

First Draft

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## **PART A POLICY FRAMEWORK**

# UNIT 1

## EMPOWERING THE POWER SECTOR

*“Electricity has become one of the basic necessities of life, not only does it drive the economic growth but also determines the standard of living of people”*

*Prime Minister Shri Atal Behari Vajpayee*

### 1.1 Introduction

To make India Economically developed, militarily strong and scientifically advanced it is important that each sector performs its best. Electricity is the bedrock of all advancement in the modern world. Unstated objective of The Electricity Act 2003 was to unleash the potential of power sector through fundamental reforms.

The overall direction and intent of the Act is very forward looking but there are many uncertain and un-understandable concepts, which need clarifications. It is hoped that with the passage of time as this sector gets mature the regulatory Authority, Appellate tribunal and Courts would clarify the issues.

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Light is life<sup>1</sup>. No Nation can become a developed country without Proper and efficient system of electricity. This is truer for a developing country like India, which wishes to play a greater role in international affairs.

Universal Power Supply is the primary responsibility of a welfare state. The Constitution of India places "Electricity" in the concurrent list (Entry 38, list III of Schedule VII) and recognizes the Center and the States as equal partners in the promotion of electricity industry. The Government has been striving for Universal supply of Electricity, the results have been modest. It has been estimated that about 100,000 MW of additional generation capacity would be required by the year 2012 to achieve the objective of "Power for all". This would entail an investment of about Rs 400,000 Crore in the Generation sector. If commensurate capacity in distribution and transmission is also to be built, an additional 500,000 Crore would be required. Thus almost 900,000 Crores of fresh investment would be required in the power sector over the next 8-9 years just for creation of new capacity<sup>2</sup>. This is a mind-boggling figure. It is a great challenge for the Government and at the same time it is a great opportunity for the Indian industry.

The Electricity Act presents a unique opportunity for Creditworthy Organizations to enter National Electricity Market (NEM) and participate in all segments of growth in the Power sector – Contributing to the Governments objective of ensuring reliable and quality power to all citizens by the year 2012, and attaining the accelerated growth and development for the country besides earning handsome profits for the industry.

Special mention must be made of immense possibilities available in Wind, Solar Photovoltaic, Solar Thermal, Small Hydro, Biomass, Co-generation, Geothermal, Tidal and Urban & Industrial Wastes based power projects<sup>3</sup>. These projects it seems will have special place in the electricity market. Should we go for or against green power is not an

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<sup>1</sup> Haryana Government calls it "Policy of Power to People" (P2P)

<sup>2</sup> Mega Power projects – revised Policy Guidelines

<sup>3</sup> In India there is a separate ministry for Non Conventional Energy Sources

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issue. Now the issue after Kyoto protocol is weather we wish to go for green power now or later on. In fact the Clean Development Mechanism (CDM) is an opportunity for us to earn CERs<sup>4</sup> (Certified Emission Reduction Receipts) .This will probably make energy generation through non-conventional sources more attractive besides earning valuable foreign exchange for the nation.

## 1.2 Enactment

The Electricity Bill 2001 after being redrafted seven times, was introduced in the Lok sabha on August 30,2001. Due to inconclusive debate, the matter was referred to the Standing committee on Energy for detailed analysis .The Standing committee presented its report on December 19,2002. Most of the recommendation of the standing Committee wear accepted by the Government and incorporated in the Bill.

The reformed Electricity Bill was passed by the Lok Sabha on April 9,2003.In Rajya Sabha certain anomalies in the bill wear brought out by the members. But looking into urgency of reform in the power sector and the assurance of the Government that amendments would be brought out in the enactment in the next session of parliament, the Rajya Sabha also passed the bill on May 5,2003.

The Bill received accent of The President of India on May 26,2003. Thereafter The Electricity Act 2003 was notified in the official Gazette of India on June 2, 2003.The Electricity Act 2003 (except Section 121) was enforced by the Union Government on 10<sup>th</sup> June 2003.

Besides the enforcement of the Act, The Government gave an assurance that all rules and regulations for effective functioning of the Act shall be formulated within next twelve months.

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<sup>4</sup> under Kyoto protocol (CDM) a developing country can trade in CERs and earn a substantial amount of foreign exchange.

### 1.3 Preamble

The Preamble of The Electricity Act 2003 reads--

*“An Act to consolidate the laws relating to generation , transmission , distribution , trading and use of electricity and generally for taking measures conducive to development of electricity industry , promoting competition therein , protecting interest of consumers and supply of electricity to all areas ,rationalization of electricity tariff , ensuring transparent policies regarding subsidies , promotion of efficient and environmentally benign policies ,constitution of Central Electricity Authority , Regulatory Commission , and establishment of Appellate Tribunal and for matters connected therewith or incidental thereto”*

Preamble generally enumerates the ideals and goals which the makers of the Act intended to achieve through that enactment. It is the aid to understand the wish of the legislatures .Preamble contains in nutshell its ideals and its aspirations <sup>5</sup>.Two prepositions are quite clear: one that a preamble may afford useful light as to what the statute intends to reach ;and another ,that if an enactment is itself clear and unambiguous ,no preamble can qualify or cut down the enactment<sup>6</sup>.

It is interesting to note that when the words of the statute are clear and only one construction can be made out of them then even if they are inconsistent with the preamble they will hold good. Furthermore if two or more interpretations are possible with the same words then that interpretation shall be applicable which is consistent with the preamble.

From the Preamble it is clear that the Electricity Act 2003 endeavors to achieve following objectives-

- To consolidate the laws relating to generation, transmission, distribution, Trading and use of electricity.

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<sup>5</sup> I.C.Golak Nath V State of Punjab .AIR 1967SC

<sup>6</sup>Powell V Kempton Park Race Course Co, 1899 AC 143 at 153

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- For taking measures conducive to development of electricity industry.
- To promote competition in the National Electricity Market.
- To protect interest of consumers.
- To promote Universal access to electricity.
- Rationalization of electricity tariffs.
- Ensuring transparent policies regarding subsidies and other matters relating to Electricity.
- Promotion of efficient and environmentally benign policies.
- Constitution of Central Electricity Authority.
- Constitution Independent Regulatory Commission.
- Constitution of Appellate Tribunal for Electricity.

## 1.4 Repeals

This Enactment will lead to Uniform and smooth functioning of the power sector. All laws relating to the Electricity have been consolidated. Section 185 of the Electricity Acts has repealed –

- The Indian Electricity Act 1910
- The Electricity Supply Act 1948
- The Electricity Commissions Act 1998

Section 185 further provides that --

2. *“Notwithstanding such repeal,-*

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- (a) *anything done or any action taken or purported to have been done or taken including any rule, notification, inspection, order or notice made or issued or any appointment, confirmation or declaration made or any license, permission, authorization or exemption granted or any document or instrument executed or any direction given under the repealed laws shall, in so far as it is not inconsistent with the provisions of this Act, be deemed to have been done or taken under the corresponding provisions of this Act;*
  - (b) *the provisions contained in section 12 to 18 of the Indian Electricity Act, 1910 and rules made there under shall have effect until the rules under sections 67 to 69 of this Act are made;*
  - (c) *the Indian Electricity Rules, 1956 made under section 37 of the Indian Electricity Act, 1910 as it stood before such repeal shall continue to be in force till the regulations under section 53 of this Act are made.*
  - (d) *All rules made under sub-section (1) of section 69 of the Electricity (Supply) Act, 1948 shall continue to have effect until such rules are rescinded or modified, as the case may be;*
  - (e) *All directives issued, before the commencement of this Act, by a State Government under the enactments specified in the Schedule shall continue to apply for the period for which such directions were issued by the State Government.*
3. *The provisions of the enactments specified in the Schedule, not inconsistent with the provisions of this Act, shall apply to the States in which such enactments are applicable.*

The first Schedule of the Act specifies following Acts --

1. The Orissa Electricity Reform Act, 1995
2. The Haryana Electricity Reform Act 1997
3. The Andhra Pradesh Electricity Reform Act,
4. The Uttar Pradesh Electricity Reform Act, 1999
5. The Karnataka Electricity Reform Act, 1999
6. The Rajasthan Electricity Reform Act, 1999
7. The Delhi Electricity Reforms Act, 2000
8. The Madhya Pradesh Vidyut Sudhar Adhiniyam, 2000

The Central Government has also been authorized to amend the Schedule may, as and when considered necessary, by notification. This means that the Central Government can include or exclude any Act from the given schedule.

## 1.5 Power of State Government to extend the application of the Act

By virtue of section 172(d) of the Act the State Government may declare by notification that all or any provisions of the Act shall not apply in that state. The period of extension can not exceed by six months from the appointed date. That is beyond 9<sup>th</sup> December 2003 the application of the Act not be extended by the state Government.

## 1.6 Salient Features of the Act

- **Policy** on various aspects of Electricity to be formulated by central Government in consultation with State Governments and Electricity Commissions.
- **Generation of Electricity** has been De - licensed except for –

1. Hydro Electric Generation where Techno Economic Clearances required.

2. Nuclear power Generation is regulated by The Nuclear Act 1962.

However Government is contemplating changes in The Nuclear Act 1962 to allow Equity participation in NPCIL. This will lead to greater investment in the generation of Electricity and hopefully make the investment of the lender productive.

- Provision provided for **License free generation and distribution in the rural areas.**
- The State Electricity Commissions have been authorized to introduce **open Access** in **Distribution of electricity** in phases provided availability of transmission capacity .This will lead to efficiency in the National Electricity Market. **Open access in transmission** Has been provided with immediate effect. The



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CERC has come out with final order for open Access in inter-state transmission, this has greatly clarified the system of open access in transmission of electricity.

- **Distribution** has been liberalized-Consumers will have the choice of Electricity supplier .Parallel Distribution network has been allowed besides empowering the regulatory Commission to introduce open access. UPERC has allowed Parallel Distribution network for an industrial town of Tronica, This has for the first time introduced competition at the micro-level.
- **Trading** in Electricity is allowed and is recognized as a distinct activity. Moreover Distribution Licensees are deemed to be Electricity trader<sup>7</sup>.It is hoped that trading of Electricity will lead to better utilization of resources in the power sector. This clearly shows that India means business especially in the Power Sector
- Fully functional robust market needs a transparent and proactive regulator .The Act provides for **IRC** at the state as well as central level.
- The Act also envisages a Specialized body (**Electricity Appellate Tribunal**) dedicated to resolving disputes in the Electricity Sector.
- Strong encouragement for **reorganization of SEBs**.
- Strong **deterrent punishment** provisions for **theft of Electricity**.
- Safeguarding of **consumer interest paramount** .Creation of **Ombudsmen** institution and consumer **grievance redressal mechanisms**.

## 1.7 Reforms

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<sup>7</sup> There is a difference of opinion regarding the scope of trading under Section 14, proviso 9 which needs to be clarified.

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It seems that government would like to follow 3 step reform process-

- Unbundling
- Corporatisation
- Privatization

Breaking up of value chain will lead to realization of accountability and Specialization through emphasis on core competence. This model is called Management Restructuring model of the World Bank and has been applied in the state of Orrisa. The modified version as applied in Delhi probably would be the first success story of the model.

## **1.8 Conclusion**

The Act strikes a balance which takes into account the complex ground realities of the power sector in India with its intractable problems. Though there are certain non-understandable features in the Act .Overall its intention and direction is visionary and reform oriented.

It seems that the Government realizes that By providing quality Electricity we Build better India through better infrastructure. Governments "Mission 2012 , Power for All " seems achievable and not a dream.

## UNIT 2

### NATIONAL ELECTRICITY POLICY AND PLAN

*Power plays a vital role in all economic activities leading to a better quality of life .The Ministry of Power has set a goal to provide “power for all” by 2012.*

*A comprehensive blueprint for power sector development has been prepared encompassing an integrated strategy for its development with many significant objectives. These include sufficient power to achieve a GDP growth rate of 8%, reliable and quality power at optimum cost while ensuring commercial viability of power for all.*  
*R.V.Shahi*

#### 2.1 Background

Clarity of approach about the course of action to be taken is an essential condition for the successful and integrated development of any sector. The difficulties faced by the power industry are very complex and need clear and unambiguous direction to move forward.

India being a vast country where every region is endowed with different resources, an integrated approach will lead to greater and efficient utilization of resources. With the objective of developing an integrated approach and broad vision for the entire nation, The Act directs the union Government and other agencies to develop National policies on important aspects of power sector.

The Act directs that following policies & a plan shall be notified from time to time –

1. National Electricity Policy (Section 3)
2. National Tariff Policy (Section 3)
3. National Electricity Plan (Section 3(4))
4. National Policy permitting stand alone system for Rural Areas(Section 5)
5. National Policy on rural electrification and local distribution in Rural areas (Section 4)

## 2.2 National Electricity Policy

Section 3 of the Act mandates the Central Government to prepare a national Electricity policy. The procedure to prepare a policy are provided in this Section.

Section 3 states –

*“(1) The Central Government shall, from time to time, prepare the National Electricity Policy, in consultation with the State Governments and the Authority for development of the power system based on optimal utilization of resources such as coal, natural gas, nuclear substances or materials, hydro and renewable sources of energy.”*

The Central Government while preparing national electricity policy shall–

- Consult State government
- Consult Central Electricity Authority
- Take advice from the Central Electricity regulatory Commission<sup>8</sup>

The law does not mandate any other consultation or seeking of advice by the Central Government. Any other consultation by the Government may be considered extraneous and not material under the Act. This seems to be non-congruent with the Government's policy of having transparent policies regarding important public matters.

In any Electricity Market The ratio of Hydro and thermal power Is important. The ratio of 30:70 is considered as good. There are several benefits of good hydro-thermal balance such as it–

- Enables control over frequency fluctuation.

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<sup>8</sup>Section 79(2) states that The Central Commission shall advise the Central Government on all or any of the following matters namely:- (i) formulation of National Electricity Policy and tariff policy.

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- This also helps in correcting the gap between base and peak load.

In India the ratio of hydro thermal mix is 26:74 for Hydro and Thermal respectively. There is a mismatch between hydro and thermal power which needs to be corrected and probably the Electricity policy will articulate such an aspect .

The policy it is expected shall include strategy for optimal utilization of–

- Coal,
- Natural gas,
- Nuclear substances or materials,
- Hydro and
- Renewable sources of energy

The Central Government has also been directed to publish the National Electricity Policy from time to time<sup>9</sup>.The Act has also empowered the central Government to review or revise , from time to time, in consultation with the State Governments and the Authority, the National Electricity policy(NEP).

## 2.3 National Tariff Policy<sup>10</sup>

The Central Government has to follow the same procedure in formulating the National tariff policy (NTP) as is mandated for the National Electricity Policy. However in case of CERCs advisory jurisdiction on National tariff policy the Commission is of the view that the statutory advice given by CERC is expected to be accepted by the central Government<sup>11</sup>.

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<sup>9</sup> Sec 3(2)

<sup>10</sup> this section has substantially borrowed from statutory advice of CERC to the Ministry of power regarding tariff policy

<sup>11</sup> Statutory advice to Central Government regarding Tariff policy in response to the letter from ministry of power ,Government of India, vide its letter No.23/20/2001-R&R dated 18.7.2003.

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In terms of the Act, CERC is the only authority recognized by law which is vested with the statutory responsibility to advise the Central Government on the Tariff policy. The authority of the CERC in the matter of advising the central Government on Tariff Policy extends much beyond mere consultation, and its statutory advice is expected to be accepted by the Central Government.

## **National Tariff Policy – 2004**

The First Draft of the Tariff Policy has been released by the Ministry of Power. This preliminary Discussion Paper on tariff Policy was prepared with the assistance of CRICIL. However the statutory advice to the central Government regarding Tariff policy by CERC was very critical regarding the process of formulation of the policy. Moreover the views of the State Government and the Forum of Indian Regulators was also not in favor of the release of policy in the present form. Taking in view the abovementioned factors the Ministry of power on 19<sup>th</sup> August 2003 appointed a Task Force on Power Sector investments and Reforms under the chairmanship of Shri NK Singh. Other members being Shri S Narayan(Economic advisor to the PM), Shri RV Shahi (Secretary Power), Smt. Vineeta Rai(Revenue Secretary), Shri SL Bajaj(Chairman CEA). It is hoped that the final tariff policy would be out soon.

## **2.4 National Electricity Plan**

In the Energy planning of the country, a judicious mix of Hydro, Thermal, and Nuclear besides Renewable sources is important aspect; Diversified energy resource base is essential to meet electricity requirement and ensure long term energy security.

A large country like India is bound to experience different demand cycles. We have base load demand ,peak demand, intermediate demand and for every level of demand We need different types of equipment .For base load demand , you need big mega plants – Hydel, Coal or Nuclear , for intermediate demand We may use Coal, oil, gas and for peak load we have to have yet a different kind of approach . To maintain a balance between different types of electricity

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generation the CEA has been mandated to prepare National Electricity Plan.

The National Electricity Plan shall be prepared in accordance with the national Electricity Policy .It is also compulsory that such plan is notified at least once in five years.<sup>12</sup> The Authority while preparing the National Electricity Plan shall also publish the draft National Electricity Plan and invite suggestions and objections on the draft plan from licensees, generating companies and the public. This will lead to wider participation and consultation among stock holders and in turn lead to better and implement-able schemes.

Proviso to Section 3(4) also states that the Authority shall :-

- a) *Notify the plan after obtaining the approval of the central government;*
- b) *Revise the plan incorporating therein the directions, if any, given by the Central Government while granting approval to the National electricity Plan.*

The Authority can review<sup>13</sup> or revise the National Electricity Plan in accordance with the National electricity Policy.

## **2.5 National Policy permitting stand alone system for Rural Areas (Section 4) (On grid Power)**

India is a large Country with varied environmental conditions, population densities and there are certain island territories such as Andaman and Nicobar Island and Lakshdweep islands which can not be economically connected to the national grid. To supply electricity to these far flanged and remote areas it would make more commercial sense to have Stand alone systems .Unfortunately most of the remote areas and off-grid areas are rural areas.

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<sup>12</sup> Section 3(4)

<sup>13</sup> Section 3(5)

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It can also be asserted that India being a big country with a large rural hinterland, grid power is not very efficient. Decentralized Power generation can mean more efficiency because they will have short distribution lines. In fact Localized power generation is the need of the hour. Putting expensive transmission lines across the length and breadth of India is just too expensive a process, which is coupled with the high loss of electricity in transmission, theft and re-conversion from DC to AC and back to DC.

To cater to the needs of these remote areas the Act provides for a separate policy on stand alone systems for rural areas.

### Section 4 of the Act states –

*“The Central Government shall, after consultation with the State Governments prepare and notify a national policy, permitting stand alone systems (including those based on renewable sources of energy and other non-conventional sources of energy) for rural areas.”*

The Central Government while preparing national policy on stand alone system for rural areas shall Consult State governments. This consultation also seems to be important because all developmental and other activities of local importance fall under the jurisdiction of the state Government. This makes them more cognizant with the local difficulties and challenges faced in installing electricity systems.

Secondly the Act also gives added emphasis on the fact that the policy on stand alone system must include encouragement of renewable sources of energy and other non-conventional sources of energy. This will protect the ecology of the rural and remote areas. This will also be in consonance with the principles of United Nation's Framework Convention on Climate Change (Popularly known as Kyoto protocol).

Stand alone system is defined in Section 2 (63) as –

*“Stand alone system” means the electricity system set-up to generate power and distribute electricity in a specified area without connection to the grid”*

This policy applicable only to those areas which satisfy the given two conditions-



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- The area must not be connected to the Grid (i.e. it must be an off grid area)
- The area must be a rural area notified by the appropriate<sup>14</sup> government.

### **Rural Electrification Policies**

(Pursuant to Section 4 & 5 of the Electricity Act)

The Ministry of Power, Government of India has released Discussion Paper on Rural electrification Policies (November 2003). This document includes the draft of both the policies –

- 1] National Policy on stand-alone system for rural areas(For Off-grid areas)
- 2] National Policy on rural electrification and local distribution in rural areas (For grid-connected(on-grid) power)

It is expected that by first half of the year 2004 the policies for rural electrification will be out.

The Constitution of India in the Eleventh Schedule provides for the power of the panchayat. Entry 14 and 15 of the said schedule reads as Rural Electrification, including distribution of Electricity and Non Conventional Energy Sources respectively. Any policy on rural electrification would at some time need to delegate substantial amount of power and responsibility in the hands of Panchayati Raj institutions.

## **2.6 National Policy on Rural Electrification and Local Distribution in rural Areas(Section 5)(Off Grid Power)**

As per 2001 census, the rural population constitutes 72% of the total population. This means that around 650,000,000 people in India live in villages . This figure is mind boggling, It is roughly estimated that 60% of this population do not have access to Electricity supply. It

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<sup>14</sup> In case of Union territory the Central Government and in case of other areas the State Government having jurisdiction in the area.

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is estimated that 80000 villages of the country are yet to be electrified. 18000 of these villages can be electrified only through decentralized and non-conventional energy sources since they are located in remote areas and hilly terrain. These statistics beyond doubt highlight the need on our part to proactively pursue rural electrification. Moreover Section 6 makes it obligatory for the appropriate government to endeavor to supply electricity to all areas and specifically emphasizes village electrification. The solution to great extent is Micro-Power. This is the best way for empowering the local communities by making them non-dependent on the grid.

Section 5 of the Act provides for a “National Policy on electrification and local distribution in rural areas”. Section 5 states-

*“The Central Government shall also formulate a national policy, in consultation with the State Governments and the State Commissions, for rural electrification and for bulk purchase of power and management of local distribution in rural areas through Panchayat Institutions, users’ associations, co-operative societies, non-governmental organizations or franchisees.”*

The National Policy for rural electrification shall be formulated in consultation with-

- State Government
- State Electricity Regulatory Commissions

The National Policy for rural electrification shall also include –

- Policies for Bulk purchase of power
- Policies for Management of local distribution networks
- Policies for Role of Panchayat Institutions, users’ associations, co-operative societies, non-governmental organizations or franchisees<sup>15</sup>.

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<sup>15</sup> Section 2(27) “Franchisee” means a person authorized by a distribution licensee to distribute electricity on its behalf in a particular area within his area of supply;

## 2.7 Definition of Electrified village

According to the Union Government 86% of Indian villages are electrified. This figure can be said to show only partial condition of rural electrification scenario, because the definition adopted by the union government is very narrow .

Definition of Electrified village according to the union government is-

*“A village will be deemed to be electrified if electricity is used in the inhabited locality within the revenue boundary of the village for any purpose whatsoever”*

This definition is very narrow in scope which effectively means that even if a single household has power supply the village shall be considered electrified. The Central Government is contemplating to enlarge and rationalize the definition to make it more inclusive. It is hoped that a village shall be called electrified only when 10% to 20% or more population of the village has access to Electricity.

New definition proposed by the Standing Committee on Energy reads as-

- The basic infrastructure such as distribution transformers and or distribution lines is made available in the in the inhabited locality within the revenue boundary of the village including at least one hamlet / Dalit basti as applicable.
- Any of the public places like schools, Panchayat office, Health centre, Dispensaries, Community Centers, etc. avail power supply on demand; and
- The rating of distribution transformer and LT lines to be provided in the village would be finalized as per the anticipated number of connections decided in consultation with the Panchayat / Zila Parishad / District Administration / who will also issue the necessary certificate of village electrification on completion of works; and
- The number of households electrified should be minimum 10% for villages which are un-electrified , before a village is declared electrified.

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This definition is wider and more inclusive and it is hoped that a similar or a slightly modified version of the same will be accepted for census purposes.

## 2.8 National Policy on Non Conventional Energy System

The Preamble of the Act provides that It is one of the objectives of the Enactment is "promotion of efficient and environmentally benign policies "

There is no separate policy for Non Conventional sources of Energy. Issues involving Non Conventional sources of energy shall form part of the overall National electricity Policy and in minor way be part of National Policy on Stand Alone Systems.

Section 3 of the Act Provides-

*"The Central Government shall, from time to time, prepare the **National Electricity Policy**, in consultation with the State Governments and the Authority for development of the power system based on optimal utilization of resources such as coal, natural gas, nuclear substances or materials, hydro and **renewable sources of energy**."*

Section 4 of The Act states –

*"The Central Government shall, after consultation with the State Governments prepare and notify a national policy, permitting stand alone systems (**including those based on renewable sources of energy and other non-conventional sources of energy**) for rural areas."*

It is clear from the plane reading of the Section 4 that the policy for Non Conventional energy Systems shall be a part of the policy on Stand alone System. It seems that the Ministry of power will consult Ministry of Non Conventional Sources of Energy on the issue of Non Conventional Energy Systems and then prepare a wider Policy Permitting Stand alone system which will include stand alone systems based on Renewable sources of energy and other non conventional sources of energy .

## 2.9 Mega Power Policy

To encourage Private participation in the generating of Electricity the Finance minister announced the Mega Power Policy<sup>16</sup>. The benefit is available to all Thermal and Gas based Power Plants having capacity of 1000 MW and above and Hydroelectric Plant having capacity above 500 MW. The benefits include waiver of Customs and Excise duty on Project Imports .It also provides for Tax holiday of 10 year , which can be claimed in any block of 10 years.

## 2.10 Development<sup>17</sup> Of Electricity Market Within Policy Parameters

The IRCs are mandated to develop Electricity Markets in their respective areas of jurisdiction. The development of market will include development of trading in Electricity. However this development of the market must be within the parameters of National Electricity policy formulated by the Central government<sup>18</sup>, enabled by Section 3 of the Act. The Central Government is also empowered by Section 107 to give direction to CERC . The CERC will be guided by the direction given by Central Government in matters of policy involving public interest.

Interestingly Section 107 (2) reads as –

*“If any question arises as to whether any such direction relates to a matter of policy involving public interest, the decision of the Central Government thereon shall be final “*

This makes it amply clear that in the matter of policy the central Government has overriding and complete powers.

## 2.11 Conclusion

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<sup>16</sup> Mar 01, 2003 , Financial Express New Delhi.

<sup>17</sup> Section 66 of the Act provides for the development of The Electricity Market

<sup>18</sup> Section 3 of the Act

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Government has set ambitious target of “*power for all by 2012*”. To achieve this goal and other associated goals such as quality and reliable power to all, it is important that policy documents be out as soon as possible. Various Electricity policy and plan documents are at different levels of formulation. It is expected that these documents will be out within next few months. This will further clarify the direction and movement of power industry in India. The overall goal and intention of the Electricity Act is in the right direction. Now it is upon various governmental and regulatory agencies how they implement it.

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## **Part B Development of Electricity Market**

## UNIT 3

# GENERATION OF ELECTRICITY

### 3.1 Background

Power is a basic human need. It is one of the critical infrastructure on which sustainable economic growth depends. The power generation strategy of the Government focuses on low cost generation, optimization of capacity utilization and fuel mix , controlling the input cost , technology up gradation and utilization of non-conventional energy sources.

In the last two Plan periods barely half of the capacity addition planned was achieved. The Energy and peaking shortages across the country (barring eastern region) is a matter of continuing concern. Massive investment in generation capacity is needed to ameliorate the situation. It is clear from the Planning Commissions Annual Report on the working of State Electricity Boards and Electricity Departments (May 2002) that in recent years the financial health of SEBs has been deteriorating. There is a large gap between unit cost of supply and revenue. Clearly the SEBs are not in the position to invest funds into generation.

In this background The Act of 2003 has brought about a fundamental change in the regulatory regime of generation .The Act has brought in the regime of license free generation of Electricity . Moreover captive generation is being freely permitted .However Nuclear power generation is prohibited and hydro generation needs techno-economic concurrence of Central Electricity Authority.

### 3.2 Delicensing of Generation

Sec 7 of the electricity Act states that-

*“Any generating Company may establish , operate and maintain a generating station without obtaining a license under this Act if it complies with the technical standards relating to connectivity with the grid referred to in clause (b) of section 73”.*



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By virtue of Section 7 Generation of Electricity has been de-licensed. However following Technical Standards must be satisfied –

- Technical Standards as to grid connectivity and
- Technical Standards as to Environment

### 3.3 Technical Standards as to grid connectivity

Section 73 (b) Stats that –

*“The Authority shall perform such functions and duties as the Central Government may prescribe or direct , and in particular to - Specify the technical standards for the construction of electric plant ,electric lines and connectivity to the grid”*

The CEA has been mandated to specify technical standards for grid connectivity and all generators must comply with the specifications to be part of the regional or local grid systems.

### 3.4 Technical Standards as to Environment

Various Environmental norms have to be complied by any entity proposing to install a generating stations. The Acts which deal with standards to be followed are –

- Water (prevention and Control of pollution )Act, 1974
- Air (Prevention and Control of pollution ) Act, 1981
- Environmental (Protection) Act 1986
- Environment (Protection) Rules 1986
- Hazardous wastes (Handling and Management ) Rules 1989 as amended in 2000
- Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 as amended in 2000
- Public Liability Insurance Act, 1991
- Environment Impact Notification , 1994 under Environment (protection)Act 1986

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- Coastal regulation Zone Notification , 1991
- Noise Pollution (regulation and Control Rules ) 2000
- Environment (siting of industrial project rules)1999
- Forest Conservation Act 1980 as amended in 1988 which stipulates compensatory forestation for diversion of forest land for non forest purpose.
- Wild Life Protection Act 1991

### **3.5 First Power Plant Without a License (Post Electricity Act 2003)<sup>19</sup>**

Tata Power Company has begun construction of what it describes as a Merchant Power Plant with an installed capacity of 120 MW at Jojobera (Jharkhand). The investment required is about Rs30 Crore, It is likely to be operational by October 2005 .The Power will be sold to its Delhi based consumers and PTC .The total cost of power including its wheeling charges from Jharkhand to Delhi is estimated to be around 2.30 Paise per unit. However the first merchant Power Plant is the Malana Hydro Power Plant of Rajasthan which is already operational.

It will be interesting to note that Merchant Power plants do not have long term Power Purchase Agreements(PPA'S) they sell power on a competitive basis to utilities and Power Traders.

### **3.6 Additional conditions in certain cases**

Notwithstanding de licensing of the generation following forms of generating of electricity shall have to fulfill additional conditions –

- Hydroelectric Power Generation and
- Nuclear Power Generation

#### **3.6.1 Hydroelectric Power Generation**

Section 8 of the act states that –

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<sup>19</sup> The Hindu Business Line, New Delhi. Oct 1, 2003

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*“Notwithstanding anything contained in section 7, any generating company intending to set up a hydro-generating station shall prepare and submit to the Authority for its concurrence, a scheme estimated to involve a capital expenditure exceeding such sum, as may be fixed by the Central Government, from time to time, by notification.”*

Any Generating company intending to set up Hydro generating Station, involving capital Expenditure beyond the limits prescribed by the central Government has to submit to the CEA the Scheme for its concurrence<sup>20</sup>. As of now the Central Government has not fixed the Capital Outlay limits. The micro-hydro projects will not probably need any clearance. This clearance effectively is for a major – hydro project , where substantial excavation is required and displacement of people is involved.

It is also mandatory for the CEA that before concurring any scheme will take into account following factors –

- The project must not prejudice the best ultimate development<sup>21</sup> of the river
- The project must not prejudice the best ultimate development of the tributaries of the river
- The Scheme must be consistent with the requirement of drinking water, irrigation , navigation, flood control ,or other public purposes.
- CEA will also satisfy itself after consultation with the central as well as state government and other agencies as it may deem appropriate that adequate study has been made of the optimum location of dams and other river works
- CEA must also satisfy itself about the norms regarding dam design and safety<sup>22</sup>.

### 3.6.2 Multi-Purpose Project

Multi – purpose project involves many activities including Power Generation, Irrigation, Domestic water supply, food grain production, Tourism development , Fishing , Navigation development , and

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<sup>20</sup> Sec 8

<sup>21</sup> Sec 8(2)(a)

<sup>22</sup> Sec 8(2)(b)

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sometimes even water sports and other recreational activities .Thereby it is essential that the development of the river water projects takes place in a coordinated fashion.

Section 8(3) provides that In case of a multi-purpose scheme for the development of any river in any region . The State Government and the Generating company will co-ordinate their activities with the activities of the person responsible for such scheme in so far as they are inter-related.

### 3.7 Captive Generating Plant

Section 2 (8) defines “Captive generating plant” to mean

*“a power plant set up by any person to generate electricity primarily for his own use and includes a power plant set up by any co-operative society or association of persons for generating electricity primarily for use of members of such co-operative society or association”*

To classify a power plant as a captive power plant following conditions must be satisfied –

1. **person** -It must be set up by a person which includes any company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person.
2. **primarily for his own use**-The generation and co-generation in the plant must be primarily for self use of the person who is setting up the power plant .The word “primarily” needs to be further clarified. Does the word primarily mean 50% or 75% or any other figure. For the purpose of this section Besides the persons defined in section 2(49) , the person will include any co-operative society, or associations of persons but the electricity generated must be used primarily for the member of such co-operative society.

Interestingly blanket relaxation to Cooperative society or associations to generate and distribute power to its members , may lead to the distribution licensee to loose industrial consumers who are

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cross subsidizing the agriculture and other financially weaker sections of the society. To ameliorate this situation it has been provided that cross subsidy shall be phased out . In case the State Commission wishes to introduce open access before the cross subsidy is phased out then it has the option of introducing surcharge to compensate the losses incurred by the distribution licensee.

### **3.8 De-licensing of Captive Generation**

By virtue of Section 9 a person may construct, maintain or operate a captive generating plant and dedicated transmission lines.

Dedicated transmission lines means any electric supply line for point to point transmission which are required for the purpose of connecting electric lines or electric plants of a captive generating plant or generating station to any transmission lines or sub-station or generating stations, or the load center, as the case may be.

### **3.9 Benefits to shareholder of captive generation unit**

Only one exemption on charges has been provided to Electricity generated by captive power plants . Section 39, subsection 2 proviso 5 states–

*“Provided also that such surcharge shall not be leviable in case open access is provided to person who has established a captive generating plant for carrying the electricity to the destination of his own use.”*

Therefore to avail the benefit of surcharge exemption following conditions must be satisfied–

1. Use of transmission network (whether your own or some other utilities network) by means of open access facility.
2. The electricity must flow to the destination of one's own use .

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Therefore it seems to be clear that except for surcharge on transmission of electricity for own use, all other fees, levy, taxes have to be paid by the utility. In case of transmission of electricity from a captive power plant not intended for own use also all surcharges and other taxes need to be paid..

Secondly, Section 2(8) defines captive power plant to mean a power plant set up by any person to generate electricity primarily for his own use and includes a power plant set up by any co-operative society or association of persons for generating electricity primarily for use of members of such co-operative society or association.

This seems to mean that there will be no levy of surcharge on transmission of electricity to the shareholder of a captive power plant. But more than 50% (or the % of Electricity defined to mean primarily) of the electricity generated by the captive power plant must be consumed by the shareholders to qualify a power plant to be named as captive power plant under section 2(8) which defines captive power plant.

### **3.10 Benefits of Captive Generating Plant**

To encourage generation of Electricity and protect industry from over- charging of the industrial consumers (which effectively is used to cross-subsidies other category of consumers) the captive power plants have been exempted from the "cross-subsidy surcharge". Secondly the person operating such plant, shall have the right to open access for the purposes of carrying electricity from the captive generating plant to the destination of his use.

How ever such open access shall be subject to availability of adequate transmission facility and such availability of transmission facility shall be determined by the Central Transmission Utility or the State Transmission Utility, as the case may be.

Moreover it has been provided that the supply of electricity from the captive generating plant through the grid shall be regulated in the same manner as the generating station of a generating company.

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In case of a dispute regarding availability of transmission facility . The matter shall be adjudicated by the Central electricity regulatory Commission or the State Electricity regulatory Commission as the case may be.

### **3.11 Duties of generating Company**

The duties of a generating company shall be to establish, operate and maintain generating stations, tie-lines, sub-stations and dedicated transmission lines connected therewith in accordance with the provisions of the Act or the rules or regulations made there under.

- A generating company may supply electricity to any licensee in accordance with the electricity Act .
- A generating company may supply electricity to any Consumer subject to the regulations made under sub-section (2) of section 42(Open access for distribution areas).
- Every generating company shall Submit technical details regarding its generating stations to the Appropriate Commission and the Authority;
- Every generating company shall Co-ordinate with the Central Transmission utility or the State Transmission Utility, as the case may be, for transmission of the electricity generated by it.

### **3.12 Power of government to give directions in extraordinary circumstances**

The Central Government, :-

- In respect of a generating company wholly or partly owned by it or
- In relation to any inter-State generation, transmission, trading or supply of electricity and with respect to any mines, oil-fields, railways, national highways, airports, telegraphs,

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broadcasting stations and any works of defense, dockyard, nuclear power installations or

- In respect of the National Load Dispatch Centre and Regional Load Dispatch Centre or
- In relation to any works or electric installation belonging to it or under its control;

May specify that a generating company shall, in extraordinary circumstances operate and maintain any generating station in accordance with the directions of the Central Government.

