Unlawful Possession) Act, 1987 (Orissa Act 11 of 1989)
December 1991	World Bank cancelled the assistance provided to the Upper Indravati Hydro Electric Project.
1992	Government of Orissa, OSEB and the World bank discuss the issues and a variety of possible solutions to Orissa fundamental power problem
October 1993	The Government of India, with the World Bank, convened a conference of the power ministers to discuss power sector reforms
November 1993	The Government of Orissa and OSEB agree upon power sector reform programme which include substantial privatisation and complete separation of the sector from government control. The Chief Minister of Orissa conveys its commitment to reforms to the World bank
March 1994	Government of Orissa constitutes the Steering Committee and the Task Force for reform implementation through a resolution
April 1994	Council of Ministers formally approves the reform programme
December 1994	Divisionalisation of OSEB, resulting in three separate divisions for generation, transmission and distribution
January 1995	Appointment of the Boards of Directors of GRIDCO and OHPC
February 1995	DFID provides an initial assistance of 12 million pound towards technical assistance
March 1995	Government Changes and the new government endorses reform programme

April 1995	Government of Orissa issues a formal statement of its power policy
November 1995	The State Assembly passed the Orissa Electricity Reform Act, 1995
1st April 1996	The Orissa Electricity Reform Act became effective
June 1996	Establishment of Orissa Electricity Regulatory commission
September 1996	A Distribution Operations Agreement was made with the BSES to manage the distribution business in Central region
March 1997	OERC issued its first tariff order OERC allowed an overall tariff increase of 10.5 percent
April 1997	Termination of the Distribution Operations Agreement with BSES for Central zone Four distribution companies were set up as separate distribution subsidiaries of GRIDCO
November 1997	Advertisements published locally, nationally and internationally inviting private sector to participate in distribution privatisation in Orissa
March 1998	Appointment of four new Managing Directors for the distribution subsidiaries of GRIDCO
December 2000	Completion of privatisation of distribution according to the initial reform programme
August 2001	AES left CESCO
2005	Bifurcation of Gridco to create Orissa Power Transmission Corporation Limited

Appendix 3.1: A Statistical Overview of Andhra Pradesh's Electricity Sector

Installed Capacity (in MW) (as on 31st March 2006):

APGENCO	6550.86
Joint Sector (Public-Private)	272.00
Private Sector	1711.39
Share from Central Sector	2616.94
Total	11151.19

Source: APTRANSCO website http://www.aptranscorp.com/, last accessed on 21.07.2006.

Energy Generation (Million Units):

Thermal	18845.42
Hydel	7950.62
Wind	1.18
Total	26797.22

Source: APTRANSCO website http://www.aptranscorp.com/, last accessed on 21.07.2006.

Consumer Mix:

Domestic	13220362
Non-Domestic	1268594
Industrial	175069
Cottage Industry	18649
Agricultural	2440823
Public lighting/Local bodies	105855
General Purpose	85232
Temporary	949
Total (LT)	17315533
HT Total	6392
Grand Total	17321925

Source: APTRANSCO website http://www.aptranscorp.com/, last accessed on 21.07.2006.

Rural Electrification Status:

Village Electrification#		**Pumpset Energisation**		**Household Electrification**	
Total no of inhabited villages (1991 Census)	26586	Estimated ultimate potential	1981000	Total no of households	12676218
No of Villages electrified	26565	No of pumpsets energised	2347588	No households electrified	7561733
% of villages electrified	100			% of households electrified	59.65

Rest 21 villages can not be electrified through grid connection.

Source: REC website http://recindia.nic.in, last accessed on 21.07.2006.