In any other case, the State Government having jurisdiction under the Act shall have the authority to give directions. Primarily the direction must be for the intra-state operation of the electricity utility.

The expression “extraordinary circumstance<sup>23</sup>” here means circumstances arising out of-

- threat to security of the State,
- public order or
- a natural calamity or
- such other circumstances arising in the public interest.

If there is any adverse financial impact on any generating company due to the directions given by the appropriate Government , The appropriate commission may offset the adverse financial impact in such manner as it may think to be appropriate .

Curiously transmission ,trading or distribution utilities have not been provided any remedy under the Electricity Act for any adverse financial impact on them in case of the direction of the appropriate government in case of extraordinary situation . Effectively They have to bear the cost of such a direction if any .

### 3.13 Constitutional Provisions

Article 257 clause (1) provides that

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<sup>23</sup> Explanation to Section 11(1)



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*“the executive power of every state shall be so exercised as not to impede or prejudice the exercise of the executive power of the union , and the executive power of the union shall extend to the giving of such directions to the state as may appear to the Government of India to be necessary for that purpose”*

Moreover in case of national or other emergency which can be called as an extraordinary situations the central Government will have complete powers to give directions to the state government .

Further more by the authority of Article 265 if a state government fails to comply with, or to give effect to any direction by the Central Government , the president may hold that a situation has arisen in which the Government of the state can not be carried out in accordance of the constitution and this can be a ground to enforce president rule in the state .This effectively shows that the Central Government has wide powers to give directions to the state government and through state Government to the Generating plants within the executive authority of the state Government.

### **3.14 Non conventional energy source**

The Central Government has established IREDA (Indian Renewable Energy Development Agency) to promote generation of power from non conventional sources of energy .the state governments have also established such agencies(Table 16) for the same purpose which is a good initiative .

Many State Government are going forward with *pithead power plants* for generation of electricity. Delhi and Gujarat Government are at advanced stage of setting up Coal fired generating plants in Chattisgarh which has large amount of Coal reserves.

### **3.15 Small Power Plant in Rural Area**

This is a viable option now after the Passing of The Electricity Act. It is provided in the Act that an entity can take up generation and distribution in a rural area without any license from the concerned

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authority. This will be highly empowering to the NGO'S and local Developmental institutions working in the rural areas. The definition of rural area it is expected will be synchronous with the eleventh schedule (Article 243G) of the constitution. However final clarity regarding the rural areas will be arrived at after the rural electrification policies are out and areas to be considered as Rural areas shall be specified by the State Government.

### **3.16 Conclusion**

The Electricity Act 2003 has de-licensed the generation of power to a great extent .This will hopefully lead to greater private and social investment(through associations and cooperative societies ) in the generation of Electricity. Moreover competition will compel generators to efficiently and economically utilize the existing generating capacity. It will not be out of place to mention that the capacity addition in generation in near future will mainly be through Thermal Power plants For this to happen coal production had to be doubled. The Government Owned Coal industries are not in a position to meet the requirement therefore substantial private investment is required. The Government has introduced a bill for the amendment of *Coal Mines (Nationalization) Act-1973* .The process needs to be expedited in the interest of Power industry and consumers.

## **UNIT 4**

### **TRANSMISSION OF ELECTRICITY**

The transmission strategy of the Government gives a thrust on development of National Grid including interstate connection, technology up gradation , and optimization of transmission cost .

#### **4.1 National Load Dispatch Centre (NLDC)**

##### **4.1.1 Constitution of NLDC**

The Central Government is empowered to establish NLDC. The Constitution and the functions of the NLDP shall also be prescribed by the Central Government. The NLDC shall be operated by a Government Company or corporation which shall be notified by the Central Government. As of September 2003 no NLDC exists. It is believed that shortly NLDC shall be established.

##### **4.1.2 Functions of the NLDC**

The functions of the NLDC includes optimum scheduling and dispatch of Electricity amongst the Regional Load Dispatch Center. NLDC shall be the apex body for coordination between the five regional load dispatch Centers. The Central Government is empowered to make detailed rules regarding the functioning of the NLDC.

##### **4.1.3 Other business of the NLDC**

The NLDC has been specifically been barred from engaging in the business of Trading in Electricity. The Act is silent on the issue whether NLDC can enter into other business like distribution transmission and generation of electricity.

## **4.2 Regional Load Dispatch Center (RLDC)**

### **4.2.1 Constitution of RLDC**

For better and integrated management of the grid in such a large and diverse nation the grids have been divided into five regions. Which are as follows-

1. Western Region
2. Northern Region
3. Southern Region
4. Eastern Region
5. North Eastern Region

The Central Government has been empowered with the authority to make region wise demarcation of the country. The Central Government can also modify the region wise demarcation for the efficient, economical, and integrated transmission and supply of Electricity and in particular to facilitate voluntary interconnection and coordination between various entities.

The RLDC shall be a Government Company or any other authority or corporation established or constituted by or Central Act .The Central Government shall notify the entities which shall be RLDC.

It is also provided in the Act that till the RLDC is notified by the Central Government the Central Transmission Utility (Power Grid Corporation of India Ltd ) shall operate as RLDC for all regions till the Central Government notifies the RLDC's.

### **4.2.2 Other business of the RLDC**

The RLDC's has been specifically been barred from engaging in the business of Trading or generation of Electricity. The Act is silent on the issue whether NLDP can enter into other business like distribution and transmission of electricity.

### **4.2.3 Functions of RLDC**

The Regional Load Dispatch Centre is the apex body to ensure integrated operation of the power system in the concerned region. The regional Load Dispatch Centre is empowered to comply with the Indian Electricity Grid Code ( As specified by the CERC) and the Grid Standards ( As specified by the CEA) . For the purpose of fulfilling the functions assigned to the RLDC it may levy and collect such fee and charges from the generating companies or licensees engaged in inter-State transmission of electricity as may be specified by the Central Commission.

Section 28 (3) specifies the core functions of the RLDC which shall -

- be responsible for optimum scheduling and dispatch of electricity within the region, in accordance with the contracts entered into with the licensee of the generating companies operating in the region.
- Monitor grid operations;
- Keep accounts of quantity of electricity transmitted through the regional grid;
- Exercise supervision and control over the inter-State transmission system; and
- Be responsible for carrying out real time operations for grid control and dispatch of electricity within the region through secure and economic operation of the regional grid in accordance with the Grid Standards and the IEGC.

### **4.2.4 Powers of RLDC**

The Regional Load Dispatch Centre has to ensure stability of grid operation. It is also responsible to maximize efficiency and economy in the operations of the power system in the area of its operations. For the above purposes RLDC may give such directions, exercise such supervision, and control as may be required.

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Every person connected with the operation of the power system shall comply with the directions issued by the Regional Load Dispatch Centers. In case the orders issued by the RLDC is primarily concerned with the intra state matters i.e. transmission licensee of state transmission lines or any other licensee of the State or generating company (other than those connected to inter-State transmission system) or sub-station in the State shall be issued through the State Load Dispatch Centre and the State Load Dispatch Centers shall ensure that such directions are duly complied with by the licensee or generating company or sub-station.

All disputes relating to the quality of electricity or safe, secure and integrated operation of the regional grid the matter shall be adjudicated by the CERC. The directions of the RLDC shall be complied by until the final order of the CERC is delivered.

Any entity not complying with the directions of the RLDC can be made to pay penalty not exceeding rupees fifteen lacs.

### **4.3 State Load Dispatch Centre (SLDC)**

#### **4.3.1 Constitution of SLDC**

The State Government shall by notification or under state Act establish a centre to be known as the State Load Dispatch Centre. The SLDP shall be a government entity. However until the SLDP is established the State transmission Utility shall operate as SLDP

#### **4.3.2 Other business of the SLDC**

The State Load Dispatch Centre is barred to engage in the business of trading in electricity. That SLDP other wise can generate, Transmit and distribute electricity or take up some other business.

### **4.3.3 Functions of SLDC**

Section 32 of the Act provides for the functions of the State Load Dispatch Centre. SLDC shall be the apex body to ensure integrated operation of the power system in a State.

The major functions of State Load Dispatch Centre will include:-

- a) It shall Be responsible for optimum scheduling and dispatch of electricity within a State, in accordance with the contracts entered into with the licensees or the generating companies operating in that State :
- b) It shall Monitor grid operation;
- c) It shall Keep accounts of the quantity of electricity transmitted through the State grid.
- d) It shall Exercise supervision and control over the intra-State transmission system;
- e) It shall be responsible for carrying out real time operations for grid control and dispatch of electricity within the State through secure and economic operation of the State grid in accordance with the Grid Standards and the State Grid Code;

### **4.3.4 Finances of SLDC**

The State Load Dispatch Centre may levy and collect such fee and charges from the generating companies and licensees engaged in intra-State transmission of electricity as may be specified by the State Commission.

### **4.3.5 Powers of SLDC**

Section 33 specifies that *“The State Load Dispatch Centre in a State may give such directions and exercise such supervision and control as may be required for ensuring the integrated grid operations and for achieving the maximum economy and efficiency in the operation of power system in the State”*.

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However this is not an absolute power .It is co-extensive with the powers of the National and Regional load Dispatch Centre. The orders of NLDC and RLDC shall be umbrella orders within which the SLDC can issue orders.

Every entity connected with the operation of the power system shall comply with the directions issued by the State Load Dispatch Centre and the State Load Dispatch Centre shall comply with the directions of the Regional Load Dispatch Centre.

All disputes with reference to the quality of electricity or safe, secure and integrated operation of the State grid or in relation to any direction shall be adjudicated by SERC. The directions of the State Load Dispatch Centre shall be complied with pending the decision of SLDC. Failure of any entity to comply with the direction of SLDC may lead to a penalty of 5 Lacs.

## **4.4 Central Transmission Utility (CTU)**

### **4.4.1 Appointment of CTU**

A Government Company shall be notified by the Central Government as a Central transmission licensee. PGCIL Will probably be the CTU. The CTU shall be deemed to be a transmission licensee.

### **4.4.2 Other Business of CTU**

The CTU has been barred from taking up the following-

- A) generation of electricity or
- B) trading in electricity.

There are many associated business which a transmission licensee can take up including –

- Creation of Optical Fiber Network
- Distribution of Electricity
- Telecom operations
- Cable Television Distribution



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For example, Power Grid Corporation is Laying down Optical Fiber Network<sup>24</sup> of 14000 km which can be called an associated Business of the same.

#### 4.4.3 Functions of CTU

Section 38(2) states the functions of the Central Transmission Utility as-

- a) *To undertake transmission of electricity through inter-state transmission system;*
- b) *To discharge all functions of planning and co-ordination relating to inter state transmission system with :-*
  - (i) *State Transmission Utilities;*
  - (ii) *Central Government;*
  - (iii) *State Government;*
  - (iv) *Generating companies;*
  - (v) *Regional power Committees;*
  - (vi) *Authority;*
  - (vii) *Licensees;*
  - (viii) *Any other person notified by the Central government in this behalf*
- c) *To ensure development of an efficient, co-ordinated and economical system of inter-State transmission lines for smooth flow of electricity from generating stations to the load centers;*
- d) *To provide non-discriminatory open access to its transmission system for use by :-*
  - (i) *any licensee or generating company on payment of the transmission charges; or*
  - (ii) *any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission*

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<sup>24</sup> Cabinet Committee on Economic Affairs has approved the OFC Project involving Rs 14000 Crore and is expected to be completed before March 2006.

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*charges and a surcharge thereon, as may be specified by the Central Commission:*

#### **4.4.4 Surcharge**

Such surcharge shall be utilized for the purpose of meeting the requirement of current level cross subsidy. The Past arrears of the cross-subsidy can not be subsidized by the surcharge. The surcharge and cross subsidies shall be progressively reduced and eliminated. The central Commission shall specify the manner in which the cross-subsidy shall be eliminated. The duration of surcharge will not extend beyond the elimination of cross subsidy. The details regarding the manner of payment and how the amount of surcharge is to be utilized shall be specified by the Central Commission.

#### **4.4.5 Exemption from payment of Surcharge**

Captive power plants have been given exemption from surcharge if they satisfy following conditions-

- 1) open access is provided to a person who has established a captive generating plant
- 2) The electricity must be carried to the destination of his own use.

Therefore this exemption shall not be valid if the electricity generated by the Captive power plant is being used by any entity other than the owner of the Captive power station.

Interestingly The transmission tariffs being currently levied by various States for captive power do not appear to have a rational basis and was resulting in non-utilization of this significant surplus capacity. He said that this matter would also be suitably dealt with in the Tariff policy.

### **4.5 State Transmission Utility and Functions**

#### 4.5.1 Constitution of STU

The state Government may notify the Board or a Government company as the State Transmission Utility<sup>25</sup>. Such company or companies shall be deemed to be transmission licensees under this Act. The word Company or companies imply that there can be more than one State transmission Utility.

#### 4.5.2 Other Business of STU

State Transmission Utility has been barred from engaging in the business of trading in electricity. STU can take up other business such as –

- Generation of Electricity
- Distribution of Electricity
- Creation of Optical fiber Network

Interestingly Andhra Pradesh State Transmission Utility named AP Transco has laid down 1500km broad band optical fiber cable network on transmission lines as an associated business. The joint venture partner “Online Media Solutions Limited” will lay another 1800 KM optic fiber network on the transmission towers to reach all the district headquarters. The step in line is 6322KM of cable network on Distributing network connecting all the mandals.

#### 4.5.3 Functions of STU

Section 39(2) specifies The functions of the State Transmission Utility to be :-

- (a) *To undertake transmission of electricity through intra-State transmission system;*
- (b) *To discharge all functions of planning and co-ordination relating to intra-State transmission system with :-*
  - (i) *Central Transmission Utility;*
  - (ii) *State Governments;*

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<sup>25</sup> Appendix 8 provides a list of State Transmission Utility.

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- (iii) *Generating companies;*
- (iv) *Regional Power Committees;*
- (v) *Authority;*
- (vi) *Licensees;*
- (vii) *Any other person notified by the State Government in this behalf;*
- (c) *To ensure development of an efficient, co ordinated and economical system of intra-State transmission lines for smooth flow of electricity from a generating station to the load centers;*
- (d) *To provide non-discriminatory open access to its transmission system for use by :-*
  - (i) *any licensee or generating company on payment of the transmission charges;*  
*or*
  - (ii) *any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission;*

### **4.5.4 Surcharge**

Surcharge can be levied on only consumer and no other entity. Surcharge has to be specified by the Commission state Commission in this case. Secondly the surcharge shall be utilized only for meeting the current level cross-subsidy and can not extent to subsidy arrears.

Cross- subsidy and surcharge are interrelated and as the cross-subsidy is eliminated the surcharge must also be removed. It is also mandated that the cross subsidy and surcharge shall be progressively be eliminated.

### **4.5.5 Exemption from payment of Surcharge**

Captive power plants have been given exemption from surcharge if they satisfy following conditions-

- 1) open access is provided to a person who has established a captive generating plant
- 2) The electricity must be carried to the destination of his own use.

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Therefore this exemption shall not be valid if the electricity generated by the Captive power plant is being used by any entity other than the owner of the Captive power station.

## **4.6 Transmission**

### **4.6.1 Concept of Open Access in Transmission**

The Electricity Act 2003 provides Open Access in the transmission lines with immediate effect leading to competition in the bulk Electricity Market. The Objective being Separation of Carriage (Fixed network like wires) from Content (Moving Element like Energy).

To understand the concept Imagine a toll road where the operator has a right to choose as to who can use the road this will be anti competitive and monopolistic venture. The Electricity Transmission lines are also being opened up on the same lines.

Open Access in telecom is called "Interconnections". International Experience of Open Access has been good. When Open Access was introduced in United Kingdom the prices of Electricity fell down by 30%.The policy makers in India also it seems are aiming for the same , but due to over neglected system the experts are of opinion that in short run (3 to 5 years)the prices will rise but afterward the real prices it is proposed will decline.

### **4.6.2 Duties of Transmission licensees**

Section 40 of the Act provides for the duties of the all Transmission licensees including the State Transmission licensee and the Central Transmission licensee.

*It shall be the duty of a transmission licensee :-*

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- (a) To build, maintain and operate an efficient, co-ordinated and economical inter-State transmission system or intra-State transmission system, as the case may be;*
- (b) To comply with the directions of the Regional Load Dispatch Centre and the State Load Dispatch Centre as the case may be;*
- (c) To provide non-discriminatory open access to its transmission system for use by :-*
  - (i) any licensee or generating company on payment of the transmission charges; or*
  - (ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission:*

All rules regarding the surcharge and cross-subsidy and exemption to the captive power plant are similar to the provisions of STU and CTU.

### 4.6.3 Other Business of transmission licensee<sup>26</sup>

A transmission licensee may, with prior intimation to the Appropriate Commission, engage in any business for optimum utilization of its assets. It is also mandated that a proportion of revenue from any other business of the Transmission licensee shall be used for reducing the Charges for Wheeling of Electricity. The appropriate commission is empowered to provide for the details of the matter.

The transmission licensee shall also maintain separate accounts for each such business undertaking to ensure that transmission business neither subsidizes in any way such business undertaking nor encumbers its transmission assets in any way to support such business. To make the system of Open Access really meaningful it has been specifically barred from entering into contract or engaging in the business of trading of Electricity.

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<sup>26</sup> Section 41 of the Electricity Act 2003

#### **4.6.4 First Transmission license**

Central Electricity Regulatory Commission has granted 25 years Transmission license to Powerlinks Transmission Limited. This transmission licensee is a joint venture company between PGCIL and Tata Power Company. It was formerly known as Tala- Delhi Transmission limited.

This Company was formed consequent to invitation of PGCIL through bid for a joint venture partner for construction of Tala Transmission system for transmission of power generated from 1020MW Tala Hydroelectric Project in Bhutan to be wheeled to the constituents of Eastern and Northern regions. Tata Power holds 51% of the equity.

#### **4.7 Conclusion**

The transmission business tends to be a natural monopoly. The fixed cost of the same is very high. Once the infrastructure is created the marginal cost of wheeling power is very low. To sustain the transmission system it is important that large volume of regular power flows through the system. The Electricity Act 2003 by providing non discriminatory open access has created an environment for the development of the transmission system.

## UNIT 5

### DISTRIBUTION OF ELECTRICITY

#### 5.1 Background

Electricity Distribution and Transmission Systems are considered to be Natural Monopoly<sup>27</sup> in the power Industry. However through practical policies and regulatory reforms most of the demerits of a monopoly can be reduced to a negligible level. The Government's distribution strategy is meant to achieve distribution reforms . The focus is on system up gradation, loss reduction, theft control, consumer service orientation, quality power supply, commercialization, decentralized distribution, generation and supply for rural areas.

Distributing electricity is the largest and most extensive business, requiring efficiency and attention to detail on a gigantic scale. These are issues of executive training, HR policies, procedural constraints on decision making, financial expertise and commercial orientation. We can say essentially that the reason for privatization in this sector are the same as in other sectors.

#### 5.2 Steps to be taken during Application for a distribution license

**Public Notice Within Seven Days of Application-** The Applicant must publish a public notice as may be specified by the appropriate Commission.

**No Objection Certificate from the central Government-** Section 15(2)(ii) provides that the Commission shall not grant a license without a NOC from the Central Government for any premises or place in the occupation of Government for defense proposes.

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<sup>27</sup> Natural Monopoly is an industry where technology does not permit multiple non-colluding competitive firms to co-exist profitably and the best example is the Systems of transmission and Distribution of Electricity.



### **5.3 Duties of distribution licensee**

Section 42 subsection 1 provides that It shall be the duty of a distribution licensee to develop and maintain an efficient, co-ordinated and economical distribution system in his area of supply and secondly to supply electricity in accordance with the provisions contained in the electricity Act 2003.

### **5.4 Open access in the Distribution System**

Section 42 Subsection 2 provides for the manner of Introduction of open access .

The State Commission shall introduce open access in the distribution network within the territorial jurisdiction of the state. The introduction of open access will be subject to following conditions-

- 1)Cross subsidies
- 2)Other Operation Constraints

Furthermore the introduction of open access can be in such phases as may be determined by the state commission . There is no mention of minimum number of phases , there can be only one phase if the commission deems it to be appropriate. The state commissions must specify the phases within one year of the appointed date(Before 9<sup>th</sup> June 2004).The State Commission shall also specify the extent of wheeling charges for each phase.

### **5.5 Cross Subsidy**

While introducing open access the State commission shall take into consideration if there is any cross subsidy but nothing prevents the State Commission from introducing open access before the cross subsidies are eliminated but the open access shall be subject to surcharge in addition to wheeling charges provided for by the state commission.

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A further condition has been imposed that-

a) such surcharge shall be utilized to meet only the current level of cross subsidy .

b) The Cross subsidy should pertain to the area of supply of the distribution licensee.

Effectively the cross subsidy of other areas can be compensated by the surcharge. The ultimate objective is to eliminate the cross subsidy. However to protect the consumers from a tariff shock, it is advisable and practical to eliminate the same progressively. The electricity Act has empowered the State Commission to progressively reduce and eliminate cross subsidy.

## **5.6 Surcharge**

The surcharge is not livable in case open access is provided to a person who has established a captive generating plant. However the surcharge will be applicable if the power is transmitted for the use of any other person other than the owner of the captive power plant .

## **5.7 Distribution licensee as a common carrier**

In case of electricity is supplied by another licensee the distribution licensee shall provide open access to the second licensee as a common Carrier providing non discriminatory open Access.

## **5.8 Exemption to Local Authority**

All preexisting local authority who are engaged in the distribution of electricity have been exempted from the same. This provision will benefit very few local authority such as BEST(Mumbai), LESA(Lucknow Electric supply Authority, Lucknow) and NDMC (New Delhi Municipal

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Corporation, New Delhi) providing Electricity Supply to selected urban areas.

## **5.9 Additional Surcharge**

Most of the revenues generated by the Electricity Boards are from the Industrial and commercial consumers. These consumers in many states cross subsidize the Agricultural and the domestic consumer. The ultimate aim of the Electricity Act is to eliminate this cross-subsidization and rationalize tariff. However due to practical constraints this is not possible in short run. However as new players are bound to cherry pick and lure the high end, high paying consumers from the State electricity Boards. High value and high paying consumers may move to other distribution licensee. It becomes important to protect subsidizing entity in short run. Therefore the State Commission may provide for Additional Surcharge for consumers moving away from the existing distribution licensee. This is equivalent to the American concept of transition charge. These charges are generally levied to meet the fixed cost of the distribution licensee because of his obligation to supply.

## **5.10 Duty to Supply on request**

Section 43 of the Act specifies that it shall be the duty of the distribution licensee to supply Electricity on request. However following conditions must be met –

1. Application must be given by the applicant
2. The applicant must have a premises for the electricity Connection

The Distribution licensee is duty bound to supply Electricity within one month after receipt of the application requiring such supply

## **5.11 Penalty for Failure**

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If a distribution licensee fails to supply the electricity within the period specified he shall be liable to a penalty which may extend to one thousand rupees for each day of default. The Delhi Electricity regulatory Commission has set the limit of Rs 500 for the Delhi area.

## **5.12 Exceptional Cases**

In certain cases where it is not feasible due to technical reasons not to supply electricity the licensees have been granted extended timeframe until technical capability is developed.

1. where such supply require connection of distribution mains, or commissioning of new sub-station, the distribution licensee shall supply the electricity to such premises immediately after such extension or commissioning or within such period as may be specified by the Appropriate Commission:
2. in case of a village or hamlet or area wherein no provision for supply of electricity exists, the Appropriate Commission may extend the said period as it may consider necessary for electrification of such village or hamlet or area.

However the distribution licensee can not exempt himself for non Electrification due to financial reasons It shall be the duty of every distribution licensee to provide, if required, electric plant or electric line for giving electric supply to the premises if required. Secondly section 41 exempts the licensee to provide Electricity in case of force majeure or Act of God such as in cases of cyclones, floods, Storms, or other occurrence beyond the control of licensee.

## **5.13 Power to recover charges<sup>28</sup>**

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<sup>28</sup> Section 45 of the Electricity Act 2003

## First Draft

1. Subject to the provisions of this section, the prices to be charged by a distribution licensee for the supply of electricity by him in pursuance of section 43 shall be in accordance with such tariffs fixed from time to time and conditions of his license.
2. The charges for electricity supplied by a distribution licensee shall be :-
  - a. Fixed in accordance with the methods and the principles as may be specified by the concerned State Commission;
  - b. Published in such manner so as to give adequate publicity for such charges and prices.
3. The charges for electricity supplied by a distribution licensee may include :-
  - a. (a) A fixed charge in addition to the charge for the actual electricity supplied;
  - b. (b) A rent or other charges in respect of any electric meter or electrical plant provided by the distribution licensee.
4. Subject to the provisions of section 62, in fixing charges under this section a distribution licensee shall not show undue preference to any person or class of persons or discrimination against any person or class of persons.
5. The charges fixed by the distribution licensee shall be in accordance with the provisions of this Act and the regulations made in this behalf by the concerned State Commission.

### **5.14 Power to recover expenditure & Power to Require Security**

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The State Commission may provide that a distribution licensee may recover the cost of expenditure to supply Electricity. Additionally the State Commission may also provide through regulation that a distribution licensee can require security.

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<sup>29</sup> Section 46, Section 47

First Draft

While returning back the security the distribution licensee shall pay interest equivalent to the bank rate or more, as may be specified by the State Commission,

A distribution licensee is not entitled to require security in if the person requiring the supply is prepared to take the supply through a pre-payment meter.

### **5.15 Additional terms of supply<sup>30</sup>**

A distribution licensee may require any person who requires a supply of electricity any restrictions which may be imposed for the purpose of enabling the distribution licensee to comply with the regulations made by the commission. The terms may also include any terms restricting any liability of the distribution licensee for economic loss resulting from negligence of the person to whom the electricity is supplied.

### **5.16 Agreements with respect to supply or purchase of electricity<sup>31</sup>**

In case of open access to certain consumers under section 42, such consumers, notwithstanding the tariff determined by the appropriate Commission may enter into an agreement with any person for supply or purchase of electricity on such terms and conditions (including tariff) as may be agreed upon and between them.

### **5.17 The Electricity Supply Code**

Section 50 of the Act provides for a Electricity Supply Code. The State Electricity Regulatory Commission shall specify an Electricity Supply Code.

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<sup>30</sup> Section 48

<sup>31</sup> Section 49

The Electricity Supply Code shall consist of –

- to provide for recovery of electricity charges,
- intervals for billing of electricity charges,
- disconnection of supply of electricity for non-payment thereof
- restoration of supply of electricity,
- tampering, distress or damage to electrical plant, electric lines or meter
- entry of distribution licensee or any person acting on his behalf for disconnecting supply and removing the meter,
- entry for replacing altering or maintaining electric lines or electrical plant or meter.

### **5.18 Other businesses of distribution licensees<sup>32</sup>**

A distribution licensee may, with prior intimation to the Appropriate Commission, engage in any other business for optimum utilization of its assets.

The financial benefits from other business of the distribution licensee shall be used for reducing its charges for wheeling. The proportion of profits which must be used for reducing the same shall be determined by the State Electricity Commission. There must be separate accounts for each such business undertaking to ensure that distribution business neither subsidizes in any way such business undertaking nor encumbers its distribution assets in any way to support such business. However a local authority engages in the supply of Electricity is exempted from doing so.

### **5.19 Universal Metering**

Section 55 reads as-

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<sup>32</sup> Section 51

## First Draft

*“(1) No licensee shall supply electricity after the expiry of two years from the appointed date, except through installation of a correct meter in accordance with the regulations to be made in this behalf by the Authority”*

However the State Commission has been empowered to extend the said period of two years for a class or classes of persons or for such area as it may specify. This is only enabling clause which must be used in an exceptional cases.

### **5.20 Disconnection of supply in default of payment<sup>33</sup>**

In the course of supply of Electricity there are many charges which a consumer may have to pay such as –

1. Fixed Charges
2. Energy Charges
3. Metering Charges

These charges are above and beyond the charges for

1. supply or
2. transmission or
3. distribution or
4. wheeling of electricity

In the case of charges beyond the above mentioned four charges, If the consumer neglects the same the licensee or the generating company may, after giving not less than fifteen clear days notice in writing to such person and without prejudice to his rights to recover such charge or other sum by suit, cut off the supply of electricity. This may remain cut off until such charge or other sum, together with any expenses incurred by him in cutting off and reconnecting the supply, are paid but it can not extend beyond the time when the consumer pays up the charges.

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<sup>33</sup> Section 52



## First Draft

It is also provided that the supply of electricity shall not be cut off if such person deposits, under protest,-

- (a) an amount equal to the sum claimed from him, or
- (b) the electricity charges due from him for each month calculated on the basis of average charge for electricity paid by him during the preceding six months, Whichever is less, pending disposal of any dispute between him and the licensee.

The limitation of two years from the date when such sum became first due unless such sum has been shown continuously as recoverable as arrear of charges for electricity supplied.

### **5.21 Challenges before a distribution licensee**

Decades of non-focus on reforms and politicization of the Electricity industry has lead to greatly difficult situation for the distribution licensees . some of the issues of importance are-

- The wide expansion of the electrical network without consideration to technical factors has led to low voltage transmission because low voltage transmission is less expensive then high voltage transmission .To reduce Technical losses a good option would be to reduce low voltage T and D network and replace it with high voltage network.
- line staff(namely Line foremen, line inspector, linemen, and line inspector on transmission and distribution side) of most of the Electricity licensee is ageing .Skill and physical ability test after the age of 50 years must b e mandatory. It must be repeated hereafter every two years .
- Overloaded system, faulty equipment , breakdown due to rains.

### **5.22 Reforms Suggested by Various institutions**

- Unbundling –That is separation of generation, Transmission, Distribution and trading of electricity

## First Draft

- Corporateisation
- Privatization - it is assumed that private entities are more efficient
- It seems that the National Grid will be ready by 1012 the target was to move 30000 MW of power through this mechanism
- Electronic meters having internet modems can be fruitful be installed for Large Industrial power(LIP) consumers.

## 5.23 Conclusion

Only two states i.e. Orissa and Delhi have privatized the distribution networks. The Orissa model has been a great learning experience for the Power industry in India. In the Delhi Electricity Distribution Privatization the pitfalls of Orissa have been avoided and it seems the model is functional and is expected to give good results.

## UNIT 6

# TRADING OF ELECTRICITY

*“I can’t understand why people are frightened by new ideas.  
I am frightened of the old ones.”  
John Cage*

### 6.1 Background

In order to turnaround the power sector, comprehensive reforms have been initiated and a new legislation (The Electricity Act 2003) has been enacted. This would lead to evolution of the generation sector based on open market environment and cost competitive regime. Power Trading has been recognized as a distinct activity in the National electricity Market. The Electricity Act 2003 (Hereinafter referred to as The Act) recognizes the need for robust and active trading market. However it is silent on the design of the power market.

The Conventional view is that only the entity which owns the electricity network can transfer the electricity through the network. The Conventional view is analogous to requiring that every road-user needs to have a proprietary road-network. The Act envisages separation between Carriage (Hard wear in the form of wires) and Content (energy in the form of Electricity). The separation between the transport business and the trading separates the natural monopoly.

### 6.2 What is Power Trading?

Transaction of power where the price is negotiable and option exist about whom to trade with and for what quantum<sup>34</sup>. This can be called power trading in a generic sense. Due to development of power

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<sup>34</sup> Definition used by TN Thakur (PTC)

## First Draft

market a secondary market has also developed for financial transaction such as hedging and futures trading .The Electricity Act 2003 defines trading to mean

*“Purchase of electricity for resale thereof and the expression “Trade” shall be construed accordingly”<sup>35</sup>*

The definition is very simplistic which talks about only physical trading and excludes any mention of financial trading. The Secondary market for trading hopefully will be covered in the National Electricity Policy.

### 6.3 Opportunities for Power Trading

India has vast potential in the field of Power Trading. In short the impact of trading can be felt in following areas.

- Generation of Power by hydro power stations is weather sensitive. This causes surplus in high hydro season and shortage in low hydro season. This can be leveraged by trading entities.
- Demand of power is weather sensitive in general and time sensitive in metropolitan areas, this also creates opportunities for an electricity traders.
- Captive Power Plants and few upcoming Merchant power plants have Substantial surplus capacity which can leveraged for trading activities.

### 6.4 Who is an Electricity Trader?

The Act defines trader to mean –

*“Electricity trader” means a person who has been granted a license to undertake trading in electricity under section 12.*

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<sup>35</sup> Section 2(71)

It is clear that trading will imply two activities Purchase of Electricity and selling of electricity. However to be an electricity trader you need only have a license from the appropriate commission. This means that even if you do not do any business relating to electricity utility, you can be an electricity trader if the appropriate commission provides you with a trading license. Furthermore by virtue of Proviso 9 section 14 a Distribution licensee has been exempted from taking a trading license. This enables him to buy electricity from any Market or future trading Exchange for the purpose of utilization of Electricity in his own area of supply.

## 6.5 Trading entities

The Electricity act states that no person shall take up trading in Electricity unless he is authorized to do so by appropriate commission. The person<sup>36</sup> includes any company or body corporate or association or body of individuals, whether incorporated or not, artificial juridical person.

The Distribution licensee has been specifically exempted from taking a separate trading license. On the other hand following entities have been excluded from trading in electricity –

- 1.) The National Load Dispatch Centre
- 2.) The regional Load Dispatch Centre
- 3.) The State Load Dispatch Centre
- 4) The Central Transmission Utility
- 5) The State Transmission Utility
- 6) A Transmission Licensee

For the sake of greater efficiency the Electricity Act specifies that some entities will not need trading license, they will be deemed holder of a trading license –

1. Distribution licensees

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<sup>36</sup> Section 2(49)

First Draft

2. Central/State Government if it wishes to do trading in Electricity<sup>37</sup>
3. Notification of CERC can enable any local authority, Panchayat institution , users association, co-operative societies, NGOs or franchisees to take up trading .

The Exclusion of transmission utilities from trading in Electricity and mandating them to provide non-discriminatory open access provides a level playing field for trading of Electricity.

## 6.6 Players in the trading of electricity

Six Entities as of November 2003, have applied for a National or Inter-State Trading license, namely-

- Power Trading Corporation (PTC),
- Reliance Energy Power Trading Corporation Limited (REPTCL)
- Amalgamated TransePower(ATP)
- Essar energy
- Koila Energy
- Adani group

PTC is the first entity created by the Government with various players having equity to take up trading in Electricity. REPTCL is a recently launched company by the Reliance Energy (Formerly called as BSES). Amalgamated Transpower has few Hydro Power Stations in the State of Sikkim. Probably for some time it shall be a regional player in the trading industry.

## 6.7 Advantages of Power Trading

Trading of Power has many advantages –

- **Advantages for generators**
  - o Will have more avenues when they sell excess of power.
  - o Increased utilization of existing resources

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<sup>37</sup> Proviso 3 of Section 14 of electricity Act 2003

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- o Will lead to Increase in PLF and generation efficiencies.
- o The Bottled up capacities of Captive Power Plants and Merchant Power Plants will be unlocked.
- **Advantages for Transmission licensee**
  - o There will be Better grid discipline and energy security as scheduled exchanges increase.
  - o Improved utilization of transmission capacities will lead to assured revenue flow and more investment in the transmission infrastructure.
- **Advantages for Distribution licensee**
  - o Reliability of power supply to the consumer will increase.
  - o Trading of electricity will also improve quality of power in terms of frequency excursion and voltage.
  - o Avenues for reduction in cost of power through time of day trading.
  - o Overall reduction in cost of power with phasing out of surcharges.
- **Advantage for Consumers**
  - o Shortages in deficit locations minimized.
  - o Could help differing of investment for additional generation capacity. May lead to Lower cost of power due to deferment of new investments.
  - o Will Reduced environmental degradation because of better utilization of existing resources and reduction in new project related activity.
  - o Enhanced energy security.
  - o Helps in reduction in average cost of Power to some extent

The immediate visible benefit may mean that the hydro stations will not use water during off-peak hours .They may use it only during peak hours and get peaking tariff for it .Base load can be supplied by Thermal Generation. The state of Himachal Pradesh has made Energy banking arrangements. Similarly Uttaranchal has also made energy banking arrangements with Punjab State Electricity Board. This kind of arrangement will make the system more efficient. This can also be adopted by other electricity entities.

## **6.8 International power Trading**

There is growing acceptability of International trading .Diversity of demand and different capability of generation leads to scope for International exchange of Power. Italy for example imports most of its power requirement from France. In Indian subcontinent there is a large Hydro potential in Bhutan and Nepal and there is large Natural gas resource in Bangladesh. India which circumscribes all the three countries almost from three sides can be a potential market for energy trading.

The Electricity Act is silent on the issue of International Electricity trading .It seems that the process of International Trading will be through Government to Government agreement. We have arrangement for electricity transfer from Nepal and Bhutan and probably as the Electricity markets grow there is a possibility that Indian Subcontinent can be an integrated Electricity Market.

With Nepal We have identified three forms of Power exchanges-

- (I) Exchange of power on bilateral basis at the border
- (II) Trading of saleable power
- (III) Supply of power under treaty

Power Trading Corporation acts as nodal agency for the first two categories of Power exchange.

## **6.9 Inter-State Power Trading**

In India volume of Electricity exchange is very low .It is as low as 2.5% in the year 2002. There is little or no choice to Buyer and Seller because pricing as of now is determined by Regulatory Commissions (before it was decided by State Government)

The Electricity Act provides that the license for Interstate Electricity Trading shall be provided for by the CERC. Due to diversity



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in demand in various regions of the country there is great scope of inter and intra –regional exchanges of power. The CERC has also proposed to various SERCs that they must not insist on any formalities to the interstate trading licensee, they must be provided free access to intra-state trading also. This is a right step and will also avoid complications.

### **6.10 Intra-State Power Trading**

The SERC is empowered to provide license for intra-state trading of electricity. The Distribution licensee have been deemed to be a trading licensee by virtue of proviso 9 of Section 14 of the Electricity Act, Probably they will deepen the market of the intra-State trading of Electricity.

### **6.11 Reforms in Power Trading**

In India now almost all regions have implemented ABT(Availability Based Tariff).this creates a basic step forward toward an efficient electricity market. However there are various issues which needs to be clarified –

- Dose the bill allow groups of consumers to band together to exercise a collective choice in purchasing electricity directly from the most efficient or price attractive supplier or trader of Electricity.
- Can a Trading Company give franchisee to a smaller trading company
- What is the scope of deemed trading status of the Distribution licensee.

### **6.12 What will the Indian Trading Market be like**

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Alternative market for Electricity can be established in India. In a "Day ahead" market or "Spot Market" The Utilities purchase all there energy needs in a 24 hours period. Day ahead or Spot Market create vulnerability and uncertainty since utilities are subject to price spikes when suppliers decide they want to limit the amount of power offered.

It is proposed to go for Control Room depending on feasibility and expected benefits. This will be the first step towards online trading . Implementation of On line Trading would take some more time to become feasible in the country. The Power Trading Corporation is attempting to gain access to online Data and attempt is being made to have such link with northern region by November 2003.

### 6.13 Power Exchange

It is expected probably India can have power Exchanges as they exist in the developed Electricity Markets. These ideas are at preliminary stage and probably by Mid 2004 they will take some concrete Shape. Some of the International Power exchanges are mentioned in the box.

#### **Countries**

Nordic Countries  
Holland  
UK , Norway, Sweden, Denmark,  
Finland  
France  
Poland  
U.S.A.

#### **Power Exchange**

Nord Pool  
Amsterdam Power Exchange  
AP Exchange and Broker M3 Kraft  
  
Power Max  
Gielda Energii  
Power is traded on multi-comodity  
Exchanges like-

- Dynergy Direct
- Houston Street
- Trade Spark or
- International Exchange

### 6.14 Development of Power Exchange

The Power Exchange of India can be regulated by CERC on the same lines as the Stock Exchange is monitored by SEBI. The Power Exchange can be an exclusive Forum for Buy and Sell. It can settle

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imbalances and ensure network access to all concerned entities. The Power Exchange can help in disclosure of Information in relation to Spot Contracts and excess capacity in the network.

Central Electricity Regulatory Commission can Lay down disclosure norms and ensure compliance of all rules and regulations, primarily balancing the interests of various entities in the market.

### **6.15 Types of Electricity Trading**

Wholesale Trading and Retail Trading can also be separated. However in the developed electricity market there are various types of power Trading. Some of the instruments used in Trading of Electricity can be -

- 1.SWAP System
- 2.CAP System-Insurance and Hedging for Distribution Licensee
- 3.FLOOR System – Insurance and Hedging for Generators
- 4.CALLER System- Combination of CAP and FLOOR
- 5.Time of day Trading – PTC has introduced the concept.

Newly under the Kyoto Protocol a new market of Energy Certificate trading is also expected to be developed. This may have a great beneficial effect in the trading activity of Indian trading Industry.

### **6.16 Weather 100% subsidiaries of Distribution Licensee are allowed trading in power**

Proviso 9 of section 14 exempts only a distribution licensee from obtaining a trading license to trade in Electricity .Thereby a 100% subsidiary of the Distribution licensee can trade in Electricity by obtaining a separate trading license. However 100% subsidiary of any other utility shall require a separate Trading license from the appropriate Commission.

### **6.17 Minimum Requirement for Electricity Trader**

Section 52 provides for the requirement the entity should fulfill for being an electricity trader. The requirement specified is –

- technical requirement,
- capital adequacy requirement and
- Credit worthiness for being an electricity trader.

The CERC shall provide for the abovementioned requirement in case of an Inter-State trades and the SERC will provide for the requirements in case of Intra State Electricity Trader. Every electricity trader shall discharge such duties, in relation to supply and trading in electricity, as may be specified by the Electricity Commission under whose jurisdiction the trader falls.

### **6.18 Present Trading in India**

The trading activity in India is at a preliminary state and Most of the transactions tend to be short term, although the extreme ends of the duration vary from 3 days to 3 years. Performance Guarantees has now being introduced and most of the transactions are working on 'back-to-back' arrangements. Pricing of power also varies with time of flow of power, establishing differentiable characteristics like 'Peak', 'Off-Peak' and 'Round-the-Clock'.

### **6.19 Conclusion**

New management philosophy and principles are required for real-time operation, maintenance, and up gradation of National electricity Market. The Consultation process for the above is in progress and it is expected that by mid 2004 the final regulations for the same will be out. This will bring in more clarity in the market and

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probably increase the number of Market player consequently deepening the Electricity Market.

Traditionally there have been many impediments to trading in the Electricity market of India such as Demand-Supply Imbalance; Power Grid Underdeveloped; Lack of Open Access; Single Buyer Model and Bankrupt Utilities. The electricity Act 2003 has envisioned amelioration of these difficulties by Deregulating Generation; Increased investment in Transmission And creation of National grid; Surplus Capacity through increased investment by Independent Power Producers and Multiple Buyer Model.

## UNIT 7

### OPEN ACCESS

*The illiterate of the twenty first century will not be those who cannot read or write, but those who cannot learn, unlearn and relearn*  
Alvin Toffler

#### 7.1 Background

To understand the concept open Access Imagine a toll road where the operator has a right to choose as to who can use the road. This will be anti competitive and monopolistic venture. Similarly it would be anticompetitive and monopolistic if the Electricity Utility has these rights. To make the Electricity Market competitive it would be worthwhile to Separate the Carriage (Fixed network like wires) from Content (Moving Element like Energy). This is precisely what the Electricity Act aims at. The Electricity Transmission and Distribution lines are also being opened up on the same lines.

#### 7.2 Definition of Open Access

Section 2(47) defines that “open Access means the non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission”

#### 7.3 Open Access in transmission

##### 7.3.1 Pricing Strategy for Transmission

The most appropriate pricing strategy for determining Transmission pricing in a large country like India needs to balance

## First Draft

between various objectives. Besides being simple and practical it must lead to efficient use of resources; must properly compensate the owner of the carriage business; must promote efficient use of resources. As India has newly opened up the market the Scheme must also provide level playing field to the New transmission utilities and entities using the transmission facility.

The market forces should be allowed to operate and create correct economic signals for the placement of Generation facility and new lines.

The Concept based on congestion rent will not be appropriate because it incentivises the transmission licensee to have constraints in his system. An ideal Transmission Service Charge (TSC) should be –

- Distance Sensitive
- Location Sensitive
- Direction Sensitive

The Open Access Wheeling Charges(OAWC) will encourage economic transactions, But this should not discourage transmission Charge based commitment otherwise who would invest in the National grid.

The Various methods of Transmission pricing are -

- The Contract Path Method
- Incremental Postage Stamp Method

The Focus of Development has changed from regional to national. In transmission also the main objective is to develop a national Grid. Therefore it is crucial that tariff design should also be based on a national pool. However for strategic implications the design can have a regional system

The CERC Order of November 2003 provides for open Access in Inter-State Transmission

### **7.3.2 CERC Order on Open Access in Inter-State transmission(November 2003)**

## First Draft

The salient features of the order are as follows-

- CERC will have jurisdiction to specify regulations for open Access for inter-State transmission irrespective of who owns the assets. It is immaterial whether the conveyance of electricity is across the territory of an intervening State or the conveyance is within the state which is incidental to the inter-state transmission of electricity.
- Existing Postage stamp method of pricing to continue. It is also provided that the importing utility will pay in case of Inter-regional transaction. The CERC may modify its views on transmission pricing mechanism through consultation.
- Long term customer will have allotment priority over the short term customer and within the same category the request for service of longer duration will get preference to use the transmission facility.
- Nodal agency to facilitate the open Access for inter state transmission shall be CTU and RLDC. It is also provided that special energy meters shall be installed by the direct as well as the embedded customer.

## 7.4 Open Access in Distribution

### 7.4.1 Open access in the Distribution System

Section 42 Subsection 2 provides for the manner of Introduction of open access .

The State Commission shall introduce open access in the distribution network within the territorial jurisdiction of the state. The introduction of open access will be subject to following conditions-

- 1)Cross subsidies
- 2)Other Operation Constraints

The Operational constraints may include overloaded network,  
.....

Furthermore the introduction of open access can be in such phases as may be determined by the state commission . There is no



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mention of minimum number of phases , there can be only one phase if the commission deems it to be appropriate. The state commissions must specify the phases within one year of the appointed date(Before 9<sup>th</sup> June 2004).The State Commission shall also specify the extent of wheeling charges for each phase.

#### **7.4.2 Distribution licensee as a common carrier**

In case of electricity is supplied by another licensee the distribution licensee shall provide open access to the second licensee as a common Carrier providing non discriminatory open Access.

#### **7.4.3 Nodal Agency**

For Day long and Part Day open access customer Regional Load Dispatch Centre can be the Nodal Agency and Similarly for Long term and Short Term Customer seeking access for more then one month the National Load dispatch Centre can be the Nodal Agency. Probably this can be the first step for establishment of a regional and or National Power Exchange for India.

Another Scheme can be based on dynamic declaration of prices by transmission service provider and customer replacing each other through higher prices and duration bids.

#### **7.4.4 Open Access is only for Surplus Capacity**

The Open Access in India according to The Electricity Act is only for surplus capacity.

#### **7.4.5 Time Frame for Introduction of Open Access in Distribution Network**

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The Electricity Act 2003 does not provide a time frame for the introduction of Open Access in the distribution Network. This effectively means that if the State Electricity Regulatory Commission wishes it can extend the introduction of Open Access to duration which can defeat the purpose of this Act. Therefore the Government has introduced an Amendment Bill Which will add following proviso to the Section 42(2) of the Electricity Act –

*“Provided also that the State Commission shall, not later than five years from the date of commencement of the Electricity Amendment Act 2003, by regulations provide such open access to all consumers who require a supply of electricity where the maximum power to be made available at any time exceeds 1 Mega Watt”.*

This will effectively reduce the scope of discretion of SERC and lead to introduction of retail competition earlier in the India Electricity Market.

## 7.5 Parallel Distribution Network (PDN)

This is a different concept than open Access. Section 14 Proviso 6 provides that the Appropriate Commission may grant a license for parallel Distribution Network provided the applicant meets the additional requirement specified by the Central Government and the act also states that no such applicant, who complies with all the requirements for the grant of license, shall be refused grant of license on the ground that there already exists a licensee in the same area for the same purpose.

Recently Reliance Energy has applied for Parallel Distribution Network in five Urban areas of Maharashtra. The application is under active consideration of Maharashtra Electricity Regulatory Commission.

## 7.6 Availability Based Tariff & Open Access

The Implementation of Availability Based Tariff has put in place The Day ahead (Scheduling) Market for entire India. Though it took some time to implement the same in all regions of India but it is great

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achievement and a stepping stone for further reforms in the Power Industry. Due to ABT there is a mark shift in the transmission Charge from usage based transmission Charge to Access based transmission Charge.

## **7.7 Conclusion**

Open Access in telecom is called "Interconnections" and in case of roads it is known as Public Service.

International Experience of Open Access has been good. When Open Access was introduced in United Kingdom the prices of Electricity fell down by 30%. The policy makers in India also it seems are aiming for the same, but due to over neglected system the experts are of opinion that in short run (3 to 5 years) the prices will rise but afterward the real prices it is proposed will decline.

Open Access is a Debatable issue and there are many unresolved questions and answers which the power industry needs to debate upon. It will take some time for complete implementation of the same. As of now open Access would work on the principle of "As-is-Where-is" "As-available-when-available" basis. However the Order of the CERC has been the first step in the right direction.

## UNIT 8

# ELECTRICITY TARIFF

*“The basic issue is how to make money selling something everybody wanted free”  
Abheek Burman, The Economic Times*

### 8.1 Background

The financial strategy of the Commission helps generate resources for the required growth of the power sector. Tariff Setting is an important instrument of Economic Regulation and is the main source of resource mobilization. Various State Governments have already released Consultation Paper on Tariff Principles. The Andhra Pradesh paper is very forward looking and directly emphasizes the importance of “Capacity to Pay” Principle.

From the view point of Consumers the indicator of performance is –Firstly -Tariff. Secondly - Quality of Supply including reliability , frequency , and voltage. And Finally -Quality of Consumer Service including redressal of grievance and promptness of new connection. And the order of priority in a developing economy is also the same. Tariff being most important component of performance indicator.

Tariff is a means of economic regulation and Objective of Economic regulation as enumerated by Usha Ramchandran of Administrative Staff College are-

- a. To improve efficiency in the Industry
- b. To prevent market power abuse
- c. To build investor confidence to attract investment
- d. To build consumer confidence
- e. To address public Policy Goals

Part VII of the Electricity Act is concerned with economic regulation through tariff. Section 61 states that

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*“The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following namely :-*

- (a) the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;*
- (b) the generation transmission, distribution and supply of electricity are conducted on commercial principles;*
- (c) the factors which would encourage competition efficiency economical use of the resources, good performance and optimum investments;*
- (d) safeguarding of consumers interest and at the same time, recovery of the cost of electricity in a reasonable manner;*
- (e) the principles rewarding efficiency in performance;*
- (f) multiyear tariff principles;*
- (g) that the tariff progressively reflects the cost of supply of electricity, and also, reduces and eliminates cross-subsidies within the period to be specified by the Appropriate Commission;*
- (h) the promotion of co-generation and generation of electricity from renewable sources of energy;*
- (i) the National Electricity Policy and tariff policy”*

However the terms and conditions for determination of tariff under the *Electricity (supply) Act, 1948*, the *Electricity Regulatory Commissions Act, 1998* and the enactments specified in the Schedule as they stood immediately before the appointed date, shall continue to apply for a period of one year or until the terms and conditions for tariff are specified under this section, whichever is earlier.

## 8.2 Determination of tariff<sup>38</sup>

The Appropriate Commission shall determine the tariff for-

- (a) supply of electricity by a generating company to a distribution licensee. However In case of shortage of supply of electricity, the Appropriate Commission may, fix the minimum and maximum ceiling of tariff for sale or purchase of electricity
- (b) transmission of electricity;
- (c) wheeling of electricity;

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<sup>38</sup> Section 62

First Draft

(d) Retail sale of electricity – However to promote competition the commission may fix only maximum ceiling of tariff for retail sale of electricity.

### **8.3 Equality of Treatment**

It is obligatory for the Commission, that while determining the tariff, it shall not show undue preference to any consumer of electricity. However the commission may differentiate according to the-

- consumers load factor,
- power factor,
- voltage,
- total consumption of electricity during any specified period
- the time at which the supply is required or
- the geographical position of any area,
- the nature of supply and
- the purpose for which the supply is required.

### **8.4 Frequency of tariff**

The Principle of “one tariff structure for at least one year” has to be followed generally but in case of any exigencies they can be amended.

### **8.5 Consumer Protection**

If any licensee or a generating company recovers a price or charge exceeding the tariff determined by the commission the excess amount shall be recoverable by the person who has paid such price or charge along with interest equivalent to the bank rate without prejudice to any other liability incurred by the licensee. That means the consumer can approach the consumer court or other institutions also for compensation if the licensee has extracted excess charge.

## **8.6 Determination of tariff by bidding process<sup>39</sup>**

The Appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government. The Guidelines for the same are yet to be issued by The CERC as of January 2004.

## **8.7 Procedure for tariff order<sup>40</sup> (Annual Revenue Requirement)**

An application for determination of tariff shall be made by a generating company or licensee in such manner and accompanied by such fee, as may be determined by regulations. Every applicant shall publish the application, in such abridged form and manner, as may be specified by the Appropriate Commission. The determination of tariff is a time bound exercise. The Orders must be passed within one hundred and twenty days from receipt of an application after considering all suggestions and objections received from the public. The Act does not distinguish between received or Admitted therefore the discretion of the commission has been reduced by using the words received.

The Commission can take following actions based on the submissions-

- 1) Issue a tariff order accepting the application with such modifications or such conditions as may be specified in that order;
- 2) Reject the application for reasons to be recorded in writing if such application is not in accordance with the provisions of this Act and the rules and regulations made there under or the provisions of any other law for the time being in force. However the applicant shall be given a reasonable opportunity of being heard before rejecting his application.

The Appropriate Commission shall, within seven days of making the order, send a copy of the order to the Appropriate Government,

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<sup>39</sup> Section 63

<sup>40</sup> Section 64

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the Authority, and the concerned licensees and to the person concerned.

Section 64(5) States that *“Notwithstanding anything contained in Part X, the tariff for any inter-State supply, transmission or wheeling of electricity, as the case may be, involving the territories of two States may, upon application made to it by the parties intending to undertake such supply, transmission or wheeling, be determined under this section by the State Commission having jurisdiction in respect of the licensee who intends to distribute electricity and make payment therefore”*

This effectively is the exception to the authority of CERC which primarily looks into the matter of Interstate transfer of Electricity. If the two parties agree to approach a state Commission which has the jurisdiction of the area of supply of Electricity then the state Commissions order shall be valid.

## **8.8 Provision of subsidy by State Government<sup>41</sup>**

If the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the State Commission, the State Government shall, pay in advance and in such manner as may be specified, the amount to compensate the person affected by the grant of subsidy in the manner the State Commission may direct, as a condition for the licensee or any other person concerned to implement the subsidy provided for by the State Government. It is also Provided that no such direction of the State Government shall be operative if the payment is not made in accordance with the provisions contained in this section and the tariff fixed by the State Commission shall be applicable from the date of issue of orders by the Commission in this regard.

There are various ways of tariff determination and the two most important ones used in India are as shown in the Box.

### **Method of Tariff Determination**

#### **Cost of Service Approach(COS)**

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<sup>41</sup> Section 64



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The provisions of the Schedule VI of the Electricity Act 1910 provide for this method of tariff determination. This is a cost plus approach.

### **Performance based Ratemaking plan(PBR)<sup>42</sup>**

This approach while recognizing the revenue requirement of the utility provides incentives for improving efficiency and reducing costs. This also eliminates the tendency of utilities under the cost plus regulation to be more capital intensive (Averch-jhonson effect), then they would be in competitive environment. PBR empowers the electricity utility by enabling them to determine future course of action which leads to greater efficiency and certainty.

## **8.9 Fuel Adjustment Clause**

Around 70% of the generation cost is the cost of the fuel and it is essential that to maintain the viability of the financial condition of the Generators any increase in the fuel cost must be taken into consideration. The Fuel adjustment Clause does exactly the same. It allows recovery of every additional rupee spent on fuel. They provide the Generation utility zero cost insurance policy.

## **8.10 Availability Based Tariff (ABT)**

CERCs ABT order has brought in much needed discipline in the electricity grids. All regions have implemented ABT. The last region to introduce ABT was the North Eastern Region, Which introduced the same on October 1, 2003. The Complete implementation of ABT has reduced the possibilities of grid collapse in future.

### **Availability based Tariff In phases. Following were the dates when ABT was Implemented in various regions.**

Western Region	July1, 2002
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<sup>42</sup> NTPC has successfully applied PBR after the implementation of K.P.Rao Committee .

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Northern Region	December 1, 2002
Southern Region	January 1, 2003
Eastern Region	April 1, 2003
North Eastern Region	October 1, 2003

There are some problems with ABT from the generators point of view<sup>43</sup>. While the System has stabilized and the cycles are maintained. The Generators face certain difficulties. They have to give 24 hour advance notice. If Generators fall short of schedule penalty has to be paid. But if there is excess of generation it goes for free to the buyer. It seems that generators cannot adjust the shortfall even if there is a demand in the grid. What is happening is that since the generators have to give a guaranteed schedule, the tendency is to be very cautious. If the generators do better than what they promise then they seem to loose<sup>44</sup>.

Interestingly the ABT regime has been able to ensure grid discipline to a great extent recently PGCIL has filed petition in CERC against MPSEB for not paying UI (unscheduled Interconnect charges arrears of 114 crore).

## 8.11 Conclusion

Free Power supply to farmers has ended in India<sup>45</sup>. This is probably the first step towards rationalization of Tariff to commensurate with the Cost of Service. Secondly the Recovery of Tariff arrears has become a major issue. The distribution licensee can adopt innovative measures to facilitate recovery of tariff. The example being that the tariff arrear could be collected in 12 to 24 month installment. Recently CESC has decided to recover tariff arrears over 12 years.

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<sup>43</sup> March 12, 2003 The Hindu Business Line, New Delhi.

<sup>44</sup> For E.g. The Neyveli lignite Corporation is expected to loose 150 Crore in one year because of implementation of ABT.

<sup>45</sup> With TNERC deciding to impose nominal charges for supply of electricity to farmers.

## UNIT 9

# REORGANIZATION OF STATE ELECTRICITY BOARDS (SEB'S)

*Prosperity through Electricity*  
*Motto of CSEB*

### 9.1 Background

Providing reliable power at an affordable tariff has always been the prime aim of any Power reform in India. However the existing setup is not meeting the expectations it out to fulfill. One of the way out is to restructure the industry. Part XIII of the Electricity Act 2003 provides for the broad mechanisms for Reorganization of the State Electricity Boards.

### 9.2 Vesting of property SEB in State Government<sup>46</sup>

From the effective date (Date of publication of Transfer Scheme or the Date provided for by the State Government) any property, interest in property, rights and liabilities which immediately before the effective date belonged to the State Electricity Board shall vest in the State Government. The above-mentioned shall be such as will agreed upon the State Government and the Electricity Board

Any property, interest in property, rights and liabilities vested in the State Government under the Transfer Scheme shall be re-vested by the State Government in a Government company or in a company or companies, along with such other property, interest in property, rights and liabilities of the State Government as may be stipulated in such Transfer scheme. The terms shall be agreed between the State Government and such company or companies being State Transmission Utility or generating company or transmission licensee or distribution licensee, as the case may be.

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<sup>46</sup> Section 131 of the Electricity Act 2003

### **9.3 Transfer Value on the basis of Revenue Potential**

The Act also provides that the transfer value of any assets transferred hereunder shall be determined as far as may be based on the revenue potential of such assets. The terms shall be such as may be agreed between the State Government and the State Transmission Utility or generating company or transmission licensee or distribution licensee, as the case may be.

### **9.4 Transfer to Non State Entity**

In case of transfer of the assets to a non state entity the Scheme shall give effect to the transfer only for fair value which has to be paid to the State Government by the transferee. The Act also provides that when a transaction of any description is effected in pursuance of a transfer scheme, it shall be binding on all persons including third parties and the consent of third party is immaterial

### **9.5 Transfer Scheme**

The Act provides that a transfer scheme under this section may provide for -

*“(a) for the formation of subsidiaries, joint venture companies or other schemes of division, amalgamation, merger, reconstruction or arrangements which shall promote the profitability and viability of the resulting entity, ensure economic efficiency, encourage competition and protect consumer interests;*

*(b) Define the property, interest in property, right and liabilities to be allocated-*

*(i) by specifying or describing the property, rights and liabilities in question ; or*

*(ii) by referring to all the property, interest in property, rights and liabilities comprised in a described part of the transferor's undertaking; or*

*(iii) partly in one way and partly in the other;*

- (c) provide that any rights or liabilities stipulated or described in the scheme shall be enforceable by or against the transferor or the transferee;*
- (d) impose on the transferor an obligation to enter into such written agreements with or execute such other instruments in favor of any other subsequent transferee. As may be stipulated in the scheme;*
- (e) mention the functions and duties of the transferee;*
- (f) make such supplemental, incidental and consequential provisions as the transferor considers appropriate including proposition stipulating the order as taking effect; and*
- (g) provide that the transfer shall be provisional for a stipulated period.”*

The Electricity Board shall cease to be charged with and shall not perform the functions and duties with regard to transfers made on and after the effective date.

## **9.6 Revenue from the Sale**

Section 132 provides that if the Board or any utility owned or controlled by the Government is sold or transferred in any manner to a non Government entity the proceeds from such sale or transfer shall be utilized in the following priority –

The dues (including retirement benefits due) to the officers and employees of such Board or utility, who have been affected by the aforesaid sale or transfer, shall be considered first and the payment of debt or other liabilities of the transferor as may be required by the existing loan covenants shall be considered second.

## **9.7 Officers and employees<sup>47</sup>**

The Transfer Scheme may also provide for the transfer of the officers and employees to the transferee. The personnel shall hold office or service under the transferee on such terms and conditions as may be determined in accordance with the transfer scheme. The terms

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<sup>47</sup> Section 133

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and Conditions on the transfer of the employee shall not be less favorable than the pre-existing terms and conditions. Moreover the transfer can be provisional for a stipulated period. The act does not distinguish between any employee on the basis of his position.

## **9.8 Payment of compensation or damages on transfer<sup>48</sup>**

The Transfer of the employee under the provisions of this Act shall not entitle any person to approach the institutions made under *Industrial Disputes Act, 1947* or any other law. However the transfer scheme can provide anything to the contrary.

## **9.9 Remedy for Deteriorating financial Condition of SEB'S**

Due to various reasons the financial condition of the SEB's has been very unhappy. The Losses amounted to almost 30,000 crore. Outstanding dues to many Generating units have also been very high. To ameliorate the situation and to make SEBs financially viable the Government constituted Montek Singh Ahluwalia Committee. The salient features of the same are stated in the box. West Bengal will be the first state to issue bonds. These will be 15 years bond bearing a coupon rate of 7%. Hopefully this will to a great extent ameliorate the difficult financial condition of the SEB's. It will not be out of place to mention that Financial Debts to Railways is also very high in many cases. Interestingly the Railways is resorting to adjustment of outstanding dues against traction bills of some of the SEB's.<sup>49</sup>

## **Settlement Scheme between SEBs and CPSUs<sup>50</sup>**

- States to issue bonds through the Reserve Bank of India in favor of Central Power Sector Undertakings
- States to get a 60 per cent waiver on the surcharge for the one

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<sup>48</sup> Section 134 of the Electricity Act 2003

<sup>49</sup> March 12, 2003 The Hindu Business Line, New Delhi

<sup>50</sup> Recommendation of Montek Singh Ahluwalia Committee

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time settlement.

- Bonds will have tenure of fifteen years , and a five year moratorium on their redemption.
- Bonds will carry an interest rate of 8.5 per cent , which will be tax free.
- Of the total bonds issued in favor of CPSUs only ten per cent can be traded in the market.

### **9.10 Employees of SEB's**

Regarding the SEBs Employee uncooperative behavior and attitude retrenchment is not the answer, rather we need to make them accountable and offer incentive for better performance. Moreover these employees have vast and long experience which needs to be tapped in an innovative way using new management and Organizational Development Strategies.

### **9.11 Conclusion**

Electricity Boards have much strength which can be leveraged for privatization or restructuring. Some of the strengths are–

- 1.Wide Spread Network
- 2.Experienced and Skilled Manpower
- 3.Real estate at key locations
- 4.Consumer Base
- 5.Consumer Data

However it will greatly depend on the ingenuity of the State leadership to leverage the same to the best advantage of the consumers.

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# PART-C

## REGULATION AND CO-ORDINATION



# **UNIT 10**

## **CENTRAL ELECTRICITY AUTHORITY**

*The essence of good governance lies in avoiding over or under regulation*  
*TN Thakur, PTC*

### **10.1 Background**

Central Electricity Authority was established under section 3 of the Electricity Supply Act 1948. Many of the regulatory functions were vested in the Authority. With the new Electricity Act 2003 coming into force the role of CEA has been substantially been modified. Under the new dispensation CEA will be playing more of a advisory role, a facilitators role, such as laying down standards and regulations and advancing the skills of people in the Electricity industry.

### **10.2 Members of CEA**

CEA shall consist of not more than 14 members including its Chairperson. Maximum of eight members shall be full time members and they shall be appointed by the Central Government. The Central Government may appoint any person, eligible to be appointed as Member of the Authority, as the Chairperson of the Authority, or, designate one of the full time Members as the Chairperson of the Authority.

### **10.3 Qualification of the members**

Section 70(5) states that the members of the Authority shall be appointed from amongst persons of ability, integrity and standing who have knowledge of, and adequate experience and capacity in, dealing with problems relating to engineering, finance, commerce, economics

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or industrial matters, and at least one Member shall be appointed from each of the following categories, namely :-

- engineering with specialization in design, construction, operation and maintenance of generating stations;
- engineering with specialization in a transmission and supply of electricity;
- applied research in the field of electricity;
- applied economics, accounting, commerce or finance.

Section 71 also provides that No Member of the Authority shall have any share or interest, whether in his own name or otherwise, in any

- company or
- other body corporate or
- an association of persons (whether incorporated or not) or
- a firm engaged in the business of generation, transmission, distribution and trading of electricity or
- fuel for the generation thereof or
- in the manufacture of electrical equipment.

This is to protect the integrity independence of the authority.

## 10.4 General Functioning of CEA

The Chairperson and all the Members of the Authority shall hold office during the pleasure of the Central Government. Chief Executive of the Authority shall be the Chairperson..

The headquarters of CEA shall be at Delhi. CEA shall meet at head office or any other place at such time as the Chairperson may direct, and shall observe such rules of procedure in regard to the transaction of business at its meetings (including the quorum at its meetings) as it may specify.

All questions which come up before any meeting of the Authority shall be decided by a majority of votes of the Members present and voting, and in the event of an equality of votes, the Chairperson or the person presiding shall have the right to exercise a second or casting vote.

All orders and decisions of the Authority shall be authenticated by the Secretary or any other officer of the Authority duly authorized by the Chairperson in this behalf.

## **10.5 Function and duties of Authority<sup>51</sup>**

Reforming and developing the Power industry of India is a challenging task. The CEA has been envisaged as a specialist body to give technical advice to the Central Government and perform such functions and duties as the Central Government may prescribe. The duties of CEA may include-

- advise the Central Government on the matters relating to the national electricity policy, formulate short- term and perspective plans for development of the electricity system and co-ordinate the activities of the planning agencies for the optimal utilization of resources to sub serve the interests of the national economy and to provide reliable and affordable electricity for all consumers;
- specify the technical standards for construction of electrical plants, electric lines and connectivity to the grid;
- specify the safety requirements for construction, operation and maintenance of electrical plants and electric lines;
- specify the Grid Standards for operation and maintenance of transmission lines;
- specify the conditions for installation of meters for transmission and supply of electricity.
- Promote and assist in the timely completion of schemes and projects for improving and augmenting the electricity system ;
- Promote measures for advancing the skill of persons engaged in the electricity industry;
- Advise the Central Government on any matter on which its advice is sought or make recommendation to that Government on any matter if, in the opinion of the Authority, the

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<sup>51</sup> Section 73 of The Electricity Act 2003

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- recommendation would help in improving the generation, transmission, trading, distribution and utilization of electricity;
- Collect and record the data concerning the generation, transmission, trading, distribution and utilization of electricity and carry out studies relating to cost, efficiency, competitiveness and such like matters;
  - Make public from time to time the information secured under this Act, and provide for the publication of reports and investigations;
  - Promote research in matters affecting the generation, transmission, distribution and trading of electricity;
  - Carry out, or cause to be carried out, any investigation for the purposes of generating or transmitting or distributing electricity;
  - Advise any state Government, licensees or the generating companies on such matters which shall enable them to operate and maintain the electricity system under their ownership or control in an improved manner and where necessary, in coordination with any other Government, licensee or the generating company owning or having the control of another electricity system;
  - Advise the Appropriate Government and the Appropriate Commission on all technical matters relating to generation, transmission and distribution of electricity;
  - Discharge such other functions as may be provided under this Act. Certain powers and directions.

### **10.6 Power to require statistics and returns**

By virtue of Section 74 the CEA can require statistics and returns from any entity in the power industry. It shall be the duty of every licensee, generating company or person generating electricity for its or his own use to furnish to the Authority such statistics, returns or other information relating to generation, transmission, distribution, trading and use of electricity as it may require and at such times and in such form and manner as may be specified by the Authority.

### **10.7 Directions by Central Government to Authority**

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In the discharge of its functions, the Authority shall be guided by such directions in matters of policy involving public interest as the Central Government may give to it in writing.

### **10.8 Safety and electricity supply<sup>52</sup>**

The CEA may, in consultation with the State Government, specify suitable measures for :-

- protecting the public ( including the persons engaged in the generation, transmission or distribution or trading) from dangers arising from the generation, transmission or distribution or trading of electricity, or use of electricity supplied or installation, maintenance or use of any electric line or electrical plant;
- eliminating or reducing the risks of personal injury to any person, or damage to property of any person or interference with use of such property;
- prohibiting the supply or transmission of electricity except by means of a system which conforms to the specifications as may be specified;
- giving notice in the specified form to the Appropriate Commission and the Electrical Inspector, of accidents and failures of supplies or transmissions of electricity;
- keeping by a generating company or licensee the maps , plans and sections relating to supply or transmission of electricity;
- inspection of maps, plans and sections by any person authorized by it or by Electrical Inspector or by any person on payment of specified fee;
- specifying action to be taken in relation to any electric line or electrical plant, or any electrical appliance under the control of a consumer for the purpose of eliminating or reducing the risk of personal injury or damage to property or interference with its use.

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<sup>52</sup> Section 53 of The Electricity Act 2003

## **10.9 Conclusion**

The need for a non-partisan, professional organization at the centre to focus on national planning, optimum resource management, co-ordination and monitoring has become crucial for maintaining optimal growth of the power sector and ensuring energy security. CEA is uniquely positioned to have an overall perspective and is fully equipped to play a pivotal role and to simultaneously perform the role of a facilitator and an advisor to the nation on the power sector development.

# UNIT 11

## INDEPENDENT REGULATORY COMMISSION (IRC)

*The Key to the success and failure of the Act shall lie in its implementation, which will depend largely on the maturity, foresight and independence of the regulators.  
India Infrastructure May 2003.*

### 11.1 Background

The regulation strategy of the Government is aimed at protecting consumer interests and making the sector commercially viable. Electricity Act 2003 is a momentous development in the Indian Power sector, as it seeks to create liberal framework of development for the power sector by distancing Government from regulation. Most of the regulatory functions which were performed by the Government have been entrusted to the Independent regulatory Commission at the Central as well as the state level. Under the Electricity Act the Regulators are assured functional independence.

Electricity is a right that many expect to be cheap and easily available. However it must be accepted that Regulators can not be efficient managers to supply cheap electricity. They can only create the enabling environment within which efficient managers can function.

### 11.2 Why do we need strong Regulators

Electricity is a natural monopoly and to protect the consumer from the uninvited effects of a monopolistic entity we need a strong regulator. Over 30 years ago Chicago economist George Stigler<sup>53</sup> showed how regulators ,created to protect consumers from the

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<sup>53</sup> The Economic Times of April 30, 2003

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monopolies end up doing the exactly opposite : siding with the business to squeeze users .Stigler argued that business gain big time from weak regulation and have a more powerful interest to weaken these institution then consumers ,who are all over the place ,get hit in small ways by monopolistic practices but cant organize as effectively as business . So , companies tempt watch dogs and gradually turn policy in there favor, a process he calls regulatory capture.

### **11.3 Influence of Government on regulators**

Its wrong to say that regulators are easily influenced by the government .ones someone dons the hat of a regulator there is responsibility on you of fair and transparent decision making process .Moreover Decisions which blatantly favor one can not stand the test of legal scrutiny and hence have no meaning .You also have the option of approaching the ATE and thereon to the Supreme Court.

### **11.4 Members of CERC**

CERC consists of five members namely :-

- Chairperson
- Three other Members;
- Chairperson of CEA is Member ex officio.

### **11.5 Appointment of Chairperson and Members**

The Chairperson and Members of the Central Commission are appointed by the Central Government on the recommendation of the Selection Committee.