Appendix 3.2: A Chronology of Events in Andhra Pradesh's Power Sector

1st April 1959	Formation of APSEB
1st November 1982	Introduction of flat-tariff system for agricultural consumers
1989	Industrial consumers move to the Supreme Court against cross-subsidisation
7th January 1995	Formation of High Level Committee on restructuring and privatisation of power sector (Known as Hiten Bhaya Committee)
April 1995	Submission of Hiten Bhaya committee report
September 1996	World Bank's Agenda for Economic Reforms in Andhra Pradesh
March 1997	Andhra Pradesh Government's policy statement on power sector reform
April 1998	Andhra Pradesh Electricity Reform Bill was passed in the State Assembly
14th May 1998	Chief Minister's letter to the World Bank president reiterating the State Government's reform policy
May 1998	World bank's Project Appraisal Document on Andhra Pradesh Economic Restructuring Project
25th January 1999	World bank's Project Appraisal Document on Andhra Pradesh Power Sector Reform Programme
February 1999	Andhra Pradesh Electricity reform Act comes into force
1st February 1999	Bifurcation of APSEB into APGENCO (with all generation related assets) and APTRANSCO (rest of assets relating to transmission and distribution).
February 1999	Agreement between the World Bank and GoAP on Andhra Pradesh economic reform programme signed
March 1999	Agreement between the World Bank and GoAP on Andhra Pradesh power sector reform programme signed
31st March 1999	APERC was constituted
November 1999	First public hearing conducted by APERC on tariff philosophy
1st April 2000	APTRANSCO was unbundled into APTRANSCO and four discoms. But the APTRANSCO was assigned the role to coordinate the discoms.
6th April 2000	APTRANSCO files its first proposed tariff
27th May 2000	First tariff order by APERC
28th May 2000	People's movement against tariff hike starts
28th August 2000	Police firing on demonstrators
October 2000	High Court upholds the APERC order on tariff hike
10th June 2005	TRANSCO was separated from the discoms and assigned the function of transmission only

References

Primary Sources:

Documents:

APSEB (1987): *Statistical Data,* Hyderabad: Andhra Pradesh State Electricity Board.

APSEB (1988): *Statistical Data*, Hyderabad: Andhra Pradesh State Electricity Board.

APTRANSCO (2003): *Power Development in Andhra Pradesh (Statistics) 2002-2003*, Hyderabad: Transmission Corporation of Andhra Pradesh Ltd.

CEA (2006): Monthly Report, New Delhi: Central Electricity Authority.

GoAP (1995): *Report of High Level Committee: Guidelines on Restructuring and Privatisation of Power Sector and Power Tariff*, Hyderabad: Government of Andhra Pradesh.

GoAP (1997): *White Paper on Power Sector*, Hyderabad: Government of Andhra Pradesh.

GoI (1910): *Indian Electricity Act, 1910*, Delhi: Government of India.

GoI (1948): *Constituent Assembly of India (Legislative) Debates, Part II*, Delhi: Government of India.

GoI (1948): *The Electricity (Supply) Act, 1948*, Delhi: Delhi: Government of India.

GoI (1956): *Industrial Policy Resolution*, Delhi: Government of India.

GoI (1991): *The Electricity Laws (Amendment) Act, 1991*, Delhi: Government of India.

GoI (2003): *The Constitution of India*, New Delhi: Universal Law Publishing Co. Pvt. Ltd.

GoI (2003): *The Electricity Ac, 2003*, Delhi: Government of India.

GoO (1962): *The Orissa State Electricity (Supply) Rules, 1962*, Bhubaneswar: Government of Orissa.

GoO (1981): *The Electricity (Supply) (Orissa Amendment) Act, 1981*, Bhubaneswar: Government of Orissa.

GoO (2001): *Report of the Committee on Power Sector Reform in Orissa*, Bhubaneswar: Government of Orissa.

GoO (2004): *Human Development Report 2004*, Bhubaneswar: Government of Orissa.

GoUK (1999): *Modernising Government,* The Stationary Office, Government of UK.

Gridco (1998): *The Gridco Newsletter*, March.

MoP (2005): *Rajiv Gandhi Grameen Vidyutikaran Yojana: Scheme for Rural Electricity Infrastructure & Household Electrification*, Ministry of Power, Government of India.