### **11.6 Central Selection Committee**

The Central Government shall, for the purposes of selecting the Members of the Appellate Tribunal and the Chairperson and Members



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of the Central Commission, constitute a Six member Selection Committee consisting of :-

- Member of the Planning Commission in charge of the energy sector. He shall be the Chairperson of the Selection Committee;
- Secretary-in-charge of the Ministry of the Central Government dealing with the Department of Legal Affairs(Member);
- Chairperson of the Public Enterprises Selection Board (Member);
- A person to be nominated by the Central Government from amongst persons holding the post of chairperson or managing director, by whatever name called, of any public financial institution specified in section 4A of the Companies Act, 1956(Member).
- A person to be nominated by Central Government by notification, from amongst persons holding the post of director or the head of the institution, by whatever name called, of any research, technical or management institution for this purpose.
- Secretary-in-charge of the Ministry of the Central Government dealing with power(Member);

Power Secretary shall be the Convener of the Selection Committee. It is also provided that The Central Government shall within one month from the date of occurrence of any vacancy by reason of death, resignation or removal of a Member of the Appellate Tribunal or the Chairperson or a Member of the Central Commission and six months before the superannuation or end of tenure of the Member of the Appellate Tribunal or Member of the Central Commission, make a reference to the Selection Committee for filling up of the vacancy.

The Selection Committee is mandated to finalize the selection of the Chairperson and Members of the ATE and CERC within three months from the date on which the reference is made to it. It is also provided that the Selection Committee shall recommend a panel of two names for every vacancy referred to it. The Electricity Act also provides that the selection Committee shall satisfy itself that such person does not have any financial or other interest which is likely to affect prejudicially his functioning as a Chairperson or member. But the Act does not provide the way to determine the same

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However no such satisfaction is required in case of the appointment of a of a person as the Chairperson of the Central Commission where such person is, or has been, a Judge of the Supreme Court or the Chief Justice of a High Court.

### **11.7 Qualifications for appointment of Members of CERC<sup>54</sup>**

The Chair person and the Members of the Central Commission shall be persons having adequate knowledge of, or experience in, or shown capacity in, dealing with, problems relating to engineering, law; economics, commerce, finance or management and shall be appointed in the following manner, namely:-

- one person having qualifications and experience in the field of engineering with specialization in generation, transmission or distribution of electricity;
- one person having qualifications and experience in the field of finance;
- two persons having qualifications and experience in the field of economics commerce, law or management. However not more than one Member shall be appointed under the same category. However if desired by the Central Government it can appoint any person as the Chairperson from amongst persons who is, or has been, a judge of the Supreme Court or the Chief Justice of a High Court. However if a judge is appointed as a chairperson it shall be after consultation with the Chief Justice of India.

### **11.8 Functions of Central Commission**

Section 79 of the Act provides for the functions of CERC. It shall discharge the following functions, namely :-

- to regulate the tariff of generating companies owned or controlled by the Central Government;

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<sup>54</sup> Section 77 of the Electricity Act 2003

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- to regulate the tariff of generating companies other than those owned or controlled by the Central Government specified in the previous clause , if such generating companies enter into or otherwise have a composite scheme for generation and sale of electricity in more than one State.
- to regulate the inter-State transmission of electricity;
- to determine tariff for inter-State transmission of electricity;
- to issue licenses to persons to function as transmission licensee and electricity trader with respect to their inter-State operations;
- to adjudicate upon disputes involving generating companies or transmission licensee in regard to matters connected with abovementioned entities and to refer any dispute for arbitration;
- to levy fees for the purposes of this Act;
- to specify Grid Code having regard to Grid Standards.
- To specify and enforce the standards with respect to quality, continuity and reliability of service by licensees;
- To fix the trading margin in the inter –State trading of electricity, if considered, necessary;
- To discharge such other functions as may be assigned under this Act.

### **11.9 Advisory role of the Central Commission**

The Central Commission shall advise the Central Government on all or any of the following matters namely:-

- formulation of National Electricity Policy and tariff policy
- promotion of competition efficiency and economy in activities of the electricity industry;
- promotion of investment in electricity industry;
- any other matter referred to the central commission by that Government

### **11.10 CERC A Body Corporate**

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The CERC is a body corporate, having perpetual succession and a common seal with power to acquire, hold and dispose of property, both movable and immovable, and to contract and shall, by the said name, sue or be sued.

### **11.11 CERC is guided by Policy**

In discharge of its functions, the Central Commission shall be guided by the National Electricity Policy, National Electricity Plan and tariff policy published by the Central Government.

### **11.12 Licensing powers of CERC**

1. The Central Commission may, on the recommendations of the Appropriate Government , in accordance with the national policy<sup>55</sup> and in the public interest, direct, by notification that subject to such conditions and restrictions, if any, and for such period or periods, as may be specified in the notification, that following institutions will not require license to enter electricity market –

- local authority,
- Panchayat Institutions
- users association,
- co-operative societies,
- non-governmental organizations or
- franchisees<sup>56</sup>

2. The Central Commission may, on an application made to it grant a licence to any person<sup>57</sup> –

- (a) To transmit electricity as a transmission licensee; or

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<sup>55</sup> formulated under section 5

<sup>56</sup> Sec 13. Power to Exempt from requirement of license

<sup>57</sup> Sec 2 states that “Person” shall include any company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person.

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- (b) To distribute electricity as a distribution licensee; or
- (c) To undertake trading in electricity as an electricity trader,

3. Where a person makes an application to act as a licensee, the Appropriate Commission shall, as far as practicable, within ninety days after receipt of such application-

- (a) Issue a licence subject to the provisions of this Act and the rules and regulations made thereunder; or
- (b) Reject the application for reasons to be recorded in writing if such application does not conform to the provisions of this Act or the rules and regulations made thereunder or the provisions of any other law for the time being in force<sup>58</sup>.

It is also Provided that no application shall be rejected unless the applicant has been given an opportunity of being heard.

4. The Central Commission may specify any general or specific conditions which shall apply either to a licensee or class of licensees and such conditions shall deemed to be conditions of such licence<sup>59</sup>.

5. The Central Commission shall, within one year from the appointed date (10<sup>th</sup> June 2003), specify any general or specific conditions of license<sup>60</sup> applicable to the licensees who are considered to be deemed licensee under the Act (Preexisting Electricity utilities fall under this category)

### **11.13 State electricity Regulatory Commission**

It is mandated that, within six months from the appointed date (10 June 2003) the State Governments by notification, constitute State Electricity Regulatory Commission. However the State Electricity Regulatory Commission, established by a State Government under the-

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<sup>58</sup> Sec 15 (6)

<sup>59</sup> Sec 16

<sup>60</sup> Proviso to Sec 16

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- Electricity Regulatory Commission Act, 1998 or
- The Orissa Electricity Reform Act, 1995 or
- The Haryana Electricity Reform Act 1997 or
- The Andhra Pradesh Electricity Reform Act, or
- The Uttar Pradesh Electricity Reform Act, 1999 or
- The Karnataka Electricity Reform Act, 1999 or
- The Rajasthan Electricity Reform Act, 1999 or
- The Delhi Electricity Reforms Act, 2000 or
- The Madhya Pradesh Vidyut Sudhar Adhiniyam, 2000

and functioning as such immediately before the appointed date, shall be the SERC for the purposes of this Act and the Chairperson, Members, Secretary, and officers and other employees thereof shall continue to hold office, on the same terms and conditions on which they were appointed under those Acts:

#### **11.14 SERC A Body Corporate**

The SERC shall be body corporate, having perpetual succession and a common seal, with power to acquire, hold and dispose of property, both movable and immovable, and to contract and shall, by the said name, sue or be sued.

#### **11.15 Members of SERC**

The SERC shall consist of not more than three Members, including the Chairperson.

#### **11.16 Appointment of Chairperson and Members of SERC**

The Chairperson and Members of the State Commission shall be appointed by the State Government on the recommendation of a Selection Committee constituted for the purpose of recommending the names for the members of ATE and CERC..

### **11.17 Joint Commission<sup>61</sup>**

There are certain states which due to micro electricity system or due to integrated and coordinated electricity system may wish to have a joint Electricity system with the neighboring states. By virtue of section 83 a joint Commission may be constituted by an agreement to be entered into –

- by two or more Governments of States; or
- by the Central Government, in respect of one or more Union territories, and one or more Governments of States,

This arrangement may be in force for such period and shall be subject to renewal for each further period, if any, as may be stipulated in the agreement.

### **11.18 Composition of Joint Commission**

The Joint Commission shall consists of one Member from each of the participating States and Union territories and the Chairperson shall be appointed from amongst the Members by consensus, failing which by rotation.

### **11.19 Working of the Joint Commission**

Matters related to the functioning of the joint commission and the relation between the various states and the union territories participating in the joint commission and any other matter incidental consequential may be contained in the agreement. It is provided that the joint Commission shall determine tariff in respect of the participating States or Union territories separately and independently. However the Central Government may, if so authorized by all the

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<sup>61</sup> Section 83 of The Electricity Act 2003

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participating States, constitute a Joint Commission and may exercise the powers in respect of all or any of the, matters so specifically authorized by the participating States.

### **11.20 Qualification for appointment of Chairperson and Members of SERC**

The Chairperson and the Members of the States Commission shall be persons of ability, integrity and standing who have adequate knowledge of, and have shown capacity in, dealing with problems relating to engineering, finance, commerce, economics, law or management. The State Government may appoint any person as the Chairperson from amongst persons who is, or has been, a judge of a High Court and it shall be in consultation with the Chief justice of the High Court

The Chairperson or any other Member of the State Commission have been barred from holding any other office. The Chairperson shall be the Chief Executive of the State Commission.

### **11.21 State Selection Committee**

The only function of the State Selection committee shall be selection of members of state Commission. The composition of State selection Committee shall be –

- a person who has been a Judge of the High Court(Chairperson);
- the Chief Secretary of the concerned State(Member)
- the Chairperson of the CEA or the Chairperson of the CERC(Member);

However appointment of a judge of a high Court shall not be selected by the State selection committee.

### **11.22 Reference to the State selection Committee**



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The State Government shall, within

- one month from date of occurrence of any vacancy by reason of death, resignation or removal of the Chairperson or a Member and
- six months before the superannuation or end of tenure of the Chairperson or Member,

make a reference to the State Selection Committee for filling up of the vacancy. The state Selection Committee shall finalize the selection of the Chairperson and Members within three months from the date on which the reference is made to it. The State Selection Committee shall recommend a panel of two names for every vacancy referred to it. It is also mandated that before recommending any name Selection Committee shall satisfy itself that such person does not have any financial or other interest which is likely to affect prejudicially his functions as such Chairperson or Member, as the case may be.

## **11.23 Function of State Commission**

Section 86 states the functions of state electricity regulatory Commission. The following functions shall be discharged by the SERC-

- determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State;
- When open access is permitted by the SERC then SERC shall determine only the wheeling charges and surcharge only;
- regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies of licensees or from other sources through agreement for purpose of power for distribution and supply within the State;
- facilitate intra-State transmission and wheeling of electricity;
- issue licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;
- promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for

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connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;

- adjudicate upon the disputes between the licensees and generating companies and to refer any dispute for arbitration;
- levy fee for the purpose of this Act;
- specify State Grid Code consistent with the Indian Electricity Grid Code specified by the CERC;
- specify of enforce standards with respect to quality, continuity and reliability of service by licensees;
- fix the trading margin in the intra-State trading of electricity, if considered, necessary;
- discharge such other functions as may be assigned to it under this Act.

It is also mandated that in discharge of its functions, the State Commission shall be guided by the National Electricity Policy, National Electricity Plan and tariff policy published by the Central Government or the CEA as the case may be.

### **11.24 Advisory role of SERC**

The SERC shall advise the State Government on all or any of the following matters, namely:-

- promotion of competition, efficiency and economy in activities of the electricity industry;
- promotion of investment in electricity industry;
- recognition and restructuring of electricity industry in the State;
- matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.
- The State Commission shall ensure transparency while exercising its powers and discharging its functions.

### **11.25 SERC and Open access**

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**Open Access** <sup>62</sup> The State Commission shall introduce open access in phases within one year of the appointed date .The appointed date is 10<sup>th</sup> June 2003 therefore the open access must be introduced by state Commission by 10<sup>th</sup> June 2004.it is also provided that the State Commission may allow open access before the cross subsidies are eliminated on payment of a surcharge in addition to the charges for wheeling as may be determined by the State Commission.

It is also stipulated that such surcharge shall be utilized to meet the requirements of current level of cross subsidy within the area of supply of the distribution licensee. This effectively means that the amount given as surcharge will come back to the distribution licensee.

It is also mandated that such surcharge and cross subsidies shall be progressively reduced and eliminated.

Interestingly the fourth proviso to section 42 reads as-

*“Provided also that such surcharge shall not be leviable in case open access is provided to a person who has established a captive generating plant for carrying the electricity to the destination of his own use.”*

There can be two constructions of the abovementioned proviso-

**First construction-** A distribution licensee who also happens to generate electricity through a captive power plant can supply electricity in his area of electricity supply without paying any surcharge for carrying electricity to the destination of his own use .

This construction of the above mentioned proviso is also supported by the definition of Captive Generating plant as provided in Section 2 (8).<sup>63</sup>

**Second construction-**Captive power plant is a narrow term and must be confined to mean generating plant for use of one or a very limited number of consumers and specially industrial consumers. The

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<sup>62</sup> See Sec 42(2)

<sup>63</sup> “Captive generating plant” means a power plant set up by any person to generate electricity primarily for his own use and includes a power plant set up by any co-operative society or association of persons for generating electricity primarily for use of members of such co-operative society or association.

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distribution licensee having a large base of domestic consumer can not be said to have a captive power plant.

If first construction is accepted which seems to be correct on plain reading of the provisions then a distribution licensee does not need to pay surcharge for a captive power plant supplying electricity to his area of electricity supply.

**Additional Surcharge** <sup>64</sup>-Where the State Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the distribution licensee of his area of supply, such consumer shall be liable to pay an additional surcharge on the charges of wheeling, as may be specified by the State Commission, to meet the fixed cost of such distribution licensee arising out of his obligation to supply.

## **11.26 Terms of office and conditions of service of Members**

The Chairperson or other Members of CERC and SERC shall hold office for a term of five years from the date on which they enter upon their office. However the Chairperson or other Members in the CERC or the SERC shall not be eligible for re-appointment in the same capacity as the Chairperson or a Member in that Commission in which he had earlier held office as such. The maximum age limit prescribed is 65 years.

The salary, allowances and other terms and conditions of service of the Members, shall be prescribed by the concerned government and shall not be varied to their disadvantage after appointment.

However there is no bar on the Commission members being reemployed by the state Government. This could influence the state commission to take State – Friendly decisions. Many experts are of the opinion that a specific provision barring reemployment of the members

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<sup>64</sup> See Sec 42 (4)

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and chairmen under government service must be incorporated in the Act.

### **11.27 Resignation and removal**

A Member may –

- relinquish his office by giving in writing to the Appropriate Government a notice of not less than three months; or
- be removed from his office in accordance with the scheme for removal provided under section 90.

### **11.28 Two year moratorium from employment in relevant industry**

Any member ceasing to hold office as such shall :-

- not accept any commercial employment for a period of two years from the date he ceases to hold such office; and
- not represent any person before the Central Commission or any State Commission in any manner.

Commercial employment for the purpose of reemployment means in any capacity in any organization which has been a party to the proceedings before the Appropriate Commission or Employment in any capacity under, or agency of, a person engaged in trading, commercial, industrial business in electricity industry and includes a director of a company or partner of a firm in setting up practice either independently or as partner of a firm or as an advisor or a consultant.

### **11.29 Removal of Member(Section 90)**

The Central Government , in the case of a member of the CERC, and the state Government , in the case of a Member of the SERC, may by order remove from office any member if he-

(a) has been adjudged an insolvent;

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- (b) has been convicted of an offence which, in the opinion of the Appropriate Government, involves moral turpitude;
- (c) has become physically or mentally incapable of acting as Member;
- (d) has acquired such financial or other interest as is likely to affect prejudicially his functions as a Member;
- (e) has so abused his position as to render his continuance in office prejudicial to the public interest; or
- (f) has been guilty of proved misbehavior;

It is also provided that no Member shall be removed from his office on any ground specified in the above-mentioned clauses (d), (e) and (f) unless the Chairperson of the Appellate Tribunal on a reference being made to him in this behalf by the Central Government or the State Government, as the case may be, has, on an inquiry, held by him in accordance with such procedure as may be prescribed by the Central Government, reported that the Member ought on such ground or grounds to be removed.

### **11.30 Suspension of Members**

The Central Government or the State Government, as the case may be, may, in consultation with the Chairperson of the Appellate Tribunal suspend any Member of the CERC and SERC respectively until the Central Government or the State Government, as the case may be, has passed orders on receipt of the report of the Chairperson of the Appellate Tribunal, on such reference:

The provisions relating to suspension and removal shall not apply in case of Chairperson of the Appropriate Commission who, at the time of his appointment as such is a-

- sitting judge of the Supreme Court or
- the Chief Justice of a High Court or a
- Judge of a High Court

### **11.31 Proceeding of CERC and SERC**

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The members shall meet at the head office or any other place at such time as the Chairperson may direct, and shall observe such rules of procedure in regard to the transaction of business at its meetings (including the quorum at its meetings) as it may specify.

If the Chairperson, is unable to attend a meeting of the Commission, any other Member nominated by the Chairperson in this behalf and, in the absence of such nomination or where there is no Chairperson, any Member chosen by the Members present from amongst themselves, shall preside at the meeting.

All questions shall be decided by a majority of votes of the Members present and voting, and in the event of an equality of votes, the Chairperson or in his absence, the person presiding shall have a second or casting vote. Every Member shall have one vote.

All orders and decisions of the Appropriate Commission shall be authenticated by its Secretary or any other officer of the Commission duly authorized by the Chairperson in this behalf.

### **11.32 Power of Civil Court**

The Commission shall, for the purposes of any inquiry or proceedings under this Act, have the same powers as are vested in a civil court under the Code of Civil Procedure, 1908 in respect of the following matters, namely:-

- summoning and enforcing the attendance of any person and examining him on oath;
- discovery and production of any document or other material object producible as evidence;
- receiving evidence on affidavits;
- requisitioning of any public record;
- issuing commission for the examination of witnesses;
- reviewing its decisions, directions and orders;
- any other matter which may be prescribed.

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### **11.33 Interim Order**

The Commission shall have the powers to pass such interim order in any proceeding, hearing or matter before the Commission, as that Commission may consider appropriate.

### **11.34 Representation of Consumer interest**

The Commission may authorize any person, as it deems fit, to represent the interest of the consumers in the proceedings before it.

### **11.35 Proceedings to be judicial in nature**

All proceedings before the Commission shall be deemed to be judicial proceedings within the meanings of sections 193 and 228 of the *Indian penal Code* and the Commission shall be deemed to be a civil court for the purposes of sections 345 and 346 of the *Code of Criminal procedure, 1973*.

### **11.36 Power of entry and seizure**

The Commission or any officer, not below the rank of a Gazette Officer specially authorized in this behalf by the Commission, may enter any building or place where the Commission has reason to believe that any document relating to the subject matter of the inquiry may be found, and may seize any such document or take extracts or copies there from subject to the provisions of section 100 of the *Code of Criminal Procedure, 1973*, in so far as it may be applicable.

### **11.37 Sub Delegation of power**

The Commission may, by general or special order in writing, delegate to any Member, Secretary, officer of the Commission or any other person subject to such conditions, if any, as may be specified in the order, such of its powers and functions under



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this Act (except the powers to adjudicate disputes under section 79 and section 86 and the powers to make regulations under section 178 or section 181) as it may deem necessary.

### **11.38 Central Electricity Regulatory Commission Fund**

This fund shall be credited by -

- any grants and loans made to the Central Commission by the Central Government
- all fees received by the Central Commission under this Act;
- all sums received by the Central Commission from such other sources as may be decided upon by the Central Government.

The fund shall be applied for meeting following expenses -

- the salary, allowances and other remuneration of Chairperson, Members, Secretary, officers and other employees of the Central Commission;
- the expenses of the Central Commission in discharge of its functions
- the expenses on objects and for purposes authorized by this Act.

The Central Government may, in consultation with the Comptroller and Auditor –General of India, prescribe the manner of applying the Fund for meeting the expenses specified for fulfilling the functions of the CERC and the any other object specified in the Electricity Act 2003.

### **11.39 Reasonable Control over the commission**

To maintain a reasonable control over the activities of the CERC its accounts are audited by the Comptroller and auditor general and the CERC has also to prepare a Annual report giving the summary of activities taken up the commission in the preceding year. A copy of the report received by the Central government shall be laid, as soon as may be after it is received, before each House of Parliament.

### **11.40 SERC Fund**

SERC shall constitute a fund which shall be credited with–

- any grants and loans made to the State Commission by the State Government
- All fees received by the State Commission under this Act;
- All sums received by the State Commission from such other sources as may be decided upon by the State Government.

The Fund shall be applied for meeting following expenses–

- the salary, allowances and other remuneration of Chairperson, Members, Secretary, officers and other employees of the State Commission;
- the expenses of the State Commission in discharge of its functions of the SERC;
- the expenses on objects and for purposes authorized by this Act.

The State Government may, in consultation with the Comptroller and Auditor-General of India, prescribe the manner of applying the Fund for meeting the expenses for fulfilling the functions of the SERC and to meet the objects authorized by the act.

### **11.41 Reasonable control over SERC**

The SERC must maintain proper accounts. The accounts of the SERC are to be audited by the Auditor general of India and the SERC shall also prepare an annual report giving the summary of the activities in the previous years. The summary shall be presented to the State Government which shall be laid before the state legislature.

### **11.42 Directions on Policy matters**

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In the discharge of its functions, the CERC shall be guided by such directions in matters of policy involving public interest as the Central Government may give to it in writing.

Similarly In the discharge of its functions, the SERC shall be guided by such directions in matters of policy involving public interest as the State Government may give to it in writing.

### **11.43 Conclusion**

The regulatory Commissions of many states have contributed greatly to the development of the power sector. Specifically speaking Andhra Pradesh Electricity Regulatory Commissions policy of “Cost to Serve” has reduced the electricity tariffs for industrial consumers. The Delhi Governments Policy direction issued in November 2001 instructs Delhi Electricity Regulatory Commission to give a profit of at least 16 per<sup>65</sup> cent to Discoms has lead to successful privatization of the power distribution system in Delhi.

However there are many deficiencies in the system as one independent energy research institution(Prayas Energy Group) has pointed out specifically talking about Delhi Electricity regulatory Commission that the Commission lacks transparency and no reading rooms are available to access non confidential information. By analogy such a remark probably is true for almost all the SERC. Nevertheless the proactive contribution of various state commission is greater then the minor deficiency in the system.

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<sup>65</sup> March 18,2001 The Hindu

## **UNIT 12**

### **COORDINATION BETWEEN VARIOUS ENTITIES IN THE ELECTRICITY MARKET**

#### **12.1 Background**

For efficient functioning of the Indian Electricity Market and successful implementation of the vision within the Electricity Act 2003, it is necessary that all stakeholders are involved in the decision making. The Electricity Act therefore provides for Advisory Committee at the Central as well as the State level. The act also clearly mentions that CERC shall strive for Coordinated Development of the Electricity industry at the national level.

The Act also envisages coordination institutions as the Central, State and District level. These provisions are a must in a democratic country like ours. This leads to more transparency in the Electricity institutions and provides a forum to various stakeholders to articulate their difficulties.

#### **12.2 Central Advisory Committee (Section 80)**

##### **12.2.1 Establishment of Central Advisory Committee**

The CERC may, by notification, establish with effect from such date as it may specify in such notification, a committee to be known as the Central Advisory Committee.

##### **12.2.2 Members of Central Advisory Committee(CAC)**

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CAC can have maximum of thirty-one members. The CAC shall represent the interest of-

- commerce,
- industry,
- transport,
- agriculture,
- labor,
- consumers,
- non-governmental organization and
- academic and research bodies in the electricity sector.

### **12.2.3 Ex-officio Members of CAC**

The Chairperson of the Central Commission shall be the ex officio Chairperson of the Central Advisory Committee and the Members of that Commission and Secretary to the Government of India in charge of the Ministry or Department of the Central government dealing with Consumer Affairs and Public Distribution system shall be the ex officio Members of the committee.

### **12.2.3 Objects of Central Advisory Committee**

Section 81 provides that the objects of the CAC shall be to advise the CERC on issues involving :-

- major questions of policy;
- matters relating to quality, continuity and extent of service provided by the licensees;
- compliance by the licensees with the conditions and requirements of their license;
- protection of consumer interest;
- electricity supply and overall standards of performance by utilities.

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## **12.3 State Advisory Committee (Section 87)**

### **12.3.1 Establishment of State Advisory Committee (SAC)**

The SERC may, by notification, establish with effect from such date as it may specify in such notification, a Committee to be known as the State Advisory Committee.

### **12.3.2 Members of State Advisory Committee(SAC)**

The SAC can consist of not more than twenty-one members to represent the interests of electricity sector in the following areas –

- commerce,
- industry,
- transport,
- agriculture,
- labor,
- consumers,
- non-governmental organizations and
- academic and research bodies in the electricity sector.

### **12.3.3 Ex-officio Members of SAC**

The Chairperson of the State Commission shall be the ex officio Chairperson of the State Advisory Committee. Following shall be ex-officio members of the SAC-

- Members of the State Commission and
- Secretary, Department of Consumer Affairs (State Government)
- Secretary, Department Public Distribution System (State Government)

### **12.3.4 Objects of State Advisory Committee**

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Section 88 describes that the objects of the State Advisory Committee shall be to advise the SERC on:-

- major questions of policy
- matters relating to quality, continuity and extent of service provided by the licensees;
- compliance by licensees with the conditions and requirements of their licensees;
- protection of consumer interest; and
- electricity supply and overall standards of performance by utilities.

## **12.4 Coordination Forum [Section 166(1)]**

:- (1) The Central Government shall constitute a coordination forum consisting of the Chairperson of the Central Commission and Members thereof, the Chairperson of the Authority, representatives of generating companies and transmission licensees engaged in inter-State transmission of electricity for smooth and coordinated development of the power system in the country.

## **12.5 Forum of Indian Regulators [Section 166(2)]**

The Central Government has also constituted a forum of regulators consisting of the Chairperson of the Central Commission and Chairpersons of the State Commissions. The Chairperson of the Central Commission is the Chairperson of the Forum of regulators.

## **12.6 State coordination Forum[Section 166(4)]**

The state Government shall constitute a coordination forum consisting of the Chairperson of the State Commission and Members thereof representatives of the generating companies, transmission licensee and distribution licensees engaged in generation, transmission

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and distribution of electricity in that State for smooth and coordinated development of the power system in the State.

## **12.7 District coordination Committee(DCC)[Section 166(5)]**

There shall be a committee in each district to be constituted by the Appropriate Government :-

- (a) to coordinate and review the extension of electrification in each district;
- (b) to review the quality of power supply and consumer satisfaction;
- (c) to promote energy efficiency and its conservation.

## **12.8 Regional Power Committee (RPP)**

### **12.8.1 Constitution of Regional Power Committee**

By virtue of Section 2(55) of the Electricity Act 2003 "Regional Power Committee" shall be established by resolution of the Central Government. The main function of the regional Power Committee shall be to facilitate the integrated operation of the power systems in the specified region.

### **12.8.2 Coordination on technical matter**

The Central transmission Utility and the State transmission Utility may involve and coordinate with the regional Power Committee in case of planning and co-ordination relating to inter-state and intra-State transmission system respectively.

Section 29(4) provides that the Regional Power Committee in the region may, from time to time, agree on matters concerning the



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stability and smooth operation of the integrated grid and economy and efficiency in the operation of the power system in that region.

## **12.9 Conclusion**

Proactive role of the various coordinating agency can play an important role in guiding the central and state commission. The disputes between various stakeholders can be minimized through continuous interaction between the various coordinating agencies.

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# **PART D**

# **ADJUDICATION**

## UNIT 13

### APPELLATE TRIBUNAL FOR ELECTRICITY (ATE)

*“While the perception of opposed interests promotes conflicts the perception of shared interests pacifies it” - MK Gandhi*

#### 13.1 Background

Many of the issues raised or disputes in the Power sector it seems would involve technical and special matters, secondly speedy disposal of the matter would be in the interest of all stakeholders including the consumers. Consequently it would be desirable to have a specialist tribunal to adjudicate on the matters raised in the national electricity framework.

It is contemplated that Appellate Tribunal for Electricity would avoid delays in dispute resolution in the courts but some of the sector expert are of the opinion that the “Regulatory Commissions” have been subordinated by this provision. These matters have been taken up in the following paragraphs.

#### 13.2 Establishment of Appellate Tribunal<sup>66</sup>

The Central Government has the mandate to establish the Appellate Tribunal by issuing a notification in this regard. The name of the tribunal shall be Appellate Tribunal for Electricity (ATE). The ATE has the jurisdiction to hear appeals against the orders of-

- Adjudicating officer or
- Central Electricity Regulatory Commission
- State electricity regulatory Commission

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<sup>66</sup> Section 110 of the Electricity Act 2003

### **13.3 Jurisdiction of Appellate Tribunal**

All appeal to the ATE shall be filed under section 111. Any Company or body corporate or association or body of individuals whether incorporated or not, or artificial juridical person aggrieved by an order made by an adjudicating officer or an order made by the CERC of State Electricity Commission may prefer an appeal to the Appellate Tribunal for Electricity.

However in case of appeal lying under section 127 to the Appellate authority, or a final order of the appellate authority . The case shall not be preferred before the ATE.

The act is silent on the issue whether one member can exercise the jurisdiction of the ATE. However it clearly states that the jurisdiction of the Appellate Tribunal may be exercised by Benches constituted by the Chairperson.

### **13.4 Preliminary Condition for Appeal to ATE**

Any person appealing against the order of the adjudicating officer levying any penalty shall, while filing the appeal, deposit the entire amount of such penalty. This provision can be contrasted with the provision in section 127(2) where the act provides that the Adjudicating authority shall not entertain any appeal unless one third of the assessed amount is deposited by the appellant.

In many ways this seems to be unequal. However this may be to deter non-serious appellant from approaching the honorable ATE. This can also be judged from the the second proviso of Section 111(1), which states that the ATE can dispense with such deposit which may cause undue hardship to the aggrieved person. However the ATE can impose such conditions as it may deem fit to impose so as to safeguard the realization of penalty.

### **13.5 Limitation Period**

Limitation period of forty-five days from the date on which a copy of the order made by the adjudicating officer or the Appropriate Commission is received by the aggrieved person has been provided in

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the Act. The Application shall be verified and should be accompanied by such fee as may be prescribed

However the Appellate Tribunal may entertain an appeal after the expiry of the period of forty-five days if it is satisfied that there was sufficient cause for not filing it within that period.

### **13.6 Order of ATE**

The ATE can dispose of the Appeal after giving the parties to the appeal an opportunity of being heard. The order can confirm, modify or set aside the order appealed against.

The Act also provides that ATE shall send a copy of every order made by it to the-

- Parties to the appeal and to
- the concerned adjudicating officer or
- The Appropriate Commission, which is involved in the present case.

### **13.7 Time frame for disposal of the Case**

One of the main objective for establishment of the EAT is to expedite the cases relating to the power sector and hence bring in certainty in the market. Therefore the Act also provides that the ATE shall deal with cases as expeditiously as possible and shall endeavor to dispose of the appeal finally within one hundred and eighty days from the date of receipt of the appeal. Whenever ATE is unable to dispose of the case within the period of 180 days, It shall record its reasons in writing for not disposing the appeal within the said period.

### **13.8 Writ of Certiorari**

Section 111(6) provides that ATE may, for the purpose of examining the –

- legality,
- propriety or

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- correctness

-of any order made by the adjudicating officer or the Appropriate Commission, in relation to any proceeding, on its own motion or otherwise, call for the records of such proceedings and make such order in the case as it thinks fit. This power will protect the Rule of Law and would be helpful in proper enforcement of the rules and regulation in the power industry.

### **13.9 Composition of Appellate Tribunal<sup>67</sup>**

The ATE will be a three member body which shall consist of one Chairperson and three other members. The Act enables the Chairperson to constitute benches with two or members of the ATE as the Chairperson of the ATE may deem fit.

However every Bench constituted under this clause shall include at least one Judicial Member and one Technical Member;

### **13.10 Location of ATE**

The Benches of the Appellate Tribunal shall ordinarily sit at Delhi and such other places as the Central Government may, in consultation with the Chairperson of the Appellate Tribunal, notify. The Central Government shall also notify the areas in relation to which each Bench of the Appellate Tribunal may exercise jurisdiction. This provision on first glance seems to be unjust because it vests power in the central Government which it should not have. However by providing that the Chairperson of the ATE may transfer a Member of the Appellate Tribunal from one Bench to another Bench, the scope of arbitrary action on part of any government has been reduced to a negligible extent.

### **13.11 Qualification for appointment of Chairperson**

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<sup>67</sup> Section 112 of the Electricity Act 2003

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A person shall not be qualified for appointment as the Chairperson of the Appellate Tribunal unless he is or has been, a judge of the Supreme Court or the Chief Justice of a High Court and the Chairperson of the Appellate Tribunal shall be appointed by the Central Government after consultation with the Chief Justice of India.

### **13.12 Qualification for appointment of Members**

A person shall not be qualified for appointment as the member of the ATE unless he

- is or has been or is qualified to be, a judge of High Court; or
- is, or has been, a Secretary for at least one year in the Ministry or Department of the Central Government dealing with economic affairs or matters or infrastructure; or
- is, or has been, a person of ability and standing, having adequate knowledge or experience in dealing with the matters relating to electricity generation, transmission and distribution and regulation or economics, commerce law or management.

It is also provided that the Members of the Appellate Tribunal shall be appointed by the Central Government on the recommendation of the Selection Committee<sup>68</sup>.

### **13.13 Disqualification for appointment as Member of ATE**

The person having any financial or other interest which is likely to affect prejudicially his functions as such Chairperson or Member, shall be disqualified from appointment at such position. It is the responsibility of the Central Government to satisfy itself that the person does not have such a interest.

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<sup>68</sup> See Chapter 12 (Independent Regulatory Commission) for the details on constitution of Selection Committee

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### **13.14 Term of office**

The Chairperson of the Appellate Tribunal or Member of the Appellate Tribunal shall hold office as such for a term of three years from the date on which he enters upon his office. The Chairperson and other members are eligible for appointment for a second term. However the Act is silent on the issue whether the abovementioned can have a third term in office.

The Chairperson can not hold office after he attains the age of 70 years and in case of members the age of 65 years has been provided.

### **13.15 Term and conditions of service**

To protect the independence of the ATE it is provided that salary and allowances nor the other terms and conditions of service of the Chairperson or a Member of the Appellate Tribunal shall be varied to his disadvantage after appointment. However initially the Central Government shall prescribe the same.

### **13.16 Registration and removal<sup>69</sup>**

The Chairperson or a Member of the Appellate Tribunal may, by giving 3 months notice in writing under his hand addressed to the Central Government, resign his office.

The Chairperson of the Appellate Tribunal or a Member of the Appellate Tribunal shall be removed from his office by an order by the Central Government on the ground of-

- proved misbehavior or
- incapacity

This can be done after an inquiry made by a Judge of the Supreme Court, as the Central Government may appoint for this purpose in which the Chairperson or a Member of the Appellate

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<sup>69</sup> Section 117 of The Electricity Act 2003



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Tribunal concerned has been informed of the charges against him and given a reasonable opportunity of being heard in respect of such charges.

There seems to be a minor anomaly in the sense that the Chairperson of ATE can be a supreme court judge and if it happens that a junior colleague of the judge has to investigate his incapacity or misbehavior then there may be a certain amount of bias. One important legal principle is that " Justice may not only be done it should also be seen to be done"

One Way out could be that the Vice President can investigate the same or a committee can be formed to investigate the matter with the Chief Justice of India being its chairperson. This will require an amendment to the Act and presently the status remains the same.

### **13.17 Member to act as Chairperson in certain circumstances**

In the event of any vacancy in the office of the Chairperson by reason of his

- death,
- resignation or
- otherwise, or
- unable to discharge his functions owing to absence, illness or any other cause

It is provided that the senior-most Member of the Appellate Tribunal shall act as the Chairperson of the Appellate Tribunal until the date on which a new Chairperson, appointed, enters upon his office.

### **13.18 Procedure and powers of Appellate Tribunal**

Section 120 of The Act provides for the powers of the EAT. Sub section (1) states that The ATE shall not be bound by the procedure laid down by the *Code of Civil Procedure, 1908*, but shall be guided by the principles of natural justice. It is also provided that confirming to

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the provisions of the Electricity Act 2003 the ATE shall have powers to regulate its own procedure. This gives wide discretion and powers to the ATE.

Probably this will provide flexibility to the institution to act in the interest of justice and not go into procedural details of the civil Procedure Code.

Section 120(2) provides that the ATE shall have, for the purposes of discharging its functions under this Act, the same powers as are vested in a civil court under the *Code of Civil Procedure, 1908*, while trying a suit, in respect of the following matters, namely:-

- summoning and enforcing the attendance of any person and examining him on oath;
- requiring the discovery and production of documents;
- receiving evidence on affidavits;
- subject to the provisions of sections 123 and 124 of the *Indian Evidence Act, 1872*, requisitioning any public record or document or copy of such record or document from any office;
- issuing commissions for the examination of witnesses or documents;
- reviewing its decisions;
- dismissing a representation of default or deciding it ex parte;
- setting aside any order of dismissal or any representation for default or any order passed by it ex parte;
- any other matter which may be prescribed by the Central Government.

It is also stated that an order made by the Appellate Tribunal under this Act shall be executable by the ATE as a decree of civil court and, for this purpose; the ATE shall have all the powers of a civil court. Moreover if the honorable ATE desires, it may transmit any order made by it to a civil court having local jurisdiction and such civil court shall execute the order as if it were a decree made by that court.

All proceedings before the Appellate Tribunal shall be deemed to be judicial proceedings within the meaning of sections 193 and 228 of the Indian Penal Code and the Appellate Tribunal shall be deemed to

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be a civil court for the purposes of sections 345 and 346 of the *Code of Criminal Procedure, 1973*.

### **13.19 Section 121 and Difference of Opinion**

Section 121 states -

*“Power of Chairperson of Appellate Tribunal.:- The Chairperson of the Appellate Tribunal shall exercise general power of super-intendence and control over the Appropriate Commission.”*

Many of the Power industry stake holders were of the opinion that the “Regulatory Commissions” have been subordinated by this provision of giving power of superintendence and control over IRC to the ATE. It is also alleged that this may lead to over-interference by the ATE in the day to day activity of the IRCs.

The Central Government recognizing the importance of this contention did not enforce this section. As of now on 10<sup>th</sup> June 2003 the entire Electricity Act 2003 was enforced except for Section 121.

Consequently the Power minister gave an assurance in the Rajya Sabha that this section will be suitably be modified to take into consideration the view of the industry experts.

Thereafter a Bill to amend Electricity Act 2003 has been introduced in the parliament, which seeks to substitute the section with following words-

*“Power of Appellate Tribunal- The Appellate Tribunal may , after hearing the appropriate Commission or other interested party, if any , from time to time, issue orders, instructions or directions as it may deem fit, to any appropriate Commission for the performance of its statutory functions under the Act”*

### **13.20 Distribution of business amongst Benches**

Where Benches are constituted, the Chairperson of the ATE may, from time to time, by notification, make provisions as to the distribution of the business of the ATE amongst the Benches and also provide for the matters which may be dealt with by each Bench.

### **13.21 Transfer of cases**

A case can be transferred from one bench to another bench in two ways –

- 1) **On the application of any of the parties** – In case of an application of any of the party the Chairperson shall give a notice and after hearing such of them as they may desire to be heard may transfer the case to another bench.
- 2) **On his own motion** – Suo moto also the chairperson may transfer a case from one bench to another bench. In this case no notice is required.

### **13.22 Decision to be by majority**

In case the Members of the ATE of a Bench consisting of two Members differ in opinion on any point, they shall state the point or points on which they differ, and make a reference to the Chairperson of the Appellate Tribunal who shall either hear the point or points himself or refer the case for hearing on such point or points by one or more of the other Members of the Appellate Tribunal and such point or points shall be decided according to the opinion of the majority of the Members of the Appellate Tribunal who have heard the case, including those who first heard it.

### **13.23 Right of appellant to take assistance of legal practitioner**

A person preferring an appeal to the Appellate Tribunal under this Act may either appear in person or take the assistance of a legal practitioner of his choice to present his case before the ATE.

### **13.24 Commission to appoint presenting officers**

The CERC and various State electricity Regulatory Commission may appoint may appoint one of its officer or authorize one or more legal practitioners to act as presenting officers and every person so

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authorized may present the case with respect to any appeal before the Appellate Tribunal, as the case may be.

### **13.25 Jurisdiction of Supreme Court**

By virtue of Section 125 the supreme Court shall have the jurisdiction to try cases in appeal from the ATE. Section 125 provides that Any person aggrieved by any decision or order of the ATE, may, file an appeal to the Supreme Court on any one or more of the grounds specified in section 100 of the *Code of Civil Procedure, 1908*.

Section 100 of The Code of Civil Procedure primarily provides that the appeal shall lie when substantial question of law is involved.

### **13.26 Limitation period of Sixty Days**

The appeal shall be filed within sixty days from the date of communication of the decision or order of the Appellate Tribunal, to the applicant party. It is also provided that that the Supreme Court may, if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal within the said period, allow it to be filed within a further period not exceeding sixty days.

### **13.27 Conclusion**

ATE will help in quick disposal of cases relating to the specialized field of Electricity. The sanctity of the ATE is very high almost equivalent to the high court. This will ensure greater certainty in the power sector for faster development.

## **UNIT 14**

### **OFFENCES AND PENALTIES**

#### **14.1 Background**

Aggregate Technical and Commercial losses(AT&C), are very high for Power utilities in India. The reason for the same are several including -

- Imp / Exp metering errors
- Technical losses (66 & 33KV)
- Technical losses (11 kV & below)
- Theft
- CT ratio/MF error
- Stop meter
- Slow meter
- Defective meter
- Meters not read
- Consumers not billed
- Unregistered consumers
- Bills not delivered
- Misuse of category
- Consumers billed but not credited
- Part payment
- Deliberate under billing
- Provisional billing
- Bills on a/c of old meter when changed
- Line disconnected consumer

This list for A& T losses may seem to be long, but many energy expert are of the opinion that Electricity theft is the main reason for such high T& D losses. Besides this it is also believed that disguised power theft is taking place at a large scale.

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To rectify the situation and to contain Power theft many Distribution Licensees have instituted One Time Amnesty<sup>70</sup> schemas which has been implemented with Mixed results.

However it was known in the industry that strong anti theft legislation would be the right deterrent for reducing theft of electricity. Many state legislations were enacted which provided for strong anti theft laws. Some of the state legislation dealing with anti theft provisions are –

- The Indian Electricity (Gujarat ) Amendment Act 2003
- The Madhya Pradesh Urja Adhiuniam 2001
- The Indian Electricity (Andhra Pradesh Amendment) Act 2003
- The Indian electricity(Maharashtra) Amendment Act, 2003
- Indian Electricity (Uttar Pradesh Amendment) Ordinance, 2001
- The Indian Electricity (West Bengal Amendment) Bill, 2001
- The electricity (Karnataka) Amendment Bill, 2001

However after the enactment of the Electricity Act 2003 the provisions in the state Act which are inconsistent with the Electricity Act are non Applicable and the provisions of the Electricity Act 2003 shall be valid for all practical purposes. The Electricity Act provides for stronger deterrent punishment to contain and reduce power theft and other offences relating to power industry . Part XIV of the Electricity Act deals with Offences and penalties.

## 14.2 Theft of Electricity

Section 135 defines theft of Electricity .To prove theft of electricity two elements must be present –

### 14.2.1 Mens Rea - Mental Element

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<sup>70</sup> MSEB instituted " Sanman " Amnesty Scheme for domestic users and " Krishi Vikas " Amnesty Scheme for Agricultural Consumers. BSES YAMUNA and BSES RAJDHANI instituted " VDS(Voluntary Disclosure Scheme ) " to contain power theft.

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Inclusion of the word “dishonestly ” in section 135 means that the mental element must be present in the act .But it is commonly known that to prove the mental element in electricity theft is a daunting task because of the nature of business and the actual supply lines being within the premises of the consumers which is not easily accessible.

To ameliorate such a situation the proviso to sub Section (1) to section 135 provides that –

*“if it is proved that any artificial means or means not authorized by the Board or licensee exist for the abstraction, consumption or use of electricity by the consumer, it shall be presumed, until the contrary is proved, that any abstraction, consumption or use of electricity has been dishonestly caused by such consumer”*

There shall be presumption of the presence of dishonesty (mental element) if it is proved that that following things exist –

1. artificial means or
2. means not authorized by the Board or licensee

The word used in the proviso is “exist”. This implies that whether the artificial means were being used or not by the consumer is irrelevant .Even if the artificial means exist , it will be presumed for the purpose of this act that there was dishonest intention on the part of the accused . It is not motioned in the act that whether the unauthorized means must be present within the premises or it can be any wear in or around the system from where the accused can abstract, consume or use electricity .

### **14.2.2 Actus rea – physical element**

The second element will be satisfied if any of the following is proved – where any entity -

*“(a) taps, makes or causes to be made any connection with overhead, under ground or under water lines or cables, or service wires, or service facilities of a licensee; or*

*(b) tampers a meter, installs or uses a tampered meter, current reversing transformer, loop connection or any other device or method which interferes with accurate or proper*



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*registration, calibration or metering of electric current or otherwise results in a manner whereby electricity is stolen or wasted; or*

*(c) damages or destroys an electric meter, apparatus, equipment, or wire or causes or allows any of them to be so damaged or destroyed as to interfere with the proper or accurate metering of electricity, so as to abstract or consume or use electricity”*

### **14.3 Powers of officers authorized by the State Government**

Following are the powers of the officer authorized by the state Government. He may -

- (a) *enter, inspect, break open and search any place or premises in which he has reason to believe that electricity has been, is being or is likely to be used unauthorized;*
- (b) *Search, seize and remove all such devices, instruments, wires and any other facilitator or article which has been, is being , or is likely to be, used for unauthorized use of electricity;*
- (c) *Examine or seize any books of account or documents which in his opinion shall be useful for or relevant to , any proceedings in respect of the offence under subsection (1) of section 135 and allow the person from whose custody such books of account or documents are seized to make copies thereof or take extracts there from in his presence.*

### **14.4 Rights of the consumer while authorized officer(s) exercising his powers**

**14.4.1 Right to remain present during Search<sup>71</sup>** -The occupant of the place has a Right to remain present during the search operation. Any other person may also remain present during the search operation.

**14.4.2 Right to receive list of things seized<sup>72</sup>** – The authorized officer shall prepare a list of things seized during the course of the search operation. The list will be delivered to the occupant , who shall sign the list.

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<sup>71</sup> Section 135(3)

<sup>72</sup> Section 135(3)

**14.4.3 Domestic places not to be inspected at night<sup>73</sup>** – No inspection, search and seizure of any domestic premises shall be carried out between sunset and sunrise except in the presence of adult male member occupying such premises.

The provisions of the Code of Criminal Procedure, 1973, relating to search and seizure shall apply, as far as may be, to searches and seizure under this Act.

<b>Secti on</b>	<b>Offence</b>	<b>Punishment</b>
135	Theft of Electricity	<p>Imprisonment for a term which may extend to three years or with fine or with both.</p> <p>Lode less than 10 KW</p> <p><b>First conviction</b> –Fine not less then three times the financial gains.</p> <p><b>Second and subsequent conviction</b> –Fine not less then six times the financial gains .</p> <p>Lode more then 10KW</p> <p><b>First conviction</b> –Fine not less then three times the financial gains</p> <p><b>Second and subsequent conviction</b>- imprisonment for a term not less than six months but which may extend to five year <b>and</b> with fine not less than six times the financial gain</p>
136	Theft of Electric lines and materials	<p>First Conviction</p> <p>Second or</p> <p>May extent to three years or with fine or with both</p> <p>Imprisonment shall not be</p>

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<sup>73</sup> Proviso to section 135(3)

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		subsequent conviction	less then six months but which may extent to five years and shall also be liable to fine which shall not be less then ten thousand rupee .
137	Punishment for receiving stolen property	imprisonment for a term which may extend to three years or with fine or with both	
138	Interference with meters or works of licensee	First Conviction	Imprisonment for a term which may extent to three years , or with fine which may extent to ten thousand rupees , or with both .
		Continuing offence	Daily fine which may extent to five hundred rupee
139	Negligently wasting Electricity or injuring work	Fine which may extent to ten thousand rupees	
140	Penalty for maliciously wasting electricity for injuring works	Fine which may extent to ten thousand rupees	
141	Extinguishing public lamps	Fine which may extent to two thousand rupees	
142	Non compliance of directions by Appropriate Commission	Penalty shall not exceed one lakh rupee for each contravention and in case of continuing failure with an additional penalty which may extent to six thousand rupee for every day during which the failure continues .	
145	Non compliance of orders and	First offence	Three months or

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directions  
under the  
Electricity Act  
2003

Continuing offence

with fine which may  
extend to Rs 1 lakh  
Fine may extend to  
Five thousand for  
every day

## 14.5 Theft of electric lines and materials

To prove theft of electric lines and materials also it is necessary to prove intention of dishonesty .Second important point which is notable is that for the purpose of this section it is immaterial whether the purpose of theft was profit or some other purpose . Section 136 (1) of the Electricity Act states that -

*“Whoever, dishonestly :-*

- (a) *cuts or removes or takes away or transfers any electric line, material or meter from a tower, pole, any other installation or place of installation or any other place, or site where it may be rightfully or lawfully stored, deposited, kept, stocked, situated or located, including during transportation, without the consent of the licensee or the owner, as the case may be, **whether or not the act is done for profit or gain**; or*
- (b) *Stores, possesses or otherwise keeps in his premises, custody or control, any electric line, material or meter without the consent of the owner, whether or not the act is committed for profit or gain; or*
- (c) *Loads, carries, or moves from one place to another any electric line, material or meter without the consent of its owner, whether or not the act is done for profit or gain”*

Further more receiving of stolen property has also been made an offence and whoever dishonestly receives any stolen electric line or material knowing that the same is stolen property shall be punished under section 137 of the Act .

## 14.6 Interference with meters or works of licensee

Section 138 states that –

*“Whoever*

- (a) *unauthorisedly connects any meter, indicator or apparatus with any electric line through which electricity is supplied by a licensee or disconnects the same from any such electric; or*

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- (b) *unauthorisedly reconnects any meter, indicator or apparatus with any electric line or other works being the property of a licensee when the said electric line or other works has or have been cut or disconnected; or*
- (c) *lays or causes to be laid, or connects up any works for the purpose of communicating with any other works belonging to a licensee ; or*
- (d) *maliciously injures any meter, indicator, or apparatus belonging to a licensee or wilfully or fraudulently alters the index of any such meter, indicator or apparatus or prevents any such meter, indicator or apparatus from duly registering,”*

*Shall be punishable with imprisonment for a term which may extend to three years, or with fine which may extend to ten thousand rupees, or with both, and, in the case of a continuing offence, with a daily fine which may extend to five hundred rupees; and if it is proved that any means exist for making such connection as is referred to in clause (a) or such reconnection as is referred to in clause (b), or such communication as is referred to in clause (c), for causing such alteration or prevention as is referred to in clause (d), and that the meter, indicator or apparatus is under the custody or control of the consumer, whether it is his property or not, it shall be presumed, until the contrary is proved, that such connection, reconnection , communication, alteration, prevention or improper use, as the case may be, has been knowingly and willfully caused by such consumer.*

Thereby the presence of mental element shall be presumed under the above mentioned cases unless it is proved by the accused that there was absence of mental element .

## 14.7 Wasting of Electricity

Section 139 and Section 140 of the Act deals with wasting of Electricity. Section 139 provides that whoever negligently causes electricity to be wasted , or diverted or negligently breaks , injures , throws down or damages any material connected with the supply of electricity would be guilty of negligently wasting of electricity or injuring electrical works .

Section 140 provides that whoever maliciously causes electricity to be wasted or diverted , or, with the intention to cut of the supply of electricity , cuts or injures , or attempts to cut of injure , any electric supply line or works , shall be guilty of maliciously wasting electricity or injuring works .

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The punishment for both the offences is fine which may extend to ten thousand rupee.

### **14.8 Extinguishing public lamps**

Section 141 makes extinguishing of public lamps a offence .It is necessary to prove malice for conviction under this section . The section reads-

*" Whoever, maliciously extinguishes any public lamp shall be punishable with fine which may extend to two thousand rupees"*

### **14.9 Non compliance of Directions or orders**

Section 139 provides that Whoever, fails to comply with any order or direction given under this Act, within such time as may be specified in the said order or direction or contravenes or attempts or abets the contravention of any of the provisions of this Act or any rules or regulations made there under, shall be punishable with imprisonment for a term which may extend to three months or with fine which may extend to one lakh rupees, or with both in respect of each offence and in the case of a continuing failure, with an additional fine which may extend to five thousand rupees for every day during which the failure continues after conviction of the first such offence.

The provision is all encompassing and dose not limit itself to only this part of the Act .Therefore any order given by any authority within the preview of the Act shall fall within the this section. Wherever the act is silent on the issue of effect of non-compliance of order , this section shall be applicable.

### **14.10 Penalties not to affect other liabilities**

All penalties imposed will be in addition to and not a substitute of the actual compensation or the due amount which has to be recovered. Further more the government institutions have to also comply with the provisions of this act and they can not be exempted

### **14.11 Lifting of Corporate Vail**

By virtue of section 149 where acts are committed by the company , whoever was the in charge of the company will be proceeded against. However if the person proves that the act was committed without his knowledge or he had exercised all due diligence to prevent the commission of such offence, then such person shall not be liable for the same .

### **14.12 Abetment**

Whoever abets an offence punishable under this Act, shall notwithstanding anything contained in the Indian Penal Code, be punished with the punishment provided for the offence. And the employees of the utility are also included within the ambit of the definition.

### **14.13 Cognizance of offences**

The Court shall not take cognizance of any offence under this act unless a complaint is filed in writing-

- Appropriate Government or
- Appropriate Commission or
- any of their officer authorized by them or
- a Chief Electrical Inspector or
- an Electrical Inspector or
- licensee or
- the generating company,

### **14.14 Compounding of offences**

Only two entities can compound an offence

- the Appropriate Government
- or any officer authorized by it in this behalf

The *Code of Criminal Procedure 1973*, shall not have application for compounding of offence .

**TABLE**

Nature of Service	Rate at which the sum of money for compounding to be collected per Kilowatt (KW)/Horse Power (HP) or part thereof for Low Tension (LT) Supply and per Kilo Volt Ampere (KVA) of contracted demand for High Tension (HT)
(1)	(2)
1. Industrial Service 2. Commercial Service 3. Agricultural Service 4. Other Services	Twenty thousand rupees; Ten thousand Rupees; Two thousand Rupees; Four thousand rupees;

It is mandated that on payment of the sum of money in accordance with the compounding of offence any person in custody in connection with that offence shall be set at liberty and no proceedings shall be instituted or continued against such consumer or person in any criminal court. The acceptance of the sum of money for compounding an offence in accordance with sub-section (1) by the Appropriate Government or an officer empowered in this behalf shall be deemed to amount to an acquittal within the meaning of section 300 of the *Code of Criminal Procedure, 1973*. However compounding of an offence under sub-section shall be allowed only once for any person or consumer .

#### **14.15 Power of appropriate Commission to impose penalty<sup>74</sup>**

The CERC and SERCs as the regulators of the electricity sector in India are entrusted with wide powers to regulate and develop the Electricity market in India . These powers are exercised by the appropriate commissions by issuing of directions to the appropriate entities. To maintain the sanctity of the regulatory authority and to provide a remedy in case of non-compliance of direction of the regulating authority it was felt necessary that certain powers to impose penalty must be entrusted to them.

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<sup>74</sup> Section 142



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If the appropriate commission is sue moto or against the complaint of any person is satisfied that any person has contravened the direction of the commission .Then the commission after giving the person who has contravened the orders an opportunity to be heard direct in writing that such person pay the penalty . The penalty shall not exceed one lakh rupee .It is also provided that such penalty shall be in addition to any other penalty which the contravening party may be required to pay . Further more it is also mandated that in case of continuing non – compliance of the direction an additional penalty may be imposed which may extend to six thousand rupee every day during which the failure continues after contravention of first such direction .

### **14.15 Conclusion**

Only strong laws can not reduce theft of electricity. An intelligent licensee needs to proactively search for a healthy mix of new technology and strong implementation of the law to get good results. Technology such as Plastic Coated Cables will put an end to Large Scale hooking and illegal tapping of Electricity and this will also enhance public safety as there are no naked live wires in the open<sup>75</sup>.

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<sup>75</sup> NDPL has already launched the project in low-middle class and resettlement colonies of the Capital.

## **UNIT 15**

# **INVESTIGATION, ENFORCEMENT AND SPECIAL COURTS**

### **15.1 Background**

One thing is great about the Electricity Act 2003, there are multiple organizations and authorities for proper checks and balances in the power sector. However so many institutions and authority many a time also create confusion. To clarify the jurisdiction and scope of the functioning of various authorities I have clubbed them together in this chapter. These institutions in many ways are semi-judicial in nature therefore there discussion before taking up special courts would be apt.

### **15.2 Adjudicating officer (Section 143)**

#### **15.2.1 Appointment of Adjudicating officer**

The appropriate commission shall appoint adjudicating officer. One of the members of the appropriate commission can only be appointed as an adjudication officer.

All question which come before any meeting of the appropriate commission are decided by a majority of the members present and voting , and in the event of equality of votes , the chairperson or in his absence , the person presiding shall have a second or casting vote. Thereby is can be deducted that in case of appointment of an adjudicating officer also one of the member will be appointed by the above mentioned procedure .

#### **15.2.2 Functions of Adjudicating officer**

The primary function of the adjudicating officer of the appropriate commission shall be holding of inquiry .The Central

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Government is empowered to make rules under section 176(2)(v) for the manner of functioning of the adjudicating officer .It is also mandated that any person concerned with the case will be given reasonable opportunity to be heard before any penalty under section 143 is imposed .

### **15.2.3 Powers of the Adjudicating Officer**

The adjudicating officer shall have the power to summon and enforce the attendance of any person acquainted with the facts and circumstances of the case . He person can also be asked to give evidence or produce any document which in the opinion of the adjudicating officer may be useful for or relevant for the subject matter of the inquiry .If on such inquiry the adjudicating officer is satisfied that that the person has failed to comply with the provisions of the below mentioned sections , he may impose penalty as he thinks fit in accordance with the provisions of any of the below mentioned sections .

Section 29(5) provides that If any dispute arises with reference to the quality of electricity or safe, secure and integrated operation of the regional grid or in relation to any direction given under by Regional load dispatch center , it shall be referred to the Central Commission for decision. It is also Provided that pending the decision of the Central Commission, the directions of the Regional Load Despatch Centre shall be complied with by the State Load Despatch Centre or the licensee or the generating company, as the case may be.

If any licensee, generating company or any other person fails to comply with the directions issued by the Adjudicating officer he shall be liable to a penalty not exceeding rupees fifteen lacs.

Secondly Section 33(4) provides that If any dispute arises with reference to the quality of electricity or safe, secure and integrated operation of the State grid or in relation to any direction given the state load dispatch center it shall be referred to the adjudicating officer for decision . It is also provided If any licensee, generating company or any other person fails to comply with the directions issued

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by state load dispatch centre, he shall be liable to a penalty not exceeding rupees five lacs.

Finally Section 43 states that Every distribution licensee, shall on an application by the owner or occupier of any premises, give supply of electricity to such premises, within one month after receipt of the application requiring such supply. It is also Provided that where such supply require connection of distribution mains, or commissioning of new sub-station, the distribution licensee shall supply the electricity to such premises immediately after such extension or commissioning or within such period as may be specified by the adjudicating officer of the Appropriate Commission:

Furthermore that in case of a village or hamlet or area wherein no provision for supply of electricity exists, the adjudicating officer of the Appropriate Commission may extend the said period as it may consider necessary for electrification of such village or hamlet or area. It is also Provided that no person shall be entitled to demand, or to continue to receive, from a licensee a supply of electricity for any premises having a separate supply unless he has agreed with the licensee to pay to him such price as determined by the adjudicating officer of the Appropriate Commission.

#### **15.2.4 Jurisdiction of the civil Court**

No civil court<sup>76</sup> has jurisdiction to entertain any suit or proceeding in respect of any matter which an adjudicating officer is empowered to determine .Further more no injunctions shall be granted by any court or any other authority in respect of any action taken or to be taken in pursuance of any power conferred by or under the Electricity Act .

### **15.3 Assessing officer (Section 126)**

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<sup>76</sup> Section 145

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### **15.3.1 Appointment of assessing officer**

Assessing officer is an officer of the State Government or State Electricity Board or licensee .He is designated as an assessing officer by the state Government.

### **15.3.2 Assessment**

If on inspection of any premises or documents the assessing officer duly authorized by the State Government comes to the conclusion that unauthorized use of Electricity is taking place . He shall provisionally assess to the best of his judgment the electricity charges which the person using the electricity must pay .Subsection 5 of Section 126 also provides that it shall be presumed that unauthorized use of electricity was taking place for three months immediately preceding the date of assessment in case of domestic and agriculture consumers and six months immediately preceding in case of all other consumers. This presumption shall stand unless it is rebutted by the person ,occupier or possessor of such premises .It is also provided that the assessment shall be made at the rate of one and a half times the tariff applicable.

### **15.3.3 Unauthorized use of Electricity**

Explanation (b) of Section 126 defines "unauthorized use of electricity" to means the usage of electricity-

- by any artificial means; or
- by a means not authorised by the concerned person or authority or licensee; or
- through a tampered meter; or
- for the purpose other than for which the usage of electricity was unauthorized.

### **15.3.4 Notice of Assessment**

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The order of the provisional assessment shall be served the appropriate person in accordance with the rules made by the state Government under section 180(2)(k). The assessed person can file objections against the provisional assessment before the assessing officer. The assessing officer may or may not give reasonable opportunity to such assessed person before passing the final order.

The assessed person can accept the provisional assessment and deposit the assessed amount within seven days of service of the provisional assessment order. If the assessed person deposits the assessed amount then he shall not be subject to any further liability or any action regarding unauthorized use of electricity

#### **15.3.4 Final Assessment**

The person served with the notice of provisional assessment shall be entitled to file objection. The Assessing officer after giving reasonable opportunity of hearing to such person, pass a final order of assessment of the electricity charges payable by such a person.

Furthermore under section 127(6) it is provided that When a person defaults in making payment of assessed amount, he in addition to the assessed amount shall be liable to pay, on the expiry of thirty days from the date of order of assessment, an amount of interest at the rate of sixteen per, per annum compounded every six months.

#### **15.3.5 Jurisdiction of the civil Court**

No civil court<sup>77</sup> has jurisdiction to entertain any suit or proceeding in respect of any matter which an assessing officer<sup>78</sup> designated by the state government is empowered to determine. Further more no injunctions shall be granted by any court or any other authority in respect of any action taken or to be taken in pursuance of any power conferred by or under the Electricity Act.

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<sup>77</sup> Section 145

<sup>78</sup> Section 126

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## **15.4 Appellate Authority (Section 127)**

### **15.4.1 Appointment of Appellate Authority**

The Electricity Act is silent on the issue of the appointment of the appellate Authority .It is not clear from the Act whether the appellate authority shall be a functionary of the Government or the licensee .

### **15.4.2 Functions of Appellate Authority**

The Appellate Authority shall dispose of the appeal from the aggrieved party in the matter of final order of the Assessing officer under section 126.The Appellate Authority shall pass appropriate orders and send a copy of the order to the assessing officer and the appellant.

The order of the Appellate authority shall be final .It is also provided that no appeal shall lie to this appellate authority against the final order of the Assessing officer where the final order was made with the consent of the party.

### **15.4.3 Limitation on appeal**

The appeal shall lie to the appellate authority not after 30 days of the final order of the assessing officer. Secondly no appeal shall be entertained by the appellate authority unless an amount equal to one-third of the assessed amount is deposited in cash or by way of bank draft with the licensee . it is also mandatory that the documentary evidence of the same must be enclosed with the appeal .

### **15.4.4 Rules for the Appellate Authority**

Central Government may frame rules for the general functioning of the appellate authority under the rule-making powers vested in the central Government under section 176(1)(u) of the electricity Act .

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#### **15.4.5 Jurisdiction of the civil Court**

No civil court<sup>79</sup> has jurisdiction to entertain any suit or proceeding in respect of any matter which an Appellate authority empowered to determine. Further more no injunctions shall be granted by any court or any other authority in respect of any action taken or to be taken in pursuance of any power conferred by or under the Electricity Act.

#### **15.4.6 Epilogue**

The central government it is hoped will soon come out with the relevant regulation to make the institution truly functional. However as a proactive step one of the distribution licensee of Delhi has created a establishment by the name of Consumer grievance redressal Committee which has similar powers as of the appellate authority. It is a three member body with following composition-

- One retired High Court Judge
- One Senior technical Person
- One person from Non Governmental Organization

This kind of institution will help in speedy and quick disposal of cases with minimum of procedural formalities.

### **15.5 Assessment Hierarchy for unauthorized use of Electricity**

Appellate Authority  
(Section 127)

Assessing Officer  
(Section 126)

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<sup>79</sup> Section 145



## **15.6 Investigating Authority (Section 128)**

### **15.6.1 Appointment of Investigating Authority**

The Electricity Commission has the power to appoint an Investigating Authority. If the Appropriate Commission is satisfied that a license has

- A generating company or a license has failed to comply with any of the provisions of this Act or
- A generating company or a license has failed to comply with any of the the rules or regulations made there under,

Appoint an "Investigating Authority" in the order to investigate the affairs of any generating company or license and to report to that Commission on any investigation made by such Investigating Authority. The investigating authority is at liberty to employ auditor for the purpose of investigation.

### **15.6.2 Powers of the Investigating Authority**

Wide powers can be conferred on the investigating authority by the electricity Commission. The powers of the investigation authority may include-

- Inspection of Books
- Examination on oath of appropriate person
- Officers of the investigated licensee or generating companies are duty bound to provide information

The electricity Commission on receipt of the report take following action after giving appropriate hearing to the party concerned -

- require the licensee or the generating company to take such action in respect of any matter arising out of the report as the Appropriate Commission may think fit; or
- cancel the license; or
- direct the generating company to cease to carry on the business of generation of electricity.

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This is a extreme power in the hands of the Electricity Commission for application in an extreme situation. The investigating authority can investigate -

- all the subsidiaries of the investigated entity formed for the purpose of carrying on the business of generation or transmission or distribution or trading of electricity exclusively outside India; and
- all its branches whether situated in India or outside India.

## 15.7 Special Courts

### 15.7.1 Constitution of Special Courts

The State Government may, for the purposes of providing speedy trial of offences by notification in the Official Gazette provide for the same. The special court shall try following offences -

- Theft of electricity (Section 135 )
- Theft of electric lines and materials( Section 136)
- Punishment for receiving stolen property(Section 137)
- Interference with meters or works of licensee(Section 138)
- Negligently wasting electricity or injuring works(Section 139)

### 15.7.2 Appointment of judge

A Special Court shall consist of a single Judge who shall be appointed by the State Government with the concurrence of the High Court. However A person shall not be qualified for appointment as a Judge of a Special Court unless he was, immediately before such appointment, an Additional District and Sessions Judge. Moreover it is also provided that in case of exigency or any urgent business, the business shall be disposed of :-

- by a Judge, if any, exercising Jurisdiction in the Special Court;
- where there is no such other Judge available, in accordance with the direction of District and Sessions Judge having jurisdiction over the ordinary place of sitting of Special Court.

### **15.7.3 Procedure and power of Special Court**

All abovementioned offences shall be triable only by the Special Court within whose jurisdiction such offence has been committed. Where it appears to any court in the course of any inquiry or trial that the case pertains to the abovementioned offence and the case is one which is triable by a Special Court constituted under this Act for the area in which such case has arisen, it shall transfer such case to such Special Court, and thereupon such case shall be tried and disposed of by such Special Court.

It has specially been provided that it shall be lawful for such Special Courts to act on the evidence, if any, recorded by any court in the case of presence of the accused before the transfer of the case to any Special Court. However if the Special Court is of opinion that further examination, cross-examination and re-examination of any of the witnesses whose evidence has already been recorded, is required in the interest of justice, it may re-summon any such witness and after such further examination, cross-examination or re-examination, if any, as it may permit, the witness shall be discharged.

The Special Court may, notwithstanding anything contained in sub-section (1) of section 260 or section 262 of the *Code of Criminal procedure, 1973*, try the offence referred to in sections 135 to 139 in a summary way in accordance with the procedure prescribed in the said Code and the provisions of sections 263 to 265 of the said Code shall, so far as may be, apply to such trial: that where in the course of a summary trial under this sub-section, it appears to the Special Court that the nature of the case is such that it is undesirable to try such case in summary way, the Special Court shall recall any witness who may have been examined and proceed to re-hear the case in the manner provided by the provisions of the said Code for the trial of such offence: further that in the case of any conviction in a summary trial under this section, it shall be lawful for a Special Court to pass a sentence of imprisonment for a term not exceeding five years.

A Special Court may, with a view to obtaining the evidence of any person supposed to have been directly or indirectly concerned in or privy to, any offence tender pardon to such person on condition of his making a full and true disclosure of the circumstances within his

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knowledge relating to the offence and to every other person concerned whether as principal or abettor in the commission thereof, and any pardon so tendered shall, for the purposes of section 308 of the *Code of Criminal Procedure, 1973*, be deemed to have been tendered under section 307 thereof.

The Special Court may determine the civil liability against a consumer or a person in terms of money for theft of energy which shall not be less than an amount equivalent to two times of the tariff rate applicable for a period of twelve months preceding the date of detection of theft of energy or the exact period of theft if determined whichever is less and the amount of civil liability so determined shall be recovered as if it were a decree of civil court.

In case the civil liability so determined finally by the Special Court is less than the amount deposited by the consumer or the person, the excess amount so deposited by the consumer or the person, to the Board or licensee or the concerned person, as the case may be, shall be refunded by the Board or licensee or the concerned person as the case may be within a fortnight from the date of communication of the order of the Special Court together with interest at the prevailing Reserve Bank of India prime lending rate for the period from the date of such deposit till the date of payment

For the purposes of this section, "civil liability" means loss or damage incurred by the Board or licensee or the concerned person, as the case may be, due to the commission of an offence referred to in sections 135 to 139.

#### **15.7.4 Special Court to have power of Court of Session**

Save as otherwise provided in this Act, *the Code of Criminal Procedure, 1973*, insofar as they are not inconsistent with the provisions of this Act, shall apply to the proceedings before the Special Court and for the purpose of the provisions of the said enactments, the Special Court shall be deemed to be a Court of Session and shall have all powers of a Court of Session and the person conducting a prosecution before the Special Court shall be deemed to be a Public Prosecutor.

### **15.7.5 Appeal and revision**

The High Court may exercise, so far as may be applicable, all the powers conferred by Chapter XXIX and XXX of the *Code of Criminal Procedure, 1973*, as if the Special Court within the local limits of the jurisdiction of the High Court is a District Court, or as the case may, be , the Court of Session, trying cases within the local limits of jurisdiction of the High Court.

### **15.7.6 Review**

The Special Court may, on a petition or otherwise and in order to prevent miscarriage of justice, review its judgment or order passed, by it. However review petition shall be entertained only on the ground that it was such order passed under a-

- mistake of fact,
- ignorance of any material fact or
- any error apparent on the face of the record.

The review petition in the Special Court shall not be allowed if the review petition has been previously set aside in its previous order or review the judgment without hearing the parties affected.

## **15.8 Hierarchy for Trial of Criminal offence under section 135 to 139**

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## UNIT 16

### OMBUDSMEN AND CONSUMER PROTECTION

*“Solos populi est suprema lex”  
(Regard for public welfare is the highest law)  
Latin Maxim*

#### 16.1 Background

Empirical evidence suggests that competition is the best regulator and is in keeping with the interest of the consumer. Where monopoly elements are present as is the case in the Electricity industry, Independent regulators have done commendably well. However we need a strong institution at the consumer level for the protection of individual consumer. This is where the role of Ombudsmen and consumer courts come in. Electricity suppliers have repeatedly failed the customers with confusing bills, estimated meter readings and mismanaging customer expectations. This is essentially difficult market for most consumers to comprehend.

#### 16.2 Rights of a Consumers, Applicant of Electricity Connection and other Citizens

Section 2(15) defines “**Consumer**” to “*mean any person who is supplied with electricity for his own use by a licensee or the Government or by any other person engaged in the business of supplying electricity to the public under this Act or any other law for the time being in force and includes any person whose premises are for the time being connected for the purpose of receiving electricity with the works of a licensee, the Government or such other person, as the case may be.*”

This definition is very wide to includes all kinds of consumers. Even unauthorized consumers have been included in the definition by incorporating the words person who’s premises is connected with the works of the licensee. The last line of the definition makes the definition more inclusive . It specifies that “such other person as the case may be” shall also be considered as a consumer.

The issue is whether an applicant is a consumer or not?

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No the applicant is not a consumer. The rights of an applicant who is an owner or a holder of a premises has separate set of rights then the consumer. After the applicant receives the Electricity connection whether authorized or unauthorized he is deemed to be a consumer for all practical purposes.