OSEB (1979): Administration report 1978-79, Bhubaneswar: Orissa State Electricity Board.

OSEB (1982: *Administration Report 1981-82*, Bhubaneswar: Orissa State Electricity Board.

OSEB (1985): 'Rural Electrification in Orissa', *OSEB News*, June-September.

Interviews:

Interview with B B Das, Chairman, Working Group on Tariff, February 27, 2006, Bhubaneswar.

Interview with Balaram Reddy, ex-Chairman of APSEB, October 21, 2005, Hyderabad.

Interview with Geeta Gouri, Director Tariff, APERC, November 24, 2005, Hyderabad.

Interview with Jaydev Mishra, First MD of OPGC, August 17, 2005, Bhubaneswar.

Interview with Loksatta members, May 12, 2006, Hyderabad.

Interview with M Y Rao, Ex-Chairman of OSEB, February 21, 2006, Bhubaneswar.

Interview with M. Thimma Reddy, civil society activist, October 24, 2005, Hyderbad.

Interview with N. Shreekumar, civil society activist, October 25, 2005, Hyderbad.

Interview with Nageswar Pattnaik, Journalist, August 16, Bhubaneswar.

Interview with R P Mohapatra, retired chief engineer, OSEB, November 15, 2005, Bhubaneswar.

Interview with Raghu, employee, APTRANSCO, November 23, 2005, Hyderabad.

Interview with Sovan Kanungo, former Chairman of the Committee on Power Sector Reform in Orissa, February 23, 2006, Cuttack.

Interview with Tata Rao, Ex-Chairman of APSEB, May 17, 2006, Hyderabad

Interview with Raghu, Employee, APTRANSCO, October 18, 2005, Hyderabad.

Interview with the J B Pattnaik, ex-Chief Minister of Orissa, November 14, 2005, Bhubaneswar.

Interview with Usha Ramachandra, ASCI, October 23, 2005, Hyderabad.

Secondary Sources:

Books:

Agnihotri, V K, Ed. (1995): *Public Policy Analysis and Design*, New Delhi: Concept Publishing Company.

Anderson, James E (1975): *Public Policy Making*, USA: Nelson.

Austin, G. (2003): *The Indian Constitution: Cornerstone of a Nation*, New Delhi: Oxford University Press.

Bardhan, Pranab (2005): *The Political Economy of Development in India: Expanded Edition with an Epilogue on the Political Economy of Reform in India*, New Delhi: Oxford University Press.

Bhaduri, Amit (2005): *Development with Dignity: A Case for Full Employment*, New Delhi: National Book Trust.

Bhaduri, Amit and Deepak Nayyar (1996): *The Intelligent Person's Guide to Liberalisation*, New Delhi: Penguin Books.

Chatterjee, Partha (1999): *A Possible India: Essays in Political Criticism*, New Delhi: Oxford University Press.

Corbridge, S. and J. Harriss (2004): *Reinventing India: Liberalization, Hindu Nationalism and Popular Democracy*, New Delhi: Oxford University Press.

Das, Gurcharan (2002): *India Unbound: From Independence to the Global Information Age*, New Delhi: Penguin Books.

Dhar, P N (2003): *The Evolution of Economic Policy in India: Selected Essays*, New Delhi: Oxford University Press.

Dye, Thomas R (1972): *Understanding Public Policy*, Englewood Cliff, N.J.: Prentice-Hall.

Easton, David (1965): *A Systems Analysis of Political Life*, New York: Wiley.

Frankel, Francine R. (2005): *India's Political Economy 1947-2004*, New Delhi: Oxford University Press.

Friedrich, Carl J (1963): *Man and His Government*, New York: McGraw-Hill.

Gallagher, Kevin P, Ed. (2005): *Putting Development First: The Importance of Policy Space in the WTO and International Financial Institutions*, London: Zed Books.

Gerber, Elisabeth R. (1999): T*he Populist Paradox: Interest Group Influence and the Promise of Direct Legislation*, Princeton, New Jersey: Princeton University Press.

Grindle, Merilee S and John W Thomas (1991): *Public Choices and Policy Change: The Political Economy of Reform in Developing Countries*, Baltimore: The Johns Hopkins University Press.

Jalan, Bimal (1993): *India's Economic Policy: Preparing for the Twenty-First Century*, New Delhi: Penguin Books.

Kapur, Devesh and Pratap Bhanu Mehta, Eds. (2005): *Public Institutions in India: Performance and Design*, New Delhi: Oxford University Press.

Lasswell, Harold D (1956): *The Decision Process*, College Park, Md: Bureau of Governmental Research, University of Maryland.

Lindblom, Charles E (1968): *The Policy-Making Process*, Englewood Cliffs, N.J.: Prentice-Hall.

Machiavelli, Nichole (2002): *The Prince*, London: Oxford University Press.

Marx, Karl and Frederick Engels (1977): *Manifesto of the Communist Party*, New Delhi: People's Publishing House.

Meier, Gerald M, Ed. (1991): *Politics and Policy Making in Developing Countries: Perspectives on the New Political Economy*, California: ICS Press.

Nigam, Raj K. (1984): *A Concise Handbook on Government Policies for Public Enterprises*, New Delhi: Documentation Centre for Corporate & Business Policy Research.

Olson, Mancur (1977): *The Logic of Collective Action: Public Goods and the Theory of Groups*, Cambridge: Havard University Press.

Panandikar, Pai (1985): *Policy Making in India*, New Delhi: Centre for Policy Research.

Prayas (2004): *Know Your Power: A Citizens' Primer on the Electricity Sector*, Pune: Prayas, Energy Group.

Ranis, Gustav and Sayed Mahmood (1992): *The Political Economy of Development Policy Change*, Cambridge: Basil Blackwell.

Rao, P S (2003): *History of Modern Andhra*, New Delhi: Sterling Publishers Private Limited.

Rao, Y.V.Krishna and S.Subrahmanyam ed. (2002): *Development of Andhra Pradesh: 1956-2001, A Study of Regional Disparities*, Hyderabad: Pragati Offset Private Ltd.

Rudolph, Lloyd I. and Susanne Hoeber Rudolph (1998): *In Pursuit of Lakshmi: The Political Economy of the Indian State*, New Delhi: Orient Longman Limited.

Ruet, Joel (2005): *Privatising Power Cuts? Ownership and Reform of State Electricity Boards in India*, New Delhi: Academic Foundation in Association with Centre de Sciences Humaines.

Sarkar, Sumeet (1983): *Modern India, 1885-1947*, Delhi: Macmillan.

Thakurdas, Purushotamdas, J R D Tata, et al. (1944): *A Plan of Economic Development for India*, India.

Whiteley, Paul (1986): *Political Control of Micro-Economy: The Political Economy of Public Policy Making*, London: Sage Publications.

World Bank (1996): *Staff Appraisal Report- Orissa Power Sector Restructuring Project*, Energy and Infrastructure Operating Division, Report No. 14298-IN.

World Bank (1999): *Project Appraisal Document on Andhra Pradesh Power Sector Restructuring Programme*, Report No. 18849 IN.

World Bank (2001): *India: Power Supply to Agriculture*, South Asia: Energy Sector Unit, South Asia Regional Office, World Bank.

Articles:

Agarwal, O P and T V Somanathan (2005): 'Public Policy Making in India: Issues and Remedies', New Delhi: Centre for Policy Research.

Alagh, Yoginder K (2004): 'Policy without Theory: Indian in a Globalising Economy', *Economic and Political Weekly*, 39(17).

Bardhan, Pranab (2005): 'Nature of Opposition to Economic Reforms in India', *Economic and Political Weekly*, November 26.