### **16.3 Rights of a Consumer**

#### **(1) Right to redressal of grievance**

*Section 42 (5) provides that "Every distribution licensee shall, within six months from the appointed date or date of grant of license, whichever is earlier, establish a forum for redressal of grievances of the consumers in accordance with the guidelines as may be specified by the state commission".*

In case of deemed licensee the appointed date is 10<sup>th</sup> June 2003. for all other distribution licensee the date of grant of license is the date from which the period of six months shall begin.

#### **(2) Right to representation before Ombudsmen**

Section 42(6) provides that Any consumer, who is aggrieved by non-redressal of his grievances by the forum established by the distribution licensee under the Act, may make a representation for the redressal of his grievance to an authority to be known as Ombudsman. The Ombudsman shall be appointed by or designated by the state Commission.

The Ombudsman shall settle the grievance of the consumer within such time and in such manner as may be specified by the State Commission.



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## **Concept of Ombudsmen**

The Ombudsmen is an Scandinavian concept, created for redressal of citizens grievances. The office of Ombudsmen originated in Sweden(1809).Several countries have since adopted the system as a bulwark against the impropriety of bureaucrats. The Swedish meaning of the word is – An officer appointed by the legislature to handle complaints against the administrative and judicial action.

As an impartial investigator the ombudsmen makes investigation, collects the facts objectively and reports back to the authority appointing it. The complainant has to simply write to him or the Ombudsmen can also take sue motto cognizance of a matter whether through news papers or other means. The right to investigate dose not empower him to quash or reverse a decision, he dose not have a direct control over the institution he is investigating.

The Ombudsmen only reports back and publishes its findings. This has made it a very popular institution. Its strength lies in the wide publicity that is given to its working in the mass media. The World wide acceptance of the system has led to its introduction in many public oriented organizations. The concept of Ombudsmen is somewhat similar to Parliamentary Commissioner of UK, Procurator of USSR and the lokayuktas of India.

The Lokpal Bill pending in the parliament also envisages creation of a similar institution at the Central level.

### **(3) Right of Non Discrimination**

By virtue of Section 45(4) all consumers are to be treated with equity and the licensee can not show undue preference to any person or class of persons or discriminate against any person or class of persons.

### **(4) Right not to pay security in case of prepaid meters**

The consumer is not required to pay security in case of a prepaid meter. This right flows by virtue of Section 47(5).

## 16.4 Consumer grievance redressal hierarchy

## 16.5 Rights of an Applicant

Section 43 provides that *“Every distribution licensee, shall on an application by the owner or occupier of any premises, give supply of electricity to such premises, within one month after receipt of the application requiring such supply”*

The right to receive supply is not an absolute right, In fact it is a limited right .Under following circumstances there can be delay in supply –

1. that where such supply require connection of distribution mains, or commissioning of new sub-station, the distribution licensee shall supply the electricity to such premises immediately after such extension or commissioning or within such period as may be specified by the Appropriate Commission:
2. In case of a village or hamlet or area wherein no provision for supply of electricity exists, the Appropriate Commission may extend the said period as it may consider necessary for electrification of such village or hamlet or area.

However it is the duty of every distribution licensee to provide, if required, electric plant or electric line for giving electric supply to the premises specified in the area where the entity holds a license

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Section 43(3) provides that the distribution licensee who fails to supply electricity with in the period of one month shall be liable for a penalty which may extend to Rs 1000.However the act is silent on the issue of who shall determine the amount of penalty to be paid and in every case who will determine the duration of default.

However the law recognizes the exigencies beyond the control of a distribution licensee and excludes the licensee from its obligations incase of force majeure.

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### **16.6 Rights of Non Electrified Citizens residing in Rural Areas**

The Act (Section 6) states that the Appropriate Government shall endeavor to supply electricity to all areas including villages and hamlets.

## **UNIT 17**

### **TORTS AND CONSUMER COMPENSATION**

#### **17.1 Background**

The appropriate Commission is empowered to specify the Standards of performance of licensee<sup>80</sup> If a licensee fails to meet the standards specified he shall be liable to pay such compensation to the person affected as may be determined by the IRC. However before determination of compensation, the concerned licensee shall be given a reasonable opportunity of being heard. It is also provided that the concerned licensee within ninety days of such determination. This is forward looking provision and would help in ensuring electricity supply of right quality to the consumer.

However besides this there are various other remedies which are available to the consumer, which we will discuss in brief in this chapter.

#### **17.2 Lok Adalats**

##### **17.2.1 Concept**

Article 39A of the Constitution provides that the state shall secure that the operation of the legal system promotes justice on a basis of equal opportunity, and shall, in particular, provide free legal aid, by suitable legislation or schemes or in any other way, to ensure that the opportunities for securing justice are not denied in any other way, to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities.

To achieve the abovementioned objective and to provide free legal aid it was considered desirable to have an institution for the disposal of cases expeditiously and without much cost. The Legal Services Authorities Act, 1987 was enacted to fulfill the desirable.

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<sup>80</sup> Section 57 of the Electricity Act 2003

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The Legal Services Authorities Act, 1987 besides other institution provides for creation of lok Adalats for quick disposal of Cases including Electricity related disputes.

### **17.2.1 Powers of Lok Adalat**

Lok Adalats are vested with the power of civil Court under the Code of Civil Procedure. It is empowered to summon and enforce the attendance of any witness, to discover and produce any document, to receive evidence on affidavits, to requisite any public record or document or copy of such record or document or copy of such record or document from any court of law and or office.

### **17.2.2 Permanent Lok adalat for Electricity disputes**

By virtue of section 22B of the Legal services Authorities Act 1987, permanent lok adalats for exercising jurisdiction in respect of public utility services including supply of power and light can be established. For example in Delhi single judge, two permanent lok adalats have been established.

However permanent Lok Adalat will not have jurisdiction where the value of the dispute is more than rupee ten lakh. The peoples court are guided by the principles of natural justice, objectivity, fair play, equity, and other principles of justice, and are not bound by the Code of Civil Procedure, 1908 and the Indian Evidence Act 1872. It is also provided that when the parties fail to reach at an agreement, the permanent lok adalat shall decide the case. However the dispute must not relate to any offence.

### **17.2.3 Conclusion**

For Consumers the permanent Lok adalat is a good institution for quick disposal of cases. However by virtue of section 174 the electricity Act 2003 shall have overriding effect in case of a inconsistency between the electricity Act 2003 and The Legal services authorities Act 1987.

### 17.3 Consumer Courts

The Consumer Protection Act 1986 tries to help a consumer when the power supplied is subject to deficiency. Its main objective is better protection of the interest of consumer and as far as possible quick disposal of the cases.

Under The Consumer Protection Act 1986 three Consumer dispute redressal agencies have been established. The agencies set up are-

- Consumer Dispute redressal forum(District Forum)
- Consumer dispute redressal Commission(State Forum)
- National Consumer Dispute Redressal Commission(National Commission)

Pecuniary jurisdiction of the District forum is rupee five lakhs. In case of the state Commission it extends from five lakhs to twenty lakhs and any claim which exceeds rupee twenty lakhs shall fall under the jurisdiction of the National Commission.

The consumer within the Consumer Protection act means any person who either –

- Buys any goods for consideration , or
- Hires or avails of any services for a consideration.

Definition of service<sup>81</sup> includes supply of electricity or other energy. This does not include any service free of charge or under a contract of personal service. Deficiency<sup>82</sup> means any fault, imperfection, shortcoming or inadequacy in the quality, nature and manner of performance which is required to be maintained by or under the law for the time being in force or has been undertaken to be performed by a person in pursuance of a contract or otherwise in relation to any service.

The Electricity agencies have in many cases held that the supply of electricity was deficient. Some of the common complaints include-

- Voltage fluctuation<sup>83</sup>
- Installation of totally stopped meter<sup>84</sup>
- Defective meter<sup>85</sup>

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<sup>81</sup> Section 2(1)O of the Consumer Protection Act 1986

<sup>82</sup> Section 2(1)G of the Consumer Protection Act 1986

<sup>83</sup> Travencore Oxygen limited vs Kerala state Electricity Board I(1997)C.P.J. 17 (N.C.)

<sup>84</sup> Rajasthan State electricity Board vs Mohammad Usuf III(1995)C.P.J. 433(Raj.SCDRC)

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- Illegal disconnection<sup>86</sup>
- Wrongful disruption<sup>87</sup>

The forum has held the above complaints to fall within the definition of deficiency of service. They have also been effective in many cases to provide appropriate commission to the aggrieved party.

#### 17.4 National Human Rights Commission

Recently a Man Stepped on Live Wire and Got Electrocuted in Bihar, The National Human Rights Commission ordered interim compensation for the widow<sup>88</sup>. The judgment reads as follows - Satyabrat Narain Singh was electrocuted and died when he came into contact with a live electric wire lying on the ground in Patna. The widow of the deceased approached the Bihar State Electricity Board (BSEB) for compensation, but the Board denied her relief, despite the fact that the Apex Court had awarded compensation in a similar case. The BSEB attributed the electrocution and death of Shri Singh to a 'natural calamity' and an 'act of God', as they claimed that the wire had been broken during a recent storm. The widow then appealed to the National Human Rights Commission as she and her minor sons were on the verge of starvation.

The Commission asked for reports from the Secretary of the BSEB and from the Home (Police) Department, Government of Bihar. The reports confirmed the facts of the case and restated that the BSEB could not be held liable for the death.

The Commission found that the BSEB defense was based on flimsy and untenable grounds. The obligation to take 'due care' and the consequences of 'negligence' have been detailed in a number of cases, such as *Manohar Lal Sobha Ram Gupta vs. M.P. Electricity Board (1975 ACJ 494)*. The principle of strict and absolute liability had also been laid down by the Supreme Court of India, in the *Sriram Gas Case*, regarding the operation of all inherently dangerous activity. The Commission also criticized the 'act of God' defense, stating that there is no indication that the storm caused the wire to break, nor material

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<sup>85</sup> Gita Rani Chakroborty vs West Bengal Electricity Board I (1997)CPJ 450(WB S.C.D.R.C)

<sup>86</sup> Haryana state Electricity Board vs Naresh Kumar II (1996)C.P.J 306 (N.C.)

<sup>87</sup> Haryana State electricity Board vs T.R. Poltry farmsII(1996) C.P.J.15(N.C)

<sup>88</sup> www.Nhrc.nic

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to show that the storm was of such unprecedented intensity that it's hazards to safety could not have been foreseen. Electric lines, due to their hazardous nature, are expected to be installed in such a way as to withstand the vagaries of nature. If all precautionary measures fail, it still remains the duty of the Board to protect the public, either by switching off the power or by removing the wire.

The Commission has therefore asked the Government of Bihar to pay Rs. 2 lakhs to the widow of the deceased as immediate interim relief. It has also asked the BSEB to conduct an inquiry into the incident and take appropriate measures against concerned officials. The Commission has also asked the BSEB to frame regulations and guidelines to prevent such incidents from recurring.

### **17.5 Conclusion**

The Lok Adalts, Consumer forum, and National Human Rights Commission have played an enabling role by providing remedy to the aggrieved person but the amount of compensation it is thought by some legal expert is very low if we compare the same with other democratic countries. This kind of nominal compensation only gives some consolation to the victim but does not provide any deterrent to the Power utility.

However recently strong action by the Delhi High court in the Uphar Cinema case, Where the Court provided that the DVB is also liable for proper maintenance of the distribution system and the same had to pay over Rs 3 crore paid as compensation. This may set a precedent at the national level for more rational and exemplary compensation for the aggrieved.



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# **PART – E**

## **ENERGY ISSUES**

## UNIT 18

# FUTURE OF ELECTRICITY INDUSTRY

*Our vision of India in 2020 is of a nation busting with energy, entrepreneurship & Innovation*

*India Vision 2020 prepared by the Planning Commission*

### 18.1 Background <sup>89</sup>

In 1983, when India's total software exports were only \$ 12 million, who would imagine that they would multiply 500 times in 17 years and the country would be recognized around the world as a major IT Power. Probably similar is the destiny of the power sector

Economic growth the world over is driven by energy. It powers the nations industries, vehicles, homes and offices. For future growth to be both rapid and sustainable, the energy source needs to be as resource efficient as possible. Business as usual will mean that total demand of power will increase by another 3.5 times in the next two decades. This will mean that we need to strive to triple the installed generation capacity by the year 2020.

### 18.2 Renewable energy

Reliance on renewable sources of energy will offer enormous economic, social and environmental benefits. India is already fifth largest producer of wind power. Interestingly most of the (almost 95%) investment in the wind sector is from the private sector. Renewable technologies such as solar power, Biomass, small hydro, and bio-fuels will play greater role. The greater emphasis on the alternative energy will probably reduce India's dependence on imported fuels And also helping in better environmental management. Tapping the same would require conducive national policies and programme to attract strong participation by the private player.

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<sup>89</sup> substantially borrowed from Report of the committee on India Vision 2020 (Chairman Dr SP Gupta), Planning Commission. Substantially follows Shri APJ Abdul Kalam's vision (President of India). Full document available at [http://planningcommission.nic.in/plans/planrel/pl\\_usn2020.pdf](http://planningcommission.nic.in/plans/planrel/pl_usn2020.pdf).

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Interestingly BHEL has manufactured zero emission electric vehicle shuttle service. This probably can be the base for future development.

### 18.3 Alternate Thinking

With growing literacy and awareness, new possibilities of power system management will be increasingly used. Fortunately many states have started contemplating implementation of Demand side measures, Madhya Pradesh being first of them. Demand side Participation can be used with benefits to all the stakeholders. The Time of Day tariff which many regulatory commissions have accepted in principle can be taken as a preliminary step towards incentivising off peak period use of Electricity for better management of the system.

Some industries even at this preliminary stage are contemplating creation of Value Chain- From Mining of Fuel to end supply of Electricity POOL System. For example the famous words used by one of the entrepreneur are "from Well head to the Wall Socket".

### 18.4 Immediate technological Changes

Human interface will also tremendously reduce with greater technology application and innovation. Some of the new technology which are at different stages of implementation and testing in India are-

**1.Pre Paid Meters** –Human interface can be avoided in metering , billing and collection

Availability based tariffs. Recently The West Bengal Renewable Energy Development Agency (WBREDA)<sup>90</sup> has developed a prepaid card for electricity bills .

**2.Automated Meter Reading-** This will Eliminate the possibility of human error in Power billing .The System will remove the practice of giving power bills on the basis of estimated reading when the consumers house is found lock. However the Distribution Licensee find

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<sup>90</sup> 13<sup>th</sup> March,2003 Business Standard, Kolkatta .

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the system prohibitive ,hence it has not been adopted as of now .Nevertheless this is a system which will be implemented in future.

**3.Thermo Vision Cameras<sup>91</sup>**-they can film the grids and all other installations to detect even the smallest of troubles .The infrared image from the camera highlights the areas that are relatively hot. The rise in temperature can be caused due to loose contacts and can result in breakdowns.

**4.IT Based Solutions for Power Sector<sup>92</sup>** - Broad areas of development can be-

- a. Enterprise Asset Management
- b. Control Systems and knowledge based decision systems for power plants and plant equipment.
- c. Consumer Billing
- d. Plant maintenance Management tool
- e. ERP solutions for Power Plants

**5.Automated Storage and retrieval system<sup>93</sup> (ASRS)**- The major benefits of the system are efficient use of vertical space .The design flexibility also helps in accommodating a wide range of loads and configuration of bins .Inventory management and control also becomes easier.

**6. E-Bill-DHBVN(Dakshin Haryana Bijli Vitran Nigam )** has already introduced the System in few places. Any domestic and Non Domestic consumer could get information on the mobile service applying through SMS.

**7.SCADA-Supervisory Control and Data Acquisition-** This will help provide better and reliable supply to all consumer . Reliance Energy has already implemented this project in suburban Mumbai at 11 KV level. SCADA leads to increased system reliability, reduced interruptions in supply and enabled redeployment of manpower.

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<sup>91</sup> NDPL has provided these cameras to its engineers. March 30,2003 Business Today

<sup>92</sup> TCS and BHEL have already signed MOU to provide IT based solutions jointly

<sup>93</sup> new ASRS has been developed by Corporate Research and Development (R & D)of the BHEL

First Draft

**8. ECS Electronic Clearing System** – Modern tools for efficient management of the distribution system will probably be used increasingly by various utilities. This could lead to better consumer service.

## **18.5 Re-Segmenting of power business**

In future there can be re-segmenting of business into separate areas such as –

- retail supply,
- network operations,
- back office and
- energy audit and
- other similar areas .

This can spawn a host of other businesses. The states of Andhra Pradesh and Karnataka have already out sourced there collection and other services.

## **18.6 Technology Development in Power Cables**

Cables can be classified according to the voltage

1. Low Tension(LT)
2. High Tension (HT)
3. Super Tension (ST)
4. Extra High Tension (EHT)
5. Extra Super Voltage

For higher range of cables , there has been a switch from copper to aluminum for the manufacture of conductors so that vast aluminum resources available in India are effectively used .Another significant Development have been the introduction of cross linked polyethylene (XLPE) insulated Cables used earlier ,resulting in longer llife and better electrical properties .In the range of 66 kv to 132 kv cables now indigenously produced and Indian manufactures have also recently developed 230 kv power cables with XLPE insulation .There has also been the development of fire retardant low smoke density (FRLS) PVC sheathed cable.

## **18.7 T & D Losses**

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Most of the efficient electricity markets have very low T&D losses for example T and D losses of United States is 8% and of Japan is 7%. There will probably be similar kind of T&D losses in India.

] The APTransco has reduced T and D losses by 10.8% in 4 years (1999 to 2003) by improving internal efficiency in the T and D sector. The widely studied Delhi privatization model also emphasizes that the distribution licensee shall reduce T&D losses by 17% within the transition period of five years.

The losses due to long distance transmission will also reduce with the application of new technology. Already the Maintenance of Transmission lines of Power Grid Corporation has been taken up by Pawan Hans Helicopters.

## **18.8 Grid Security and Reliability**

WRLDC has launched FGMO (Free governor mode operation) from May 19 2003. Under FGMO, the grid security level would rise. This will contain rapid variation in frequency.. Under this system all generators would have to track power demand variations by regulating their output to change in frequency. Slow variations in frequency would be taken care of by commercial signals while fast variations will be taken care of by FGMO.

## **18.9 Alternative use of electricity system**

Internet access through the electrical lines would probably revolutionize world wide internet access. Interestingly an American company Power line communications Technologies<sup>94</sup> has already studied the option. It is cheaper than Digital Subscriber lines (DSL). Internet access is received through any electrical outlet. A modem in the distribution hub for electricity, or sub station, converts digital signals into analog.

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<sup>94</sup> Substantially taken from March 20, The Hindu Business line

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These signals pass along the unused higher frequency spectrum on power lines. The line connect to the internet backbone. That connection is made either through a line leased from the local phone carrier or through the fiber links owned by the utility.

Whether broadband through the power lines is as fast as DSL is a subject of some Debate .The fastest speed of power line communications far exceed those of DSL and the cable ,but interference and competing traffic on electrical wires slows down such communications. Still a power line communication link is considerably faster than dial up modem and it can compete effectively on price .

## 18.10 Conclusion

Can we have a future Quality power at affordable price. The Electricity Act 2003 provides some hope in the direction. Energy Security is also a issue which the Government is taking seriously. The Oil Major of India has invested in Sakhalin basin and Sudan for reliable supply of energy. Recently Korea(Daiwoo) and India(ONGC) are jointly exploring first exploration Well in the off-shore gas block A-1(Burma) off the Rakhini bordering Bangladesh and India. All these steps it seems are in the right direction for energy security.

## **UNIT 19**

### **ENVIRONMENT AND ENERGY**

“Thousands have lived without Love ,  
not one without air, so lets keep it clean”

#### **19.1 Background**

Relentless and unplanned economic growth using fossil fuel is causing irreversible change of Ecology. This is the most serious environmental threat which has the potential to unalterably change the way human species live. It is predicted that the average increase in temperature around the world will be between 1 and 5 degree Celsius by year 2100 .this is expected to cause rising of sea water level and flooding of low laying areas .

The primary cause of temperature rise is the green house gases like CO<sub>2</sub> , N<sub>2</sub>O , CH<sub>4</sub> , Hydro fluoro Carbons. Therefore it is essential that appropriate Energy management strategies must be evolved for protection of environment and sustainable development .

The Electricity Act has provided a wide leverage for Promotion of Renewable Energy through-

1. Proper fiscal Planning
2. Long term New Energy Policy
3. Fiscal and Financial Planning.
4. Continuous monitoring of renewable energy plans.

#### **19.2 Clean Development Mechanisms(CDM) And Carbon Trading**

The United Nations Framework Convention on climate change in 1997 adopted “The Kyoto protocol “. According to Kyoto Protocol the developed countries have to contain and limit there green house gas emissions and reduce them to an average of 5% from the 1990 emission levels.



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One of the mechanisms to control Green House Gases (GHG) emission is clean Development Mechanism (CDM) which provides for co-operation between developed and Developing countries. Under this mechanism the developed countries and their corporations could invest in projects in developing countries which are carbon efficient. The benefit of carbon reduction will accrue to the industrialized country in its balance sheet of carbon accounting. The developing countries would be selling certified emission reduction units.

It may be pointed out that in order to transfer environment friendly technologies from the developed countries to developing countries to check the emission of green house gases. The benefit to the developing countries would be better technology and more investment in the sectors like power.

There is vast potential in India to satisfy the demand for carbon trading or hot air trading for example -MEDA Maharashtra Energy Development Agency is the nodal agency in Maharashtra to promote co- gen power plants .According to a recent study undertaken by the Federation of cooperative sugar factories in Maharashtra as many as Rs 2000 crore could be availed under the carbon Credit from IFC and GEF(Global Environment Facility).Nearly \$10 per ton can be possible under this facility .The State Government and The Federation would rope in cogen India for taking the benefit of Carbon Credit.

### **19.3 Tariff and Environment Consideration**

MERC has raised the issue of Weather environmental consideration should be a factor in deciding the tariff. Who should share the high cost of environmentally benign power till the technology has matured . The commission has suggested that in addition to the Government ,Consumers should also pay higher energy charges ,taking into account the importance of switching to renewable energy sources .

### **19.4 Green Cess under section 86(1E) of Electricity Act 2003**

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Maharashtra energy Development Agency has suggested a green cess to be collected by charging industrial consumers at the rate of 5 paise per unit. Agency has also suggested imposing "Renewable portfolio Standards" This would mean that all companies would have to ensure that at-least 10% of generation comes from renewable energy sources by the year 2012.

## **19.5 Hydro Projects and environment**

It is not that only thermal Plants have adverse impact on the environment, a wrongly implemented hydropower plant may also cause severe damage to the local ecosystem. Therefore it would be in the larger interest that measures should be adopted for protection of ecosystem. The National Hydro Power Corporation has an Environment Management Plans which includes –

1. Environment Impact Assessment Studies(EIA)
2. Catchment Area Treatment (CAT)
3. Compensatory A forestation
4. Green belt development and reservoir rim treatment.
5. Landscaping
6. Solid Waste management
7. Wild Life Conservation
8. Conservation and Management of Fishes
9. Resettlement and rehabilitation of Project Affected People (POP)
10. Water Quality testing
11. Disaster Management

## **19.6 Experience in Environment protection**

At an initial level to move forward in the purpose for envelopment protection and sustainable development we can learn from experience of other people and institution and replicate the same for our advantage. Some of the experiences are mentioned below-

### **19.6.1 One-Gujarat Experience**

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The Country 's first dual flue gas conditioning unit<sup>95</sup> , which helps stem particulate emission at the thermal power stations , has been commissioned at Gujarat Electricity Board 's Ukai thermal power station .This has brought down the particulate emission level at the Ukai station to below 150 mg/m<sup>3</sup> after the flue gas conditioning unit was installed .As per the rough estimate , the number of thermal power stations requiring particulate emission control systems is around 38. The present cost of a conditioning unit was Rs 1 lakh per MW for ammonia conditioning and Rs1.5 lakh per MW for sulphur trioxide conditioning.

### **19.6.2 Two-Biomass (California Experience)**

Interestingly Herper Dry Lake Energy Park<sup>96</sup> in California produces almost 50 MW of Electricity from cow dung. The Plant uses the technology that heats cow manure, releasing methane in sufficient quantities to fuel a gas turbine and create electricity .The solid waste is used as fertilizer, and the waste water is used recirculated with some used to grow alfalfa around the plant .

### **19.6.3 Three-Andhra Experience**

Non conventional energy Development Corporation of Andhra Pradesh(NEDCAP) Ltd has set up bio mass as fuel for generation of Electricity . Cotton stock, red gram hull , chili straw is being used as fuel.

### **19.6.4 Four-Energy Conservation (Karla experience)**

Kalamassery municipality is installing 'Smart Street Lights' which will allow the municipality to operate street light through SMS message from mobile handsets. A special ETRACS(Energy tracking and control

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<sup>95</sup> The technology for the Dual flue gas conditioning system envisaging dosing of the flue gases with Sulfur trioxide and ammonia was developed by the Heavy Water Board , a part of the Department of Atomic Energy .

<sup>96</sup> Developed by Inland Energy Inc. based at New Port Beach

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system) has been developed by Bangalore based Versite Software Limited.

#### **19.6.5 Conclusion**

Recently the government has constituted "National Hydrogen Energy Board" for promotion of development of fuel cell and other high technology. Alternative sources of energy will increasingly play a greater role and we can learn from the abovementioned example and replicate the same for the benefit of all concerned.

## UNIT 20

### NEW IDEAS TO EMPOWER THE POWER SECTOR

*“Let the implementation Challenge not vitiate the overall vision”*

*Mudit Kulshresht*

*(Energy Chemical & Utilities)*

#### 20.1 Biomass Power for Rural Job-creation & Prosperity<sup>97</sup>

India has a large rural economy with almost 75% of the citations residing in rural setup. With the passage of the electricity Act 2003 distributed generation has become a potentially viable option. The same option is being reproduced here. To leverage this opportunity India Vision 2020 provides a viable option. Approximately 50 million hectares of degraded wasteland that lie outside areas demarcated as national forests, and another 34 million hectares of protected forest area, in much of which tree cover is severely degraded. A massive programme to develop energy plantation consisting of fast-growing tree crops such as Bamboo, Casuarina and Eucalyptus can serve as a raw material for a national network of small, decentralized biomass power plants. These power plants, ranging in size from 10-25 MW, can generate thousands of megawatts of power from renewable, forest-based fuel sources in a cost effective manner. This would reduce India's dependence on imported fuel oils, stimulate private investment in the power sector, and generate massive income and employment opportunities for the rural poor. Establishment of 40 million hectares of energy plantation would be sufficient to generate 100,000 MW of power and provide year round employment for 30 million people.

The greatest advantage of biomass power is that they generate tens of millions of rural jobs and stimulate enormous growth of rural incomes, especially among the weaker sections. Therefore, these strategies should not be regarded from the narrow perspective of energy alone, but from the wider perspective of national development.

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<sup>97</sup> This article has substantially been borrowed from the India Vision 2020 document. Full text of the same is available on the website of Planning commission (<http://planningcommission.nic.in>).

## 20.2 How to supply power at 50 paisa per unit <sup>98</sup>

Recently an energy writer has proposed an innovative scheme to supply electricity at the flat rate of 50 paisa per unit. His view is that electricity could be sold at dirt cheap rates like media: charging a fraction of costs and making the rest from indirect beneficiaries. Media makes money from advertisers, power producers and suppliers could make money from a low, flat cess charged on every transaction, because every the entire economy from stock exchanges to food storage to movies need power to run. The cess could be as low as 0.5% or less of the total turnover of the economy. Interestingly India has followed a similar model to fund roads construction, where roads are built by fuel cesses.

- The benefits of the 50 p rate of electricity is
- Most of the T&D losses are due to electricity theft. With one rate in place there is no incentive in stealing power
  - Low rates electrify poor folks otherwise unable to pay higher tariffs
  - With a common rate the suppliers would not hesitate to supply in rural areas or areas which are not well off.
  - Politically 50p rate will be acceptable to all entities
  - SEBs and Government owned entities resist 'cherry-picking' by private electricity retailer because this will have adverse impact on their financial status. This will become a non entity if a common tariff is applicable.
  - 50p tariff will encourage and induce everyone to pay

Like media, electricity is an enabler of business. Without power, every light, AC gadget and computer will stop working. Supply chains will collapse without refrigeration. Trading will stop, financial markets will shut down. Telecom network will go silent. Nothing works without power. So it makes sense for business to subsidize everybody to use power, the same way companies subsidize media users. The difference between cost and tariffs can be covered by appliance makers, entertainment companies, software firms, telecoms and so on.

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<sup>98</sup> The Economic Times dated 01 Oct 2003 and Wednesday 29<sup>th</sup> Oct 2003 by Shri Abheek barman

## First Draft

He also proposes creation of a fund by imposing a cess on sectors that benefit from electricity use and use the same to fill the gap between low tariff and high costs. Some thing similar is happening in the road sector where oil cesses are funding highways. The energy writer also gives some rough estimates . India now uses about 500,000 million units (MU) of electricity , which costs about Rs. 100,000 crore. Under the new pricing regime, if everyone pays 50 paise per unit, it'll raise Rs, 25,000 crore from tariffs, leaving Rs. 75,000 crore to be covered by the cess. To recover that kind of money, you'd need to charge the profits of the economy (or GDP) a flat cess of 3%.

Now, the economy's turnover is many times more than profits, so an actual cess on turnover will be a lot lower, maybe 1% or less. That'd cover all costs and leave users with electricity priced at an unbelievable 50 paise. Power for all at 50 paise will be a political winner, with states scrambling to fix media-type tariffs for electricity.

### **19.3 Ocean Power having potential of 180, 000 MW<sup>99</sup>**

India is a tropical country with a long coastline. The National Institute of Ocean technology (NIOT) is researching on the way to harness the tremendous ocean thermal energy potential.

The Ocean Thermal Energy Conversion (OTEC) technology uses the water temperature difference at the surface (at about 29C) and at a depth of 1,100 meters (at about 7C) to produce electricity. OTECI has the potential to generate 180,000 MW of power.

The NIOT is implementing the world's first 1 MW floating OTEC technology demonstration project off the Tuticorin coast in Tamil Nadu. The various sub-systems for the plant have been configured, designed and integrated on an OTEC floating barge. A one kilometer-long cold water pipe has been towed out to the site and deployed vertically with an anchoring system at a depth of 1,200 m. The OTEC

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<sup>99</sup> Frontline November 7,2003

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plant will be commissioned after the barge is connected during the next fair weather season.

This kind of non-polluting renewable energy source is appropriate for power-starved nation like India. Though it is capital intensive now, improvements in technology and higher rated plants can bring down the unit cost considerably. India's OTEC resource potential is estimated at around 180,000 MW.

For the mainland, the cost of power generation for plants upwards of 25 MW is expected to be comparable to fossil fuel units. But for islands, an OTEC power plant of any size is cheaper than the conventional generation units. This can help in future to generate electricity for the 7000 KM coastal belt of India and can also fruitfully serve the islands of Andaman & Nicobar and Lakshdweeps.



## Table 1

### NATIONAL AND INTERNATIONAL ENERGY ENACTMENT

<b>Country</b>	<b>Enactment</b>
<b>Australia</b>	Electricity Code Renewable energy (Electricity) Act 2000 Renewable energy (electricity )(Charge ) Act 2000
<b>European Union</b>	European Communities (Internal Market in Electricity)Regulation,2000
<b>India</b>	The Electricity Act 2003 The Competition Act 2002 The Energy Conservation Act 2001
<b>Ireland</b>	Electricity(Supply) Act 1927 Electricity Regulation Act, 1999 Gas (Interim) (Regulation) Act, 2002 Energy (Miscellaneous Provisions)Act 1995
<b>Sri Lanka</b>	Public Utilities Commission of Sri Lanka Act 2000 Electricity reform Act 2002
<b>UK</b>	Electricity Act 1989 The Utilities Act 2000
<b>USA</b>	Energy Policy Act <a href="#">Federal Power Act</a>
<b>Nepal</b>	Nepal Electricity Authority Act 1982(2041) - <a href="http://www.nea.org.np/">http://www.nea.org.np/</a> Community Electricity Distribution By Laws, 2001(2060)
<b>Germany</b>	German Renewable Energy Act -

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2000

**Bhutan**

The Electricity Act of the Kingdom  
of Bhutan 2001

## Table 2

### GOVERNMENT DEPARTMENTS

Country	Department
India	<b>Ministry of Power</b> -- <a href="http://powermin.nic.in/">http://powermin.nic.in/</a> <ul style="list-style-type: none"><li>• Bureau of Energy Efficiency – <a href="http://www.bee-india.com">http://www.bee-india.com</a></li></ul> <b>Ministry of Non Conventional Energy Sources--</b> <a href="http://mnes.nic.in/">http://mnes.nic.in/</a> <ul style="list-style-type: none"><li>• National Hydrogen Energy Board</li></ul> <b>Ministry of Petroleum and Natural Gas--</b> <a href="http://petroleum.nic.in/">http://petroleum.nic.in/</a> <b>Ministry of Coal--</b> <a href="http://coal.nic.in/">http://coal.nic.in/</a> <b>Department of Atomic Energy-</b> <a href="http://www.dae.gov.in/">http://www.dae.gov.in/</a>
UK-	<b>Department of Trade and Industry</b> <a href="http://www.dti.gov.uk/energy%20">http://www.dti.gov.uk/energy%20</a>
USA	US Department of Energy ,Energy Efficiency and renewable Energy -- <a href="http://www.eere.energy.gov/">http://www.eere.energy.gov/</a>  US Department of Energy Fossil Fuels -- <a href="http://www.fe.doe.gov/">http://www.fe.doe.gov/</a>

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**Table 3**  
**INTERNATIONAL ELECTRICITY REGULATORS**

First Draft

<b>Country</b>	<b>Regulators</b>
<b>Australia</b>	NECA-National Electricity Code Administrator - <a href="http://www.neca.org/source/NECA_Home.asp">http://www.neca.org/source/NECA_Home.asp</a> , <a href="http://www.neca.com.au">http://www.neca.com.au</a>  ACCC- Australian Competition and Consumer Commission- <a href="http://www.accc.gov.au/electric/fs-elec.htm">http://www.accc.gov.au/electric/fs-elec.htm</a>  NEMMCO-National Electricity Market Management Company- <a href="http://www.nemmco.com.au/">http://www.nemmco.com.au/</a>  ORER-Office of Renewable Energy Regulators- <a href="http://www.orer.gov.au/">http://www.orer.gov.au/</a>  Office of regulator general Victoria- <a href="http://www.reggen.vic.gov.au/">http://www.reggen.vic.gov.au/</a>
<b>Iceland</b>	CER-Commission for Energy Regulation- <a href="http://www.cer.ie">http://www.cer.ie</a>
Republic of South Africa	<b>Office of Energy policy –</b> <b><a href="http://www.energy.sa.gov.au/home/index.htm">http://www.energy.sa.gov.au/home/index.htm</a></b>  NER-National Electricity Regulator- <a href="http://www.ner.org.za">http://www.ner.org.za</a>
<b>UK</b>	OFGEM, The Office of Gas and Electricity Markets - <a href="http://www.ofgem.gov.uk/ofgem/index.jsp">http://www.ofgem.gov.uk/ofgem/index.jsp</a>  Energy Watch- <a href="http://www.energywatch.org.uk/">http://www.energywatch.org.uk/</a>
<b>USA</b>	FERC Federal Energy Regulatory Commission- <a href="http://www.ferc.go/">http://www.ferc.go/</a>  NARUC-National Association of Regulatory Utility Commissioners- <a href="http://www.naruc.org/">http://www.naruc.org/</a>

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**Guatemala**

Comision Nacional De Aenergia Electric

Nepal

Nepal Electricity Authority – <http://www.nea.org.np/>

Bhutan

Bhutan electricity Authority –  
[http://www.bhutannewsonline.com/hydro\\_electricity.html](http://www.bhutannewsonline.com/hydro_electricity.html)

Sri Lanka

Ceylon electricity Board – <http://www.lanka.net/leco/>

Bangladesh

Bangladesh Power Development Board – <http://www.bd-pdb.org/>

## **Table 4**

### **NATIONAL ELECTRICITY POLICY MAKERS & REGULATORS**

#### Policy Makers at the National Level

Planning Commission	<a href="http://planningcommission.nic.in/">http://planningcommission.nic.in/</a>
Ministry of Power	<a href="http://powermin.nic.in/">http://powermin.nic.in/</a>
Central Electricity Authority	<a href="http://www.cea.nic.in/">http://www.cea.nic.in/</a>

#### Energy Departments of Various States

Andhra Pradesh	<a href="http://www.ercap.org/">http://www.ercap.org/</a>
Bihar	-
Chattisgarh	-
Delhi	-
Goa	-

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Gujarat	-
Haryana	-
Himachal Pradesh	-
Jharkhand	-
Jammu and Kashmir	-
Karnataka	-
Kerela	-
Madhya Pradesh	-
Maharashtra	-
Manipur	-
Meghalaya	-
Mizoram	-
Nagaland	-
Orissa	-
Panjab	-
Rajasthan	<a href="http://www.rajenergy.com/">http://www.rajenergy.com/</a>
Sikkim	-
Tamil Nadu	-
Tripura	-



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Uttaranchal

-

Uttar Pradesh

-

West Bengal

<http://wbpower.nic.in>

## STATES

## ELECTRICITY REGULATORS

Central Electricity Regulatory  
Commission

<http://www.cercind.org/>

Central Electricity Authority

<http://www.cea.nic.in/>

Andhra Pradesh

<http://www.ercap.org/>

Bihar

-

Chattisgarh

-

Delhi

<http://www.dercind.org/>

Goa

-

Gujarat

<http://www.gercin.org/>

Haryana

<http://herc.nic.in/>

Himachal Pradesh

<http://hperc.nic.in/>

Jharkhand

-

Jammu and Kashmir

-

Karnataka

<http://www.kerc.org/>

Kerala

<http://meseb.nic.in/>

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Madhya Pradesh	<a href="http://www.mperc.org/">http://www.mperc.org/</a>
Maharashtra	<a href="http://www.mercindia.com/">http://www.mercindia.com/</a>
Manipur	-
Meghalaya	-
Mizoram	-
Nagaland	-
Orissa	<a href="http://www.orierc.org/">http://www.orierc.org/</a>
Panjab	<a href="http://www.psebindia.org/">www.psebindia.org/</a>
Rajasthan	<a href="http://www.rerc.gov.in/">http://www.rerc.gov.in/</a>
Sikkim	-
Tamil Nadu	<a href="http://www.tn.nic.in/tnerc/">http://www.tn.nic.in/tnerc/</a>
Tripura	-
Uttaranchal	-
Uttar Pradesh	<a href="http://uperc.org/">http://uperc.org/</a>
West Bengal	<a href="http://www.wb.nic.in/power/serc.htm">http://www.wb.nic.in/power/serc.htm</a>

**Table 5**

## **INTERNATIONAL POWER UTILITIES**

Country	Power Utilities
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Sweden	ABB-Asea Brown Boveri -;Swedish Electrical Engineering group. Mainly involved in big Power Projects .
France	Alstom <sup>100</sup> -Concentrates more on small Power projects. TotalFina-French Energy Company Gaz de Franz- French Energy Company
USA	General Electric – US based Electricity Giant Enron(US) Cogentrix(US) Thermex –provides boilers .It mainly benefits from derived demand in the Electricity Capital Markets Bechtel Cummins-supplies engines and generating sets for the co-generation and captive power plants.
UK	Cairn Energy-UKs largest independent Oil and Gas Explorer British Gas(UK) Royal Dutch Shell(UK) National Power(UK) Power Gen(UK)
Belgium	Tractebel  Mirant Corp
China	Huaneng Power International Inc Shandong International Power Development Beijing Detong Power Genration
Dutch Major Italy	SHV energy India GRTN National Grid operator of Italy

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<sup>100</sup> BHEL and Alstom have tied up to bid for NTPC Sipat project .Alstom Power will transfer the boiler technology to BHEL for to execute 660 MW super critical Technology Parameter.

First Draft

## Table 6

### NATIONAL ELECTRICITY UTILITY

#### **Primary Producers of Raw Materials**

- 1.NLC-Neyveli Lignite Corporation Ltd
- 2.GAIL-Gas Authority of India Limited(State-owned Gas Transporter)
- 3.HPCL-Hindustan Petroleum Corporation Ltd
- 4.BPCL-Bharat Petroleum Corporation Limited
- 5.CIL-Coal India Limited

#### **Central / State Generation Utilities**

##### **Central Utilities**

[National Thermal Power Corporation  
– http://www.ntpc.co.in](http://www.ntpc.co.in)  
[National Hydro Power Corporation  
Nuclear Power Corporation-  
http://www.npcil.org/Welcome.html](http://www.npcil.org/Welcome.html)  
[The Satluj Jal Vidyut Nigam](#)(Nathpa  
Jhakri Power Corporation)  
[North-Eastern Electric Power  
Corporation](#) (NEEPCO)  
[Power Finance Corporation](#)  
[Tehri Hydro Development  
Corporation](#)(THDC)  
[Damoder Valley Corporation](#)(DVC)  
[Bhakra Beas Management  
Board](#)(BBMB)

Orissa

OPGC-Orissa Power Generation  
Corporation<sup>101</sup>

Haryana

Haryana Power Generation

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<sup>101</sup> US Power major AEC has 51% share holding,.

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Karnataka  
Rajasthan

Uttar Pradesh

**Uttaranchal**

**Assam**

**Other generation Utilities**

Corporation

<http://haryanaelectricity.com>

Vishveshvariya vidyut Nigam Limited

Rajasthan Rajya Vidyut Utpadan

Nigam Limited

UPRVUNL-Uttar Pradesh Rajya Vidyut

Utpadan Nigam Limited

UPJVNL-Uttar Pradesh Jal Vidyut

Nigam

Uttaranchal Jal Vidyut Nigam Ltd

<http://www.uttaranchaljalvidyut.com/>

Assam Power generation Corporation

Nabinagar Rail Bijlee Company  
Limited<sup>102</sup>

Soundcraft Power Limited<sup>103</sup>

### **Central /State Transmission Utility**

Central Government undertaking

PGCIL Power Grid Corporation  
Limited ,1989-

<http://powergridindia.com/>

Delhi

Transco- <http://delhividyt.com/>

Andhra Pradesh

APTransco

Orrisa

Grid-Co

Karnataka

KPTCL-Karnataka Power  
Transmission Limited -

[www.kptcl.com](http://www.kptcl.com)

Rajasthan

Rajasthan Rajya Vidyut Prasaran  
Limited (RSVPL)

Haryana

Haryana Vidyut Prasaran Nigam

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<sup>102</sup> 1000MW plant ,a Joint venture between NTPC and Indian Railways

<sup>103</sup> promoted by Soundcraft group involved in gems and jewelry .Plans to invest in Jharkhand.

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Assam  
**Other Transmission Utility**

Assam Electricity Grid Corporation  
RETPL-Reliance Energy  
Transmission Private Limited  
Kalpataru Power Transmission  
Company<sup>104</sup>

TDTL<sup>105</sup>-Tala Delhi Transmission  
Limited

**Unbundled Distribution Licensee**

Andhra Pradesh	-
Arunachal Pradesh	-
Assam	Lower Assam Electricity distribution Company Central Assam Electricity distribution Company Upper Assam electricity distribution Company
Bihar	-
Chattisgarh	-
Delhi	<ul style="list-style-type: none"><li>• North Delhi Power Limited <a href="http://www.ndplonline.com/index.isp">www.ndplonline.com/index.isp</a></li><li>• BSES Rajdhani Power Limited &amp;</li><li>• BSES Yamuna Power Limited – <a href="http://www.bsedelhi.com">http://www.bsedelhi.com</a></li></ul>
Goa	-
Gujarat	<ul style="list-style-type: none"><li>• Surat Electricity Corporation Limited – <a href="http://www.suratelectricity.com/">www.suratelectricity.com/</a></li><li>• Ahmedabad Electricity Supply Company Ltd –</li></ul>

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<sup>104</sup> Unconfirmed reports-400KW Bina-Nagda-dehgam Line

<sup>105</sup> Joint venture between Tatas and PGCIL

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		<a href="http://www.aecindia.com/">www.aecindia.com/</a>
Haryana		<ul style="list-style-type: none"><li>• Uttar Haryana Bijli vitran Nigam (UHBVN) – <a href="http://www.haryanaelectricity.com">http://www.haryanaelectricity.com</a></li><li>• Dakshin Haryana Bijli Vitran Nigam(DHBVN)</li></ul>
Himachal Pradesh	-	
Jharkhand	-	
Jammu and Kashmir	-	
Karnataka		<ul style="list-style-type: none"><li>• Bangalore Electricity Supply Company Limited – <a href="http://www.bescom.org">www.bescom.org</a></li><li>• Mangalore Electricity Supply Company Limited</li><li>• Hubli Electricity Supply Company Limited</li><li>• Gulberga Electricity Supply Company Limited</li></ul>
Kerela	-	
Madhya Pradesh	-	
Maharashtra		<ul style="list-style-type: none"><li>• Bombay Suburban Electricity Supply Company – <a href="http://www.bses.com">http://www.bses.com</a></li><li>• Tata Power Company Limited – <a href="http://www.tatapower.com/index.htm">www.tatapower.com/index.htm</a></li></ul>
Manipur	-	
Meghalaya	-	
Mizoram	-	
Nagaland	-	
Orissa		<ul style="list-style-type: none"><li>• NESCO</li><li>• WESCO</li><li>• SouthCO</li></ul>
Panjab	-	
Rajasthan		<ul style="list-style-type: none"><li>• Jaipur Vidyut Vitran Nigam Limited(Jaipur Discom)</li><li>• Ajmer Vidyut Vitran Nigam(Ajmer Discom)</li><li>• Jodhpur Vidyut vitran Nigam(Jodhpur Discom)</li></ul>
Sikkim	-	
Tamil Nadu	-	



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Tripura	-
Uttaranchal	-
Uttar Pradesh	<ul style="list-style-type: none"><li>• NESCL-NTPC Electric Supply Company Limited</li><li>• UPPCL-Uttar Pradesh Power Corporation Limited- <a href="http://uppcl.org/index.htm">uppcl.org/index.htm</a></li><li>• LISA-Lacknow Electric Supply Company</li><li>• CESE- Calcutta Electric Supply Company<sup>106</sup> - <a href="http://www.cescltd.com/php_cescltd/firstopen.php">http://www.cescltd.com/php_cescltd/firstopen.php</a></li></ul>
West Bengal	

### **Website of state Electricity Boards**

Andhra Pradesh -	<a href="http://www.ercap.org/">http://www.ercap.org/</a>
Arunachal Pradesh	-
Assam	-
.Bihar	<a href="http://bseb.bih.nic.in/bseb/">http://bseb.bih.nic.in/bseb/</a>
Chattisgarh	<a href="http://www.cseb-powerhub.com/">http://www.cseb-powerhub.com/</a>
Delhi	-
Goa	-
Gujarat	<a href="http://www.gseb.com/">http://www.gseb.com/</a>
Haryana	-
Himachal Pradesh	<a href="http://www.hpseb.com/">http://www.hpseb.com/</a>

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<sup>106</sup> Ownd by RP Goyanka

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Jharkhand	-
Jammu and Kashmir	-
Karnataka	-
Kerela	<a href="http://kseboard.com/">http://kseboard.com/</a>
Madhya Pradesh	-
Maharashtra	-
Manipur	-
Meghalaya	<a href="http://meseb.nic.in/">http://meseb.nic.in/</a>
Mizoram	-
Nagaland	-
Panjab	<a href="http://www.psebindia.org/">www.psebindia.org/</a>
Rajasthan	-
Sikkim	-
Tamil Nadu	<a href="http://www.tneb.org">http://www.tneb.org</a>
Tripura	-
Uttaranchal	-
Uttar Pradesh	-
West Bengal	-

### **Central / State Trading Utility**

Central Entity

Power Trading Corporation –  
<http://www.ptcindia.com>

**Other trading Utility**

1.RETPL-Reliance Energy Trading  
Private Limited

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2.NVVN- NTPC Vidyut Vyapar  
Nigam Limited

3.Global Energy Limited<sup>107</sup>

4.Amulgamated Transpower

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<sup>107</sup> As of July 2003 Global Energy is trading Electricity between Delhi and Goa

**Table 7**  
**NATIONAL MEGA POWER PLANTS**

<b>POWER PLANT</b>	<b>STATE</b>	<b>COMMISSIONED CAPACITY(MW)</b>
Singrauli	Uttar Pradesh	2000
Korba	Chattisgarh	2100
Ramgundam	Andhra Pradesh	2100
Farakka	West Bengal	1600
Vindhyachal	Madhya Pradesh	2260 + 1000 <sup>108</sup>
Rihand	Uttar Pradesh	1000
Telchar Kaniha	Orissa	1500
Simhadri	Andhra Pradesh	1000
Sipat	Chattisgarh	2000*
Hirma Thermal Power Project, M/s Southern Electric Asia Power Ltd (SEAP)	Orissa	3960
Cuddalore Thermal Power Project,	Tamil Nadu	1000
Pipavav Thermal Power Project,	Gujrat	2000
Narmada Thermal Power Project (LNG),	Gujrat	1000
Kahalgaoon Thermal Power Project Stage – II, NTPC,	Bihar	1500
North Karanpura Thermal Power Project, NTPC,	Bihar	2000
Barh Thermal Power Project Stage –I, NTPC	Bihar	2000

---

<sup>108</sup> BHEL is setting up the Stage III of the plant with commissioned capacity of 1000 mw.

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Mathon Thermal Power Project, Damodar Valley Corporation		1000
Cheyyur Thermal Power Project, Stage-I, NTPC	Tamil Nadu	1500
Anta CCPP Stage-II, NTPC,	Rajasthan	1300
Auraiya CCPP, NTPC,	Uttar Pradesh	1300
Kawas CCPP Stage-II, NTPC	Gujrat	1300
Gandhar CCPP Stage – II, NTPC	Gujrat	1300
Koel Karo HEP, NHPC,	Bihar	710
Chamera HEP Stage-II, NHPC,	Himachal Pradesh	300
Teesta HEP Stage –V, NHPC	Sikkim	510
Koldam HEP, NTPC	Himachal Pradesh	800
Parvati HEP Stage –II NHPC,	Himachal Pradesh	800
Koldam Hydal Project	Himachal Pradesh	800MW

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Table 8	
NUCLEAR POWER PLANTS	
Three Stage Nuclear Program of India	
<b>Stage-1</b> -Pressurised Heavy Water Reactors(Uses Uranium as Fuel)	
<u>Tarapur Atomic Power Station</u>	
<u>Rajasthan Atomic Power Station</u>	
<u>Madras Atomic Power Station</u>	
<u>Narora Atomic Power Station</u>	
<u>Kakrapar Atomic Power Station</u>	
<u>Kaiga Atomic Power Station</u>	
Koodankulam Nuclear Power Plant <sup>109</sup>	2000 MW
<b>Stage-2</b> Fast Breeder Reactor(Uses Plutonium as Fuel)	
Kalpakkam-500MW(First Fast breeder reactor)	
<b>Stage-3</b> ( Thorium U-233 fuel is used)	

The third Stage of the Nuclear program has not reached a commercial stage of development . However progress has been made in the third stage with the successful development of a Uranium 233 based fuel.

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<sup>109</sup> Set up jointly by India and Russia through Inter Governmental Agreement.Likely to commence generation of Electricity by 2007

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## Table -9

# ENERGY RESEARCH AND TRAINING INSTITUTIONS

Power **Research** Institutions in India

CPRI- Central Power Research  
Institute, Bangalore

TERI-The Energy Research  
Institute, Delhi

<http://www.teriin.org/index.htm>

CSIR- Council For Scientific and  
Industrial Research.<sup>110</sup>

NIOT-National Institute of Ocean  
Technology<sup>111</sup>Chennai.

Indira Ganhdi Institute of  
Development and Research,  
Mumbai

PRAYAS (Initiative in Health,  
Energy, Learning and Parenthood)

<http://www.prayaspune.org/>

NCAER-National Council for  
applied Economic research  
Petroleum Conservation Research  
Association

<http://www.ncaer.org/>

Power Technology and research  
Centre (Proposed to be set up by  
NTPC)

Corporate Research and  
Development Division

<sup>112</sup>(BHEL,Hydrabad)

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<sup>110</sup> Budget 2003 has allocated Rs 20 crore to CSIR for launching incentive driven research in Solar Energy, wind Turbine and Hydrogen Fuel.

<sup>111</sup> NOIT has developed worlds first Ocean Thermal Energy Conversion(OTEC)Technology. This technology will convert solar energy stored in ocean water in the form of heat into electricity .The process is technically called "Rankin closed Cycle Engine"

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### Power **Training** Institutions in India

PMI-Power Management  
Institute<sup>113</sup>, Noida

<http://www.pmintpc.com/jsp/PMI/>

NPTI-National Power Training  
Institute, Faridabad

National Productivity Council

CET-Center for Energy  
technology (Osmania University  
college of Technology)

Central Institute of Rural  
Electricification<sup>114</sup>

ESCI-Engineering Staff College of  
Hyderabad [www.escihyd.org/](http://www.escihyd.org/)

Irrigation Design Organization &  
irrigation research institute  
Roorkee

PSTI-Power System Training  
Institute

### International Power **Research** Institutions

Asia Pacific Energy Research  
Centre

Australia Institute of Energy-  
National Economic Research  
Associate

<http://www.aie.org.au/>

<http://www.nera.com>

SAFIR-South Asia Forum For  
Infrastructure Development-

<http://www.safir.teri.res.in/>

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<sup>112</sup> Recently this institution has developed high-velocity oxy fuel thermal spray process for preventing erosion in vital components of hydro turbines.

<sup>113</sup> Founded by NTPC

<sup>114</sup> Promoted by REC

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EPRI -Electric Power Research Institute - <http://www.epri.com>  
Asia Pacific Energy Research Centre- <http://www.ieej.or.jp/aperc/>  
ABB's Research and Development Centre, Bangalore  
National Regulatory Research Institute <http://www.ohao-state.edu/>  
Centre for Research on Energy and Material, Institut Teknologi Bandung, Indonesia

Global Industrial and Social Progress Research Institute, Japan  
The Institute of Energy Economics, Japan

Council on Energy and Environment, Korea

Kuwait Institute for Scientific Research, Kuwait  
Pusat Tenaga Malaysia (Malaysia Energy Centre), Malaysia

Energy Research Institute, Chulalongkorn University, Thailand

Energy Development and Utilization Foundation Inc., The Philippines  
International Institute for Sustainable Development, Canada  
Fondazione Eni Enrico Mattei, Italy  
Asia Pacific Energy Research Centre, The Institute of Energy Economics, Japan  
Netherlands Energy Research Foundation, The Netherlands  
Centre for International Climate and Environmental Research–Oslo, Norway  
Energy Development and Research Centre, University of Cape Town, South Africa  
Centre for Energy, Environment, Science

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and Technology, Tanzania  
Center for Environmental Initiatives,  
Massachusetts Institute of Technology,  
USA  
World Resources Institute, USA  
Institute of Energy Economics

International Power **Training** Institutions  
Institute of Advanced Energy , <http://www.iae.kyoto-u.ac.jp/iae.html>  
Kyoto Japan  
Asian Energy Institute [www.teriin.org/aei](http://www.teriin.org/aei)  
Petroleum and Mineral Resources  
Engineering Department,  
Bangladesh University of  
Engineering and Technology,  
Bangladesh  
Global Climate Change Institute, Tsinghua  
University, People's Republic of China

The Institute for Political and International  
Studies, Iran

Royal Scientific Society, Jordan

Korea Energy Economics Institute, Korea

Institute of Fundamental Studies, Sri Lanka

International Institute for Applied Systems  
Analysis, Austria

Stockholm Environment Institute, Sweden

Thailand Environment Institute, Thailand

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## Table 10

### COMMITTEES AND COMMISSIONS IN THE ENERGY SECTORS

<b>Committee/Commission</b>	<b>Appointed by</b>	<b>Subject of Report</b>	<b>Date of presentation of report</b>
Haldia Committee on Power Reforms	State of Punjab	Report on Power Reforms in Punjab	March 2003
Montake Singh Ahluwalia(expert group)	Union Of	Report on Restructuring the financial dues of SEBs towards CPSUs.	
Kudrekar Commission	State of Maharashtra	To examine the circumstances under which PPA was negotiated and accepted. It will also go into scrapping and renegotiation of the deal	
R.A.Mashelkar Report	Supreme Court of India	Auto Fuel Policy	
S Raghawan Committee		Report on city Gas Distribution in Mumbai	January 23, 2003

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Deepak Parekh Committee Report N K Singh Committee	State of Karnataka	Report on Escrow Cover Recommended Implementation of APDRP	
Kanungo Committee Report	State of Orissa	To review the Electricity reform in Orissa	October 2001
Hiten Bhaya Committee	State of Andhra Pradesh	Power Reforms in Andhra Pradesh	
Gokak Committee		To Study Rural Electrification Distributed Generation(DG)	
Kolhi Committee		Power Sector Financing during 10 <sup>th</sup> and 11 <sup>th</sup> five year plans - Recommended Special Power Bond –Vidyut Vikas patras as well as long term debt instruments for hydro power investment	
Deepak S Parekh		Expert Committee on State specific reforms and restructuring of APDRP	
Rajadhaksha Committee	Maharashtra State Electricity	Restructuring of crises ridden Maharashtra	

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	Board	State Electricity Board	
Chirman- N.K.Singh (Member Planning Commission) S Narayan,economic Advisor to the PM RV Shahi, Secretary (Power) Vineeta Rai, Revenue Secretary HL Bajaj, Chairman, CEA	Government of India	Task Force on "Power Sector Investments and Reforms "	Interim Recommendation October 31,2003 Final Report By - December 31,2003

## Table 11

### FUNDING INSTITUTIONS AND INVESTMENT BANKERS

<b>Funding Institutions</b>	<b>Website</b>
ADB <u>Asian Development Bank</u>	<a href="http://www.adb.org/">http://www.adb.org/</a>
JBIC <u>Japan Bank for International Co-operation</u>	<a href="http://www.jbic.go.jp/english/index.php">http://www.jbic.go.jp/english/index.php</a>
WB <u>World Bank</u>	<a href="http://www.worldbank.org/">http://www.worldbank.org/</a>
PFC Power Finance Corporation Ltd	<a href="http://www.pfcindia.com/about_pfc.htm">http://www.pfcindia.com/about_pfc.htm</a>
REC Rural Electrification Corporation	<a href="http://indiapublicsector.com/rec_profile.htm">http://indiapublicsector.com/rec_profile.htm</a>
IDBI Industrial Development Bank of India	<a href="http://www.idbi.com/">http://www.idbi.com/</a>
OPIC Overseas Private Investment Corporation	<a href="http://www.opic.gov/">http://www.opic.gov/</a>
IREDA Indian Renewable Energy Development Agency.	
USAID US agency for International Development	<a href="http://www.usaid.gov/">http://www.usaid.gov/</a>
DFID-Department for International Development ,UK	<a href="http://www.dfid.gov.uk/">http://www.dfid.gov.uk/</a>
CIDA Canadian International Development Agency	
APPFC-Andhra Pradesh Power Finance Corporation	

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Indo-German Cooperation  
Fund<sup>115</sup>

India Power Fund<sup>116</sup>

### **Investment Bankers**

- 1.Arther Anderson<sup>117</sup>
- 2.DSP mariil lynch
- 3.IFP<sup>118</sup>-Institut Francais du P etrol
- 4.SBI Capital
- 5.IDBI caps
- 6.ICICI Secyories
- 7.Credit lyons (french)
- 8.Karvy
- 9.ILFS
- 10.N M Rothschild<sup>119</sup>

### **Legal Consultants**

- 1.Dentol Wilde Sapate<sup>120</sup>

### **Financial Consultants**

- 1.Morgan Stanley<sup>121</sup>

### **Technical Consultants**

- 1.D&M<sup>122</sup>

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<sup>115</sup> Recently Rs 1000 Crore loan to AP Genco was provided from the fund

<sup>116</sup> Has a corpus of \$ 1 billion and is managed by PFC

<sup>117</sup> Appointed as Consultant by Rajasthan Government for privatization of power sector

<sup>118</sup> GAIL has hired IFP for carrying out due diligence of Cairns Krishna Godavari region.

<sup>119</sup> Appointed by IDBI to sell DPC

<sup>120</sup> ONGC legal Consultant

<sup>121</sup> ONGC financial consultants

<sup>122</sup> ONGC technical consultant

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## Table 12

### POWER ASSOCIATIONS

#### **National Power Associations**

India Energy Network  
Indian Wind Energy Association<sup>123</sup>  
India Energy Forum  
Federation of electricity  
undertakings of India

#### **International Power Association**

IGU- International Gas  
Union, Denmark  
IEA- International Energy Agency <http://www.iea.org/>  
IAEA-International Atomic Energy Association <http://www.iaea.org/>  
African Energy Policy  
Research Network  
National Association for regulatory Utility Commissioners <http://www.naruc.org>  
World Energy Council  
Union of the Electricity Industry(Euroelectric) <http://public.euroelectric.org/content/default.asp?>  
Biomass Users Network, Brazil  
South Asian Association for Infrastructure Regulation <http://www..safir.teri.res.in/>  
International Association

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<sup>123</sup> A non-profit apex organization of the producers of wind Energy

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of Electricity Generation,  
Transmission &  
Distribution (Afro Asian  
Region)



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## Table-13

### ENERGY JOURNALS

#### **National Power Journal**

PMI Journal	Released by Power Management Institute , Noida.
Nu Power	<a href="http://www.npcil.org/docs/nupower.htm">http://www.npcil.org/docs/nupower.htm</a>
Powerline- <a href="http://www.indiapoweronline.com">www.indiapoweronline.com</a>	
The Bulletin on Energy Efficiency	Supported by IREDA
Electrical India	Published by Chary Publication,Bombay.
India Power	Council of Power Utilities
Vidyut Bharati	Quarterly journal of Central Electricity Authority
Energise	published by BEE-Bureau of Energy Efficiency

#### **International Power Journals**

Platts POWER- <a href="http://www.powermag.platts.com">www.powermag.platts.com</a>	
International Journal of Regulation and Governance	The Energy Research Institute
Water and Energy International	Published by Central Board of Irrigation and Power , Chanakyapuri. <a href="http://www.cbip.org">www.cbip.org</a>

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## Table 14

### YEAR-WISE HISTORY OF POWER INDUSTRY

- 1887-First Electricity Act for protection of person and property from injury.
- 1903-The Indian Electricity Act-1903
- 1910-The Indian Electricity Act 1910 passed by Parliament
- 1948-The Electricity (Supply) Act 1948 passed by Parliament
- 1964-WREB- Western Regional Electricity Board Set up to promote integrated operation of the power systems in Western Region
- 1969-REC- Rural Electrification Corporation set up for rapid electrification of rural areas .
- 1975-CIL -Coal India Limited- nationalized coal industry was restructured with the establishment of a holding company with its headquarters at Calcutta.
- 1976-NEEPCO-North Eastern Electric Power Corporation Limited set up for accelerated power generation in the North Eastern areas of India .
- 1984- (January 27) Madras Atomic Power Station - Unit I at Kalpakkam starts commercial operation. Unit II goes commercial on March 21, 1986.
- 1989-PGCIL Established as the first transmission company of India.
- 1989- Supported by the Government of India , The TERI initiated to launch AEI(Asia Energy Institute) in New Delhi.
- 1989 Support by the Government of India, The TERI initiated to launch Asian Energy Institute (AEI) in New Delhi.
- 1989-(March 12) Narora Atomic Power Station Unit I attains criticality. Its Unit II attains criticality on October 24, 1991
- 1992-(September 03) Kakrapar Atomic Power Station - Unit I attains criticality. Its Unit II attains criticality on January 08, 1995
- 1993-WBRED- West Bengal Renewable Energy Development Agency was established with the objective of promoting renewable energy technologies in west Bengal.
- 1998-The Electricity Commissions Act 1998 passed by Parliament

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1999- PTC Power Trading Corporation was set up on April 16, 1999 with equity holders being IDBI, IDFC, IFCI, GIC, LIC, DVC, Tata Power.  
2003-The Electricity Act 2003 passed repealing all the three previous enactments.

## **Table 15**

### **ENTREPRENEURS OF INDIA**

1. Cosmo Power Tech, Raipur-Produces Eco friendly Bio-Gasifier Plants. This company was set up by two engineering Graduates Ravi Kumar and TK tyagi.
- 2.SuTRA-Sustainable Transformation of Rural Areas(NGO) promoted by Prof Shrinivasa(Indian Institute of Science, Bangalore) has demonstrated generation of Electricity by using Karanji Oil. One Pongamia Panata tree yields 100 kg of seeds a year, which can yield 25 liters of Oil. This can later on developed as Bio Fuel.
- 3.RRB Consultants and engineer's private limited – Rakesh Bakshi set up the first Indian Company in wind power.

**Table 16**

**AGENCIES TO PROMOTE NON CONVENTIONAL ENERGY**

To implement the following programmes the state governments have constituted below mentioned agencies.

1. National Biogas Development Programme.
2. Institutional/Nightsoil Based Biogas Plants
3. National Project on Improved Chulha
4. Biomass Gasifier Programme
5. Solar Photovoltaic Programme
  - a. Solar Lantern Programme
  - c. Home Lighting System
  - b. Solar Street Light
6. Solar Thermal Energy Programme
  - a. Solar Hot Water System
  - b. Solar Cooker Programme
7. Wind Mill Programme

World	World Council for Renewable Energy – <a href="http://www.world_council_for_renewable_energy.org/">http://www.world_council_for_renewable_energy.org/</a>
India	IREDA-Indian Renewable Energy Development Agency
Kerala	ANERT- Agency for Non Conventional Energy and Rural Technology
Chhattisgarh	CREDA <sup>124</sup> -Chhattisgarh renewable Energy Development Agency.
Maharashtra	MEDA-Maharashtra Energy Development Agency
Tamil Nadu	Tamil Nadu Energy Development Agency
Punjab	Punjab Energy Development Agency

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<sup>124</sup> Is promoting power generation plant based on rice husk .

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Karnataka	Karnataka Renewable Energy Development Agency – <a href="http://www.ker.nic.in/kredl">www.ker.nic.in/kredl</a>
Jammu &Kashmer	J &K energy Development Agency
Jharkhand	Jharkhand Renewable energy Development Agency
Himachal Pradesh	Himachal Pradesh energy Development Agency – <a href="http://himachal.nic.in/himurja">http://himachal.nic.in/himurja</a>
Haryana	Haryana State Electricity Development Agency
Gujarat	GEDA- Gujarat Energy Development Agency – <a href="http://www.geda.org.in/">http://www.geda.org.in/</a>
West Bengal	WB Renewable Energy Development Agency
Rajasthan	Rajasthan energy development agency

## **Table 17**

# **PROGRAMME FOR DEVELOPMENT OF POWER INDUSTRY**

### **1.National Hydroelectric Power Development Programme**

The programme will target at hydel capacity addition of 50 000 MW by the next decade. A total of 162 hydal projects in 16 states have been identified by the CEA for preparation of Pre-feasibility Report (PFR) .The PFRs are scheduled to to be prepared by September 2004 and will be followed by preparation of detailed project report . The initiative will require funds amounting to Rs 2250 billion , with an equity component of 700 billion and a debt level of Rs 1550 billion. It is being suggested that the equity component be met by gross budgetary support of 200 billion each during the 10<sup>th</sup> and 11<sup>th</sup> five year plans. It is proposed that the rest of the equity be raised by a levy of 3 paisa cess on every unit of power generated.

### **2.Kutir Jyoti Scheme**

This Scheme Involves 100% grant to SEBs through Rural Electrification Corporation. For the year 2003 there is a provision to spend Rs. 100 Crore.

### **3.Pradhan Mantri Gramodaya Yojna(PMGY)**

### **4.Accelerated Rural Electrification Programme**

Under this programme 4% interest subsidy is provided by GOI through REC . The Government of India has approved grant of Rs.563.87 crs under the programme during 10<sup>th</sup> plan period .

### **5.Rural Electricity Supply Technology Mission (REST)**

Representatives from MNES , CSIR, BHEL, NTPC are to evolve a strategy based on technology to provide low cost power generation and delivery.



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## **6. Accelerated Generation and Supply programme (AG & SP)**

This programme is limited to only state sector power plants and generation projects including those based on non-conventional Energy sources. All projects financed by PFC and REC will be eligible for grant assistance under this scheme.

## **7. Accelerated Power Development and reform programme (APDRP)**

Under APDRP the Government is providing financial assistance to the states for up gradation of their sub-transmission and distribution networks. Efficiency at the commercial, technical, and organizational levels is being improved in more than 400 distribution circles throughout the country by way of loans and incentives.

## **8 Rural Electrification (Supply) Technology Mission (REST)-**

Objective of the Mission is to provide power to all villages by 2007 and to all households by 2012 through the decentralized generation system.

## **9 Minimum Needs Programme (MNP)**

**Table 18**  
**TAXES ON CAPTIVE POWER PLANTS**

State	Tax	Regulation	Source of Information
Tamil Nadu	10 Paise per unit generated	Tamil Nadu Tax on consumption and sale of Electricity Act 2003	June 18,2003. New India Express
Chattisgarh	Cess of 10 Paise per unit	Policy directives on establishment of Captive power plants(CPP_ in Chattisgarh	Energy Deptt of Chattisgarh has declared the policy directive vide Notification No.2714/Sec/Energy Deptt/Raipur Dated July 12, 2002

**Table 19**  
**BASIC FACTS OF INDIAN POWER SECTOR**  
(Tentative figures)

Electric power consumption per capita (kwh) year 1950-

Electric power consumption per capita (kwh) year 2001- 384.0<sup>125</sup>

Electric power consumption per capita (kwh) year 2020- 2460.0<sup>126</sup>

Wind energy Generation Potential – 45000 MW

Wind energy installed Capacity – 1850 MW

Cost Producing One MW of Wind Energy -4.5 – 5 Crore

Peak Demand – 77157 MW

Available Supply – 68571 MW

Gap – 8586 MW

Energy Shortages – 6.5%

Peak Shortages – 11.10%

T & D losses – 27%

Average realization (Paissa / Kwh) – 240

Average Cost of Supply (Paissa / Kwh) – 350

Gap in Recovery (Paissa / Kwh) – 110

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<sup>125</sup> Vision 2020 document prepared by the Planning Commission

<sup>126</sup> Vision 2020 document prepared by the Planning Commission

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**Table 20**  
**MOTTO OF INDIAN POWER SECTOR**

Entity	Motto
Bangalore Electric Supply Company	Lighting up your lives
Chattisgarh State Electricity Board	Prosperity through electricity
Maghalaya State Electricity Board	Energy is life
Surat Electricity Corporation Limited	Power to Empower
Ahmedabad Electricity Supply Company Ltd	Bringing Light to live through Life

**Table 21**  
**DOMESTIC TARIFF RATES**

State	Domestic tariff per unit	Source
Delhi	385 paisa (above 400 units)	DERC order on ARR (26 <sup>th</sup> June 2003)

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## Appendix 1

### THE ELECTRICITY ACT (AMENDMENT BILL) 2003

#### A Bill to amend the Electricity Act, 2003

Be it enacted by Parliament in the Fifty-fourth Year of the Republic of India as Follows :-

#### 1. Short title and commencement

(1) This Act may be called the *Electricity (Amendment) Act, 2003*

(2) It shall come into force on such date as the Central Government may, by notification, in the Official Gazette, appoint

#### 2. Amendment of Section 14

In section 14 of the Electricity Act, 2003 (hereinafter referred to as the principal Act), in the sixth proviso, the words and brackets "(including the capital adequacy, creditworthiness or code of conduct)", the words "relating to the capital adequacy, credit worthiness, or code of conduct" shall be substituted".

#### 3. Amendment of Sect 42

In Section 42 of the Principal Act, in sub-section 2, after fourth provision, the following proviso shall be inserted :

**"Provided** also that the State Commission shall, not later than five years from the date of commencement of the Electricity Amendment Act 2003, by regulations provide such open access to all consumers who require a supply of electricity where the maximum power to be made available at any time exceeds 1 Mega Watt.

#### 4. Substitution of new section for section 121.



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For section 121 of the principal Act, the following section shall be substituted, namely :-

### **Power of Appellate Tribunal**

The Appellate Tribunal may, after hearing the Appropriate Commission or other interested party, if any, from time to time, issue orders, instructions or directions as it may deem fit, to any Appropriate Commission for the performance of its statutory functions under the Act."

## **5. Amendment of section 135**

In section 135 of the principal Act, in sub-section (2)-

- (i) In clause (a), for the words "has been, is being, or is likely to be," the words "has been or is being" shall be substituted;
- (ii) In clause (b), for the words "has been, is being, or is likely to be," the words "has been or is being" shall be substituted;

## **6. Substitution of new sections for sections 139 and 140**

For sections 139 and 140 of the principal Act, the following sections shall be substituted, namely:-

"Negligently breaking or damaging works	139. Whoever, negligently breaks, injures, throws down or damages any material connected with the supply or electricity, shall be punishable with fine which may
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extend to ten thousand rupees.

Penalty for intentionally  
injuring works.

140. Whoever, with intent to cut off the supply of electricity, cuts or injures, or attempts to cut or injure, any electric supply line or works, shall be punishable with fine which may extend to ten thousand rupees."

## **7. Amendment of section 146.**

In section 146 of the principal Act, the following proviso shall be inserted, namely :-

**Provided** that nothing contained in this section shall apply to the orders, instructions or directions issued under section 121".

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## SCHEDULE 2

# THE ELECTRICITY ACT, 2003

The following Act of Parliament received the assent of the President on the 26<sup>th</sup> May, 2003, and is hereby published for general information:-

THE ELECTRICITY ACT, 2003

An Act to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity and generally for taking measures conducive to development of electricity industry, promoting competition therein, protecting interest of consumers and supply of electricity to all areas, rationalization of electricity tariff, ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies, constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal and for matters connected therewith or incidental thereto.

Be it enacted by Parliament in the Fifty-fourth Year of the Republic of India as follows:-

## PART I

### PRELIMINARY

- 1. Short title, extent and commencement :-** (1) This Act may be called the Electricity Act, 2003.  
(2) It extends to the whole of India except the State of Jammu and Kashmir.  
(3) It shall come into force on such date as the Central Government may, by notification, Appoint:

**Provided** that different dates may be appointed for different provisions of this Act and any reference in any such provision to the commencement of this Act shall be construed as a reference to the coming into force of that provision.

**2 Definitions:-.** In this Act, unless the context otherwise requires, :-

1. “**Appellate Tribunal**” means the Appellate Tribunal for Electricity established under section 110;
2. “**Appointed date**” means such date as the Central Government may, by notification, appoint;
3. “**Area of supply**” means the area within which a distribution licensee is authorized by his license to supply electricity;
4. “**Appropriate Commission**” means the Central Regulatory Commission referred to in sub-section (1) of section 76 or the State Regulatory Commission referred to in section 82 or the Joint Commission referred to in section 83, as the case may be;
5. “**Appropriate Government**” means:-

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- (a) The Central Government, :-
- (i) In respect of a generating company wholly or partly owned by it;
  - (ii) In relation to any inter-State generation, transmission, trading or supply of electricity and with respect to any mines, oil-fields, railways, national highways, airports, telegraphs, broadcasting stations and any works of defense, dockyard, nuclear power installations;
  - (iii) In respect of the National Load Despatch Centre and Regional Load Despatch Centre;
  - (iv) in relation to any works or electric installation belonging to it or under its control;
- (b) In any other case, the State Government having jurisdiction under this Act;
6. **“Authority”** means the Central Electricity Authority referred to in subsection (1) of section 70;
  7. **“Board”** means a State Electricity Board, constituted before the commencement of this Act, under sub-section (1) of section 5 of the Electricity (Supply) Act, 1948;
  8. **“Captive generating plant”** means a power plant set up by any person to generate electricity primarily for his own use and includes a power plant set up by any co-operative society or association of persons for generating electricity primarily for use of members of such co-operative society or association;
  9. **“Central Commission”** means the Central Electricity Regulatory Commission referred to in sub-section (1) of section 76;
  10. **“Central Transmission Utility”** means any. Government company which the Central Government may notify under sub-section (1) of section 38;
  11. **“Chairperson”** means the Chairperson of the Authority or Appropriate Commission or the Appellate Tribunal, as the case may be;
  12. **“Cogeneration”** means a process which simultaneously produces two or more forms of useful energy (including electricity);
  13. **“Company”** means a company formed and registered under the Companies Act, 1956 and includes any body corporate under a Central, State or Provincial Act;
  14. **“Conservation”** means any reduction in consumption of electricity as a result of increase in the efficiency in supply and use of electricity;
  15. **“Consumer”** means any person who is supplied with electricity for his own use by a licensee or the Government or by any other person engaged in the business of supplying electricity to the public under this Act or any other law for the time being in force and includes any person whose premises are for the time being connected for the purpose of receiving electricity with the works of a licensee, the Government or such other person, as the case may be.
  16. **“Dedicated transmission lines.”** Means any electric supply line for point to point transmission which are required for the purpose of connecting electric lines or electric plants of a captive generating plant referred to in section 9 or generating station referred to in section 10 to any transmission lines or sub-station or generating stations, or the load center, as the case may be;
  17. **“Distribution licensee”** means a licensee authorized to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply;
  18. **“Distributing main”** means the portion of any main with which a service line is, or is intended to be, immediately connected;
  19. **“Distribution system”** means the system of wires and associated facilities between the delivery points on the transmission lines or the generating station connection and the point of connection to the installation of the consumers;
  20. **“Electric line”** means any line which is used for carrying electricity for any purpose and includes:-
    - (a) any support for any such line, that is to say, any structure, tower, pole or other thing in, on, by or from which any such line is, or may be, supported, carried or suspended; and

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- (b) any apparatus connected to any such line for the purpose of carrying electricity ;
21. **“Electrical Inspector” means a person appointed as such by the Appropriate Government; under sub-section (1) of section 162 and also includes Chief Electrical Inspector;**
22. **“Electrical plant”** means any plant, equipment, apparatus or appliance or any part thereof used for, or connected with, the generation, transmission, distribution or supply of electricity but does not include:-
- (a) an electric line; or
  - (b) a meter used for ascertaining the quantity of electricity supplied to any premises; or
  - (c) an electrical equipment, apparatus or appliance under the control of a consumer;
23. **“Electricity “** means electrical energy:-
- (a) generated, transmitted, supplied or traded for any purpose; or
  - (b) used for any purpose except the transmission of a message;
24. **“Electricity Supply Code”** means the Electricity Supply Code specified under section 50;
25. **“Electricity system”** means a system under the control of a generating company or licensee, as the case may be, having one or more :-
- (a) generating stations; or
  - (b) transmission lines; or
  - (c) electric lines and sub-station,
- and when used in the context of a State or the Union, the entire electricity system within the territories thereof;
26. **“Electricity trader” means a person who has been granted a license to undertake trading in electricity under section 12;**
27. **“Franchisee”** means a person authorized by a distribution licensee to distribute electricity on its behalf in a particular area within his area of supply;
28. **“Generating company”** means any company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person, which owns or operates or maintains a generating station;
29. **“Generate”** means to produce electricity from a generating station for the purpose of giving supply to any premises or enabling a supply to be so given;
30. **“Generating station” or “Station”** means any station for generating electricity, including any building and plant with step-up transformer, switch-gear, switch yard, cables or other appurtenant equipment, if any, used for that purpose and the site thereof; a site intended to be used for a generating station, and any building used for housing the operating staff of a generating station, and where electricity is generated by water-power, includes penstocks, head and tail works, main and regulating reservoirs, dams and other hydraulic works, but does not in any case include any sub-station;
31. **“Government company”** shall have the meaning assigned to it in section 617 of the Companies Act, 1956;
32. **“Grid”** means the high voltage backbone system of inter-connected transmission lines, sub-station and generating plants;
33. **“Grid Code”** means the Grid Code specified by the Central Commission under clause (h) of sub-section (1) of section 79;
34. **“Grid Standards”** means the Grid standards specified under clause (d) of section 73 by the authority;
35. **“High voltage line”** means an electric line or cable of a nominal voltages as may be specified by the Authority from time to time;
36. **“Inter-State transmission system”** includes:-
- (i) any system for the conveyance of electricity by means of main transmission line from the territory of one State to another State;
  - (ii) the conveyance of electricity across the territory of an intervening State as well as

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- conveyance within the State which is incidental to such inter State transmission of electricity;
- (iii) the transmission of electricity within the territory of a State on a system built, owned, operated, maintained or controlled by a Central Transmission Utility;
37. **“Intra-State transmission system” means any system for transmission of electricity other than an inter-State transmission system;**
38. **“License”** means a license granted under section 14;
39. **“Licensee”** means a person who has been granted a license under section 14;
40. **“Line”** means any wire, cable, tube, pipe, insulator, conductor or other similar thing (including its casing or coating) which is designed or adapted for use in carrying electricity and includes any line which surrounds or supports, or is surrounded or supported by or is installed in close proximity to, or is supported, carried or suspended in association with, any such line;
41. **“Local authority”** means any Nagar Panchayat, Municipal Council, municipal corporation, Panchayat constituted at the Village, intermediate and district levels, body or port commissioners or other authority legally entitled to, or entrusted by the Union or any State Government with, the control or management of any area or local fund;
42. **“Main”** means any electric supply-line through which electricity is, or is intended to be supplied;
43. **“Member”** means the Member of the Appropriate Commission or Authority or joint Commission, or the Appellate Tribunal, as the case may be, and includes the Chairperson of such Commission or Authority or Appellate Tribunal;
44. **“National Electricity Plan”** means the National Electricity Plan notified under sub-section (4) of section 3;
45. **“National Load Dispatch Centre”** means the Centre established under sub-section (1) of section 26;
46. **“Notification”** means notification published in the Official Gazette and the expression “notify” shall be construed accordingly;
47. **“Open access”** means the non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission;
48. **“Overhead line”** means an electric line which is placed above the ground and in the open air but does not include live rails of a traction system;
49. **“Person”** shall include any company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person;
50. **“Power system”** means all aspects of generation, transmission, distribution and supply of electricity and includes one or more of the following namely:-
- (a) generating stations;
  - (b) Transmission or main transmission lines;
  - (c) Sub-stations;
  - (d) Tie-lines;
  - (e) Load dispatch activities;
  - (f) Mains or distribution mains;
  - (g) Electric supply-lines;
  - (h) Overhead lines;
  - (i) Service lines;
  - (j) Works;
51. **“Premises”** includes any land, building or structure;
52. **“Prescribed”** means prescribed by rules made by the Appropriate Government under this Act;
53. **“Public lamp”** means an electric lamp used for the lighting of any street;
54. **“Real time operation”** means action to be taken at a given time at which information about the electricity system is made available to the concerned load Despatch Centre;

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55. **“Regional Power Committee”** means a committee established by resolution by the Central Government for a specified region for facilitating the integrated operation of the power systems in that region;
56. **“Regional Load Despatch Centre”** means the Centre established under sub-section (1) of section 27;
57. **“Regulations”** means regulations made under this Act;
58. **“Repealed laws”** means the Indian Electricity Act 1910, the Electricity (Supply) Act, 1948 and the Electricity Regulatory Commissions Act 1998 repealed by section 185;
59. **“Rules”** means rules made under this Act;
60. **“Scheme”** means the Schedule to this Act;
61. **“Service-line”** means any electric supply-line through which electricity is, or is intended to, be supplied:-
  - (a) to a single consumer either from a distributing main or immediately from the Distribution Licensee’s premises; or
  - (b) from a distributing main to a group of consumers on the same premises or on contiguous premises supplied from the same point of the distributing main;
62. **“Specified”** means specified by regulations made by the Appropriate Commission or the Authority, as the case may be, under this Act;
63. **“Stand alone system”** means the electricity system set-up to generate power and distribute electricity in a specified area without connection to the grid;
64. **“State Commission”** means the State Electricity Regulatory Commission constituted under sub-section (1) of section 82 and includes a joint Commission constituted under sub-section (1) of section 83;
65. **“State Grid Code”** means the State Grid Code specified under clause (h) of sub-section (1) of section 86;
66. **“State Load Despatch Centre”** means the centre established under sub-section (1) of section 31;
67. **“State Transmission Utility”** means the Board or the Government company specified as such by the State Government under sub-section (1) of section 39;
68. **“Street”** includes any way, road lane, square, court, alley, passage or open space, whether a thoroughfare or not, over which the public have a right of way and also the roadway and footway over any public bridge or causeway;
69. **“Sub-station”** means a station for transforming or converting electricity for the transmission or distribution thereof and includes transformers, converters, switch gears, capacitors, synchronous condensers, structures, cable and other appurtenant equipment and any buildings used for that purpose and the site thereof;
70. **“Supply”**, in relation to electricity, means the sale of electricity to a licensee or consumer;
71. **“Trading”** means purchase of electricity for resale thereof and the expression “Trade” shall be construed accordingly;
72. **“Transmission licensee”** means all high pressure cables and overhead lines (not being an essential part of the distribution system of a licensee) transmitting electricity from a generating station to another generating station or a sub-station, together with any step-up and step-down transformers, switch-gear and other works necessary to and used for the control of such cables or overhead lines, and such buildings or part thereof as may be required to accommodate such transformers, switch-gear and other works;
73. **“Transmission licensee”** means a licensee authorized to establish or operate transmission lines;
74. **“Transmit”** means conveyance of electricity by means of transmission lines and the expression “transmission” shall be construed accordingly;
75. **“Utility”** means the electric lines or electrical plant, and includes all lands, buildings, works and materials attached thereto belonging to any person acting as a generating company or licensee under the provisions of this Act;

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76. “**Wheeling**” means the operation whereby the distribution system and associated facilities of a transmission licensee or distribution licensee; as the case may be are used by another person for the conveyance of electricity on payment of charges to be determined under section 62;
77. “**Work**” includes electric line, and any building, plant, machinery, apparatus and any other thing of whatever description required to transmit, distribute or supply electricity to the public and to carry into effect the objects of a licensee or sanction granted under this Act or any other law for the time being in force.

## PART II

### NATIONAL ELECTRICITY POLICY AND PLAN

**3. National Electricity Policy and Plan :** (1) The Central Government shall, from time to time, prepare the National Electricity Policy, in consultation with the State Governments and the Authority for development of the power system based on optimal utilization of resources such as coal, natural gas, nuclear substances or materials, hydro and renewable sources of energy.

(2) The Central Government shall publish the National Electricity Policy and tariff policy from time to time.

(3) The Central Government may, from time to time, in consultation with the State Governments and the Authority, review or revise the National Electricity policy and tariff policy referred to in sub-section (1)

(4) The Authority shall prepare a National Electricity Plan in accordance with the National Electricity Policy and notify such plan once in five years:

**Provided** that the Authority while preparing the National Electricity Plan shall publish the draft National Electricity Plan and invite suggestions and objections thereon from licensees, generating companies and the public within such time as may be prescribed:

**Provided** further that the Authority shall :-

- c) Notify the plan after obtaining the approval of the central government;
  - d) Revise the plan incorporating therein the directions, if any, given by the Central Government while granting approval under clause (a).
- (5) The Authority may review or revise the National Electricity Plan in accordance with the National electricity Policy.

**4. National policy on stand alone systems for rural areas and non-conventional energy systems :-** The Central Government shall, after consultation with the State Governments prepare and notify a national policy, permitting stand alone systems (including those based on renewable sources of energy and other non-conventional sources of energy) for rural areas.

**5. National policy on electrification and local distribution in rural areas. :-** The Central Government shall also formulate a national policy, in consultation with the State Governments and the State Commissions, for rural electrification and for bulk purchase of



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power and management of local distribution in rural areas through Panchayat Institutions, users associations, co-operative societies, non-governmental organizations or franchisees.

**6. Obligations to supply electricity to rural areas :-** The Appropriate Government shall endeavor to supply electricity to all areas including villages and hamlets.

## PART III

### GENERATION OF ELECTRICITY

**7. Generating company and requirement for setting up of generating station: -** Any generating company may establish, operate and maintain a generating station without obtaining a license under this Act if it complies with the technical standards relating to connectivity with the grid referred to in clause (b) of section 73.

**8. Hydro-Electric Generation. : -** (1) Notwithstanding anything contained in section 7, any generating company intending to set up a hydro-generating station shall prepare and submit to the Authority for its concurrence, a scheme estimated to involve a capital expenditure exceeding such sum, as may be fixed by the Central Government, from time to time, by notification.

(2) The Authority shall, before concurring in any scheme submitted to it under sub-section (1) have particular regard to , whether or not in its opinion, :-

- (a) The proposed river-works will prejudice the prospects for the best ultimate development of the river or its tributaries for power generation, consistent with the requirements of drinking water, irrigation, navigation, flood-control, or other public purposes, and for this purpose the Authority shall satisfy itself, after consultation with the State Government, the Central Government, or such other agencies as it may deem appropriate, that an adequate study has been made of the optimum location of dams and other river-works;
- (b) The proposed scheme meets the norms regarding dam design and safety.

(3). Where a multi-purpose scheme for the development of any river in any region is in operation, the State Government and the Generating company shall co-ordinate their activities with the activities of the persons responsible for such scheme in so far as they are inter related.

**9.Captive generation :-** (1) Notwithstanding anything contained in this Act, a person may construct, maintain or operate a captive generating plant dedicated transmission lines:

**Provided** that the supply of electricity from the captive generating plant through the grid shall be regulated in the same manner as the generating station of a generating company.

(2). Every person, who has constructed captive generating plant and maintains and operates such plant, shall have the right to open access for the purposes of carrying electricity from his captive generating plant to the destination of his use :

**Provided** that such open access shall be subject to availability of adequate transmission facility and such availability of transmission facility shall be determined by the Central Transmission Utility or the State Transmission Utility, as the case may be :

**Provided further** that any dispute regarding the availability of transmission facility shall be adjudicated upon by the Appropriate Commission.

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10. **Duties of generating companies :** - (1) Subject to the provisions of this Act, the duties of a generating company shall be to establish, operate and maintain generating stations, tie-lines, sub-stations and dedicated transmission lines connected therewith in accordance with the provisions of this Act or the rules or regulations made there under.

(2) A generating company may supply electricity to any licensee in accordance with this Act and the rules and regulations made there under and may, subject to the regulations made under sub-section (2) of section 42, supply electricity to any consumer.

a. Every generating company shall :-

(a) Submit technical details regarding its generating stations to the Appropriate Commission and the Authority;

(b) Co-ordinate with the Central Transmission utility or the State Transmission Utility, as the case may be, for transmission of the electricity generated by it.

11. **Directions to generating companies :-** (1) The Appropriate Government may specify that a generating company shall, in extraordinary circumstances operate and maintain any generating station in accordance with the directions of that Government.

**Explanation :-** For the purposes of this section, the expression “extraordinary circumstance” means circumstances arising out of threat to security of the State, public order or a natural calamity or such other circumstances arising in the public interest.

(2) The Appropriate Commission may offset the adverse financial impact of the directions referred to in sub-section (1) on any generating company in such manner as it considers appropriate.

## PART IV LICENSING

12. **Authorized persons to transmit supply, etc. Electricity :** No person shall :-

- a) Transmit electricity, or
- b) Distribute electricity; or
- c) Undertake trading in electricity,

Unless he is authorized to do so by license issued under section 14, or is exempt under section 13.

13. **Power to Exempt :** The Appropriate Commission may, on the recommendations of the Appropriate Government, in accordance with the national policy formulated under section 5 and in the public interest, direct, by notification that subject to such conditions and restrictions, if any, and for such period or periods, as may be specified in the notification, the provisions of section 12 shall not apply to any local authority, Panchayat Institution, users' association, co-operative societies, non-governmental organizations, or franchisees.

14. **Grant of license :-** The Appropriate Commission may, on an application made to it under section 15, grant a license to any person –

- (a) To transmit electricity as a transmission licensee; or
- (b) To distribute electricity as a distribution licensee; or

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(c) To undertake trading in electricity as an electricity trader,

In any area as may be specified in the license:

**Provided** that any person engaged in the business of transmission or supply of electricity under the provisions of the repealed laws or any Act specified in the schedule on or before the appointed date shall be deemed to be a licensee under this Act for such period as may be stipulated in the license, clearance or approval granted to him under the repealed laws or such Act specified in the Schedule, and the provisions of the repealed laws or such Act specified in the Schedule in respect of such license shall apply for a period of one year from the date of commencement of this Act or such earlier period as may be specified at the request of the licensee, by the Appropriate Commission and thereafter the provisions of this Act shall apply to such business;

**Provided** further that the Central Transmission Utility or the State Transmission Utility shall be deemed to be a transmission licensee under this Act:

**Provided** also that in case an Appropriate Government transmits electricity or distributes electricity or undertakes trading in electricity, whether before or after the commencement of this Act, such Government shall be deemed to be a licensee under this Act, but shall not be required to obtain a license under this Act:

**Provided** also that the Damodar Valley Corporation, established under sub-section (1) of section 3 of the *Damodar Valley Corporation Act, 1948*, shall be deemed to be a licensee under this Act but shall not be required to obtain a licence under this Act and the Provisions of the *Damodar Valley Corporation Act, 1948*, in so far as they are not inconsistent with the provisions of this Act shall continue to apply to that Corporation:

**Provided** also that the Government company or the company referred to in sub-section (2) of section 131 of this Act and the company or companies created in pursuance of the Acts specified in the Schedule, shall be deemed to be a licensee under this Act:

**Provided** also that the Appropriate Commission may grant a license to two or more persons for distribution of electricity through their own distribution system within the same area, subject to the conditions that the applicant for grant of license within the same area shall without prejudice to the other conditions or requirements under this Act, comply with the additional requirements (including the capital adequacy creditworthiness or code of conduct) as may be prescribed by the Central Government and no such applicant, who complies with all the requirements for grant of license shall be refused grant of license on the ground the there already exists a licensee in the same area for the same purpose:

**Provided** also that in a case where a distribution licensee proposes to undertake distribution of electricity for a specified area within his area of supply though another person, that person shall not be required to obtain any separate license from the concerned State Commission and such distribution licensee shall be responsible for distribution of electricity in his area of supply:

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**Provided** also that where a person intends to generate and distribute electricity in a rural area to be notified by the State Government, such person shall not require any license for such generation and distribution of electricity, but he shall comply with the measures which may be specified by the Authority under section 53:

**Provided** also that a distribution licensee shall not require a license to undertake trading in electricity.

**15. Procedure for grant of license :** (1) Every application under section 14 shall be made in such form and in such manner as may be specified by the Appropriate Commission and shall be accompanied by such fee as may be prescribed.

(2) Any person who has made an application for grant of a license shall, within seven days after making such application, publish a notice of his application with such particulars and in such manner as may be specified and a license shall not be granted :-

- (i) Until the objections, if any, received by the Appropriate Commission in response to publication of the application have been considered by it :

**Provided** that no objection shall be so considered unless it is received before the expiration of thirty days from the date of publication of the notice as aforesaid;

- (ii) Until, in the case of an application for a license for an area including the whole or any part of any cantonment, aerodrome, fortress, arsenal, dockyard or camp or of any building or place in the occupation of the Government for defense purposes, the Appropriate Commission has ascertained that there is no objection to the grant of the license on the part of the Central Government.

- (3) A person intending to act as a transmission licensee shall, immediately on making the application, forward a copy of such application to the Central Transmission Utility or the State Transmission Utility, as the case may be.

- (4) The Central Transmission Utility or the State Transmission Utility, as the case may be, shall, within thirty days after the receipt of the copy of the application referred to in sub-section (3), send its recommendations, if any, to the Appropriate Commission:

**Provided** that such recommendations shall not be binding on the Commission.

- (5) Before granting a license under section 14, the Appropriate Commission shall :-
  - (a) Publish a notice in two such daily newspapers, as that Commission may consider necessary, stating the name and address of the person to whom it proposes to issue the license;
  - (b) Consider all suggestions or objections and the recommendations, if any, of the Central Transmission Utility or the State Transmission Utility, as the case may be :

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- (6) Where a person makes an application under sub-section (1) of section 14 to act as a licensee, the Appropriate Commission shall, as far as practicable, within ninety days after receipt of such application, -
- (a) Issue a license subject to the provisions of this Act and the rules and regulations made there under; or
  - (b) Reject the application for reasons to be recorded in writing if such application does not conform to the provisions of this Act or the rules and regulations made there under or the provisions of any other law for the time being in force:

**Provided** that no application shall be rejected unless the applicant has been given an opportunity of being heard.

- (7) The Appropriate Commission shall, immediately after issue of a license, forward a copy of the license to the Appropriate Government, Authority, local authority, and to such other person as the Appropriate Commission considers necessary.
- (8) A license shall continue to be in force for a period of twenty-five years unless such license is revoked.

**16. Conditions of License:-** The Appropriate Commission may specify any general or specific conditions which shall apply either to a licensee or class of licensees and such conditions shall be deemed to be conditions of such license:

**Provided** that the Appropriate Commission shall, within one year from the appointed date, specify any general or specific conditions of license applicable to the licensees referred to in the first, second, third, fourth and fifth provisos to section 14 after the expiry of one year from the commencement of this Act.

**17. Licensee not to do certain things :-** (1) No licensee shall, without prior approval of the Appropriate Commission, -

- (a) Undertake any transaction to acquire by purchase or takeover or otherwise, the utility of any other licensee; or
- (b) Merge his utility with the utility of any other licensee :

**Provided** that nothing contained in this sub-section shall apply if the utility of the licensee is situated in a State other than the State in which the utility referred to in clause (a) or clause (b) is situated.

- (2) Every licensee shall, before obtaining the approval under sub-section (1), give not less than one month's notice to every other licensee who transmits or distributes electricity in the area of such licensee who applies for such approval.
- (3) No licensee shall at any time assign his license or transfer his utility, or any part thereof, by sale, lease, exchange or otherwise without the prior approval of the Appropriate Commission.
- (4) Any agreement, relating to any transaction specified in sub-section (1) or sub-section (3), unless made with the prior approval of the Appropriate Commission, shall be void.

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**18. Amendment of license:-** (1) Where in its opinion the public interest so permits, the Appropriate Commission, may, on the application of the licensee or otherwise, make such alterations and amendments in the terms and conditions of his license as it thinks fit :

**Provided** that no such alterations or amendments shall be made except with the consent of the licensee unless such consent has, in the opinion of the Appropriate Commission. Been unreasonably withheld.

(2) Before any alterations or amendments in the license are made under this section, the following provisions shall have effect, namely :-

- (a) Where the licensee has made an application under sub-section (1) proposing any alteration or modifications in his license, the licensee shall publish a notice of such application with such particulars and in such manner as may be specified;
- (b) In the case of an application proposing alterations or modifications in the area of supply comprising the whole or any part of any cantonment , aerodrome, fortress, arsenal, delayed or camp or any building or place in the occupation of the Government for defense purposes, the Appropriate Commission shall on, make any alterations or modifications except with the consent of the Central Government;
- (c) Where any alterations or modifications in a license are proposed to be made otherwise than on the application of the licensee, the appropriate Commission shall publish the proposed alterations or modifications with such particulars and in such manner as may be specified ;
- (d) The appropriate commission shall not make any alterations or modifications unless all suggestions or objections received within thirty days from the date of the first obligation of the notice have been considered.

**19. Revocation of License :-** (1) If the Appropriate Commission, after making an enquiry, is satisfied that public interest so requires, it may revoke a license in any of the following cases, namely:-

- (a) Where the licensee, in the opinion of the Appropriate Commission, makes willful and prolonged default in doing anything required of him by or under this Act or the rules or regulations made hereunder;
  - (b) Where the licensee breaks any of the terms or conditions of the term or conditions of his license the breach of which is expressly declared by such license to render it liable to revocation :
  - (c) Where the licensee fails, within the period fixed in this behalf by his license, or any longer period which the Appropriate Commission may have granted therefore :-
    - (i) To show, to the satisfaction of the Appropriate Commission, that he is in a position fully and efficiently to discharge the duties and obligations imposed on him by his license ; or;
    - (ii) To make the deposit or furnish the security, or pay the fees or other charges required by his license;
  - (d) where in the opinion of the Appropriate Commission the financial position of the licensee is such that he is unable fully and efficiently to discharge the duties and obligations imposed on him by his license.
- (2) Where in its opinion the public interest so requires, the Appropriate Commission may, on application, or with the consent of the licensee, revoke his license as to the whole or any

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part of his area of distribution or transmission or trading upon such terms and conditions as it thinks fit.

- (3) No license shall be revoked under sub-section (1) unless the Appropriate Commission has given to the licensee not less than three months notice, in writing, stating the grounds on which it is proposed to revoke the license and has considered any cause shown by the licensee within the period of that notice, against the proposed revocation.
- (4) The Appropriate Commission may, instead of revoking a license under sub-section (1), permit it to remain in force subject to such further terms and conditions as it thinks fit to impose, and any further terms and conditions so imposed shall be binding upon and be observed by the licensee and shall be of like force and effect as if they were contained in the license.
- (5) Where the Commission revokes a license under this section, it shall serve a notice of revocation upon the licensee and fix a date on which the revocation shall take effect.
- (6) Where the Appropriate Commission has given notice for revocation of license under sub-section (5), without prejudice to any penalty which may be imposed or prosecution proceeding which may be initiated under this Act, the licensee may, after prior approval of that Commission, sell his utility to any person who is found eligible by that commission for grant of license.

- 20 **Sale of utilities/ of licensees :-** (1) where the Appropriate Commission revokes under section 19 the license of any licensee, the following provisions shall apply, namely :-

(a) The Appropriate Commission shall invite applications for acquiring the utility of the licensee whose license has been revoked and determine which of such applications should be accepted, primarily on the basis of the highest and best price offered for the utility

(b) The Appropriate Commission may, by notice in writing, require the licensee to sell his utility and thereupon the licensee shall sell his utility to the person (hereafter in this section referred to as the “purchaser”) whose application has been accepted by that commission;

(c) All the rights, duties, obligations and liabilities of the licensee, on and from the date of revocation of license or on and from the date, if earlier, on which the utility of the licensee is sold to a purchaser, shall absolutely cease except for any liabilities which have accrued prior to that date;

(d) The Appropriate Commission may make such interim arrangements in regard to the operation of the utility as may be considered appropriate including the appointment of Administrators;

(e) The Administrator appointed under clause (d) shall exercise such powers and discharge such functions as the Appropriate Commission may direct.

- (3) Where a utility is sold under sub-section (1), the purchaser shall pay to the licensee the purchase price of the utility in such manner as may be agreed upon.
- (4) Where the Appropriate Commission issues any notice under sub-section (1) requiring the licensee to sell the utility, it may, by such notice, require the licensee to deliver the utility,

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and thereupon the licensee shall deliver on a date specified in the notice, the utility to the designated purchaser on payment of the purchase price thereof.

- (5) Where the licensee has delivered the utility referred to in sub-section (3) to the purchaser but its sale has not been completed by the date fixed in the notice issued under that sub-section, the Appropriate Commission may, if it deems fit, permit the intending purchaser to operate and maintain the utility system pending the completion of the sale.
21. **Vesting of utility in purchaser :-** Where a utility is sold under section 20 or section 24, then, upon completion of the sale or on the date on which the utility is delivered to the intending purchaser, as the case may be, whichever is earlier :-
- (a) The utility shall vest in the purchaser or the intending purchaser, as the case may be, free from any debt, mortgage or similar obligation of the licensee or attaching to the utility:

**Provided** that any such debt, mortgage or similar obligation shall attach to the purchase money in substitution for the utility, and

- (b) The rights, powers, authorities, duties and obligations of the licensee under his license shall stand transferred to the purchaser and such purchaser shall be deemed to be the licensee.
22. **Provisions where no purchase takes place :-** (1) If the utility is not sold in the manner provided under section 20 or section 24, the Appropriate Commission may, to protect the interest of consumers or in the public interest, issue such directions or formulate such scheme as it may deem necessary for operation of the utility.
- (2) Where no directions are issued or scheme is formulated by the Appropriate Commission under sub-section (1), the licensee referred to in section 20 or section 24 may dispose of the utility in such manner as it may deem fit:

**Provided** that, if the licensee does not dispose of the utility, within a period of six months from the date of revocation, under section 20 or section 24, the Appropriate Commission may cause the works of the licensee in, under, over along, or across any street or public land to be removed and every such street or public land to be reinstated, and recover the cost of such removal and reinstatement from the licensee.

23. **Directions to Licensee :-** If the appropriate commission is of the opinion that it is necessary or expedient so to do for maintaining the efficient supply, securing the equitable distribution of electricity and promoting competition it may, by order, provide for regulating supply, distribution, consumption or use thereof.
24. **Suspension of distribution license and safe of utility :-** (1) If at any time the Appropriate Commission is of the opinion that a distribution licensee—
- (a) Has persistently failed to maintain uninterrupted supply of electricity conforming to standards regarding quality of electricity to the consumers; or
- (b) Is unable to discharge the functions or perform the duties imposed on it by or under the provisions of this Act; or
- (c) Has persistently defaulted in complying with any direction given by the Appropriate Commission under this Act; or
- (d) Has broken the terms and conditions of license,

And circumstances exist which render it necessary for it necessary for it in public interest so to do, the appropriate Commission may, for reasons to be recorded in writing, suspend, for a period not exceeding one year, the license of the distribution licensee and appoint an Administrator to



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discharge the functions of the distribution licensee in accordance with the terms and conditions of the license :

**Provided** that before suspending a license under this section, the Appropriate Commission shall give a reasonable opportunity to the distribution licensee to make representations against the proposed suspension of license and shall consider the representations, if any, of the distribution licensee.

- (2) Upon suspension of license under sub-section (1), the utilities of the distribution licensee shall vest in the Administrator for a period not exceeding one year or up to the date on which such utility is sold in accordance with the provisions contained in section 20 whichever is later.
- (3) The Appropriate Commission shall, within one year of appointment of the Administrator under sub-section (1), either revoke the license in accordance with the provisions contained in section 19 or revoke suspension of the license and restore the utility to the distribution licensee whose license had been suspended, as the case may be.
- (4) In a case where the Appropriate Commission revokes the license under sub-section (3), the utility of the distribution licensee shall be sold within a period of one year from the date of revocation of the license in accordance with the provisions of section 20 and the price after deducting the administrative and other expenses on sale of utilities be remitted to the distribution licensee.

## PART V

### TRANSMISSION OF ELECTRICITY

#### Inter-State Transmission

25. **Inter –State Regional and inter-regional transmission :-** For the purposes of this Part, the Central Government may, make region-wise demarcation of the country, and, from time to time, make such modifications therein as it may consider necessary for the efficient, economical and integrated transmission and supply of electricity, and in particular to facilitate voluntary inter-connections and co-ordination of facilities for the inter-State, regional and inter-regional generation and transmission of electricity.
26. **National Load Despatch Centre: -** The Central Government may establish a Centre at the national level, to be known as the National Load Despatch centre for optimum scheduling and dispatch of electricity among the Regional Load Despatch Centers.

(2) The constitution and functions of the National Load Despatch Centre shall be such as may be prescribed by the Central Government:

**Provided** that the National Load Despatch Centre shall not engage in the business of trading in electricity.

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(3) The National Load Despatch Centre shall be operated by a Government company or any authority or corporation established or constituted by or under any Central Act, as may be notified by the Central Government.

**27. Constitution of Regional Load Despatch Centre :-** (1) The Central Government shall establish a Centre for each region to be known as the Regional Load Despatch Centre having territorial jurisdiction as determined by the Central Government in accordance with section 25 for the purposes of exercising the powers and discharging the functions under this Part.

(2) The Regional Load Despatch Centre shall be operated by a government company or any authority or corporation established or constituted by or under any Central Act, as may be notified by the Central Government:

**Provided** that until a Government company or authority or corporation referred to in this subsection is notified by the Central Government, the Central Transmission Utility shall operate the Regional Load Despatch Centre:

**Provided** further that no Regional Load Despatch Centre shall engage in the business of generation of electricity or trading in electricity.

**28. Functions of Regional Load Despatch Centre :-** (1) The Regional Load Despatch Centre shall be the apex body to ensure integrated operation of the power system in the concerned region

- 2 The Regional Load Despatch Centre shall comply with such principles, guidelines and methodologies in respect of wheeling and optimum scheduling and dispatch of electricity as the Central Commission may specify in the Grid Code.
- 3 The Regional Load Despatch Centre shall
  - (a) be responsible for optimum scheduling and dispatch of electricity within the region, in accordance with the contracts entered into with the licensee of the generating companies operating in the region.
  - (b) Monitor grid operations;
  - (c) Keep accounts of quantity of electricity transmitted through the regional grid;
  - (d) Exercise supervision and control over the inter-State transmission system; and
  - (e) Be responsible for carrying out real time operations for grid control and dispatch of electricity within the region through secure and economic operation of the regional grid in accordance with the Grid Standards and the Grid Code.
- 4 The Regional Load Despatch centre may levy and collect such fee and charges from the generating companies or licensees engaged in inter-State transmission of electricity as may be specified by the Central Commission.

**29. Compliance of directions :-** (1) The Regional Load Despatch Centre may give such directions and exercise such supervision and control as may be required for ensuring stability of grid operations and for achieving the maximum economy and efficiency in the operation of the power system in the region under its control.

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(2) Every licensee, generating company, generating station, sub-station and any other person connected with the operation of the power system shall comply with the directions issued by the Regional Load Despatch Centers under sub-section (1).

(3) All directions issued by the Regional Load Despatch centers to any transmission licensee of state transmission lines or any other licensee of the State or generating company (other than those connected to inter-State transmission system) or sub-station in the State shall be issued through the State Load Despatch Centre and the State Load Despatch Centers shall ensure that such directions are duly complied with by the licensee or generating company or sub-station.

(4) The Regional Power Committee in the region may, from time to time, agree on matters concerning the stability and smooth operation of the integrated grid and economy and efficiency in the operation of the power system in that region.

(5) If any dispute arises with reference to the quality of electricity or safe, secure and integrated operation