Chandhoke, Neera (2003): 'Governance and Pluralisation of the State: Implications for Democratic Citizenship', *Economic and Political Weekly*, July 12, pp. 2957-2968.

Chandhoke, Neera (2005): "Seeing' the State in India', *Economic and Political Weekly*, 40(11), pp. 1033-1039.

Chang, Ha-Joon (2006): 'Policy Space in Historical Perspective with Special Reference to Trade and Industrial Policies', *Economic and Political Weekly*, February 18, pp. 627-633.

Cockrel, Jerri (1997): Public Policymaking in America, Cooperative Extension Service: University of Kenticky.

Common, Richard (1998): 'The New Public Management and Policy Transfer: The Role of International Organisations', in Minogue, Martin, Charles Polidano and David Hulme edited. *Beyond the New Public Management: Changing Ideas and Practices in Governance*, UK: Edward Elgar, pp. 59-75.

Desai, Ashok. 1999. 'The Economics and Politics of Transition to an Open Market Economy: India', *OECD Technical Paper,* CD/DOC (99) 12.

Dubash, N. K. and S. C. Rajan (2001): 'Power Politics: Process of Power Sector Reform in India', *Economic and Political Weekly*, 36(35), pp.3367-3390.

Fernandez, Raquel and Dani Rodrik (1991): 'Resistance to Reform: Status Quo Bias in Presence of Individual-Specific Uncertainty', *American Economic Review*, 81(5), pp. 1146-1155.

Ganguly, Sumit (2002): 'India's Multiple Revolutions', *Journal of Democracy*, 13(1).

Gilbert, Richard J., Edward P. Kahn, et al. (1996): 'Introduction: International Comparisons of Electricity Regulation', in Gilbert, Richard J. and Edward P. Kahn edited. *International Comparisons of Electricity Regulation*, Cambridge: Cambridge University Press, pp. 1-24.

Haggard, Stephan and Steven B Webb (1993): 'What do We Know about the Political Economy of Economic Policy Reform', *The World Bank Research Observer*, 8(2), pp. 143-168.

Hall, Peter A (1993): 'Policy Paradigms, Social Learning, and the State: The Case of Economic Policy-Making in Britain', *Comparative Politics*, April.

Harberger, Arnold C (1993): 'Secrets of Success: A Handful of Heros', *American Economic Review*, 83(2), pp. 343-350.

Hellman, Joel S (1998): 'Winners Take All: The Politics of Partial Reform in Post-Communist Transitions', *World Politics*, 50(2), pp. 203-234.

Kale, Sunila S (2004): 'Current Reforms: The Politics of Policy Change in India's Electricity Sector', *Pacific Affairs*, 77(3), pp. 467-491.

Kapur, Devesh (2005): 'Explaining Democratic Durability and Economic Performance: The Role of Indian Institutions', in Kapur, Devesh and Pratap Bhanu Mehta edited. *Public Institutions in India: Performance and Design*, New Delhi: Oxford University Press.

Kochanek, Stanley A. (1987): 'Briefcase Politics in India: The Congress Party and the Business Elite', *Asian Survey*, 27(12), pp. 1278-1301.

Kohli, Atul (1989): 'Politics of Economic Liberalisation in India', *World Development*, 17(3), pp. 305-328.

Kothari, Rajni (1964): 'The Congress 'System' in India', Asian Survey, 4(12), pp. 1161-1173.

Kothari, Rajni (1974): 'The Congress System Revisited: A Decennial Review', Asian Survey, 14(12), pp. 1035-1054.

Krueger, Anne O (1974): 'The Political Economy of the Rent-Seeking Society', *American Economic Review*, 64(3), pp. 291-303.

Kumar, Sanjay, 'Janata Regionalised: Contrasting Bases of Electoral Support in Bihar and Orissa', in Rob Jenkins edited *Regional Reflections: Comparing Politics Across India's States*, New Delhi: Oxford University Press, 2005.

Maru, Rushikesh M (1985): 'Policy Formulation as Political Process- A Case Study of Health Manpower: 1947-1975', in Ganapathy, R S, S R Ganesh, Rushikesh M Maru, Samuel Paul and Ram Mohan Rao edited. *Public Policy and Policy Analysis in India*, New Delhi: Sage Publications.

Mathur, Kuldeep (2000): 'Governance and Alternative Sources of Policy Advice: The Case of India', paper presented at a conference on Beyond Economics: Multidisciplinary Approaches to Development, Tokyo, Japan.

Mehta, Pratap B (1997): 'India: Fragmentation Amid Consensus', *Journal of Democracy*, 8(1), pp. 56-69.

Mishra, K C (1980): 'Importance of Revenue for the Electricity Board', *OSEB News*, 10(1), pp. 5-6.

Narain, Iqbal (1970): 'Democratic Politics and Political Development in India', *Asian Survey*, 10(2), pp. 88-99.

Pachauri, R K (2004): 'Power Politics: No Light at the End of the Tunnel', *The Times of India*, New Delhi.

Parikh, Sunita and Barry Weingast (2004): 'Partisan Politics and the Structure and Stability of Federalism, Indian Style', presented at a conference on *Empirical and Formal Models of Politics*, Centre in Political Economy, Washington University.

Rajan, A Thillai (2000): 'Power Sector Reform in Orissa: An Ex-Post Analysis of the Causal Factors', *Energy Policy*, 28.

Reddy, M. T. (2000): 'Development in the Power Sector in Andhra Pradesh', unpublished paper.

Reddy, Prabhakar T. (1997): 'Restructuring of APSEB: Some Important Issues', *Economic and Political Weekly*, 32(39).

Robinson, Mark (1998): 'Democracy, Participation, and Public Policy: The Politics of Institutional Design', in Robinson, Mark and Gordon White edited. *The Democratic Developmental State: Political and Institutional Design*, Oxford: Oxford University Press, pp. 150-186.

Rudolph, Susanne Hoeber and Lloyd I Rudolph (2002): 'New Dimensions of Indian Democracy', *Journal of Democracy*, 13(1), pp. 52-66.

Sankar, T L (1985): 'Energy Policy Formulation- The Indian Experience', in Ganapathy, R S, S R Ganesh, Rushikesh M Maru, Samuel Paul and Ram Mohan Rao edited. *Public Policy and Policy Analysis in India*, New Delhi: Sage Publications.

Sankar, T L (2003): 'Power Sector: Rise, Fall and Reform', *Economic and Political Weekly*, March 22, pp. 1171-1178.

Sankar, T L (2004): 'Fiscal Impact of Electricity Boards' Over Dues on State Finance', in Edgardo M Favaro and Ashok K Lahiri edited *Fiscal Policies and Sustainable Growth in India*, New Delhi: Oxford University Press.

Srinivasan, T N and Jessica Wallack (2003): Federalism and Economic Reform in a Global Economy, available online at http://www.yale.edu/leitner/pdf/PEW-SW.pdf, last accessed on 21.04.2004.

Stepan, Alfred (1999): 'Towards a New Comparative Analysis of Democracy and Federalism: Demos Constraining and Demos Enabling Federations', paper presented at a conference on *Federalism, Democracy and Public Policy*, Centro de Investigacion y Docencia Economicas, Mexico City, Mexico.

Vaison, Robert (1973): 'A Note on "Public Policy"', *Canadian Journal of Political Science/Revue Canadienne de Science Politique*, 6(4), pp. 661-664.

Web Sources:

http://newdeal.feri.org/tva/

http://powermin.nic.in/

http://recindia.nic.in

http://texaspolitics.laits.utexas.edu/html/bur/features/0303_01/policy.html

http://www.123orissa.com/

http://www.aptranscorp.com/

http://www.ercap.org/

http://www.gridco.co.in/

http://www.orierc.org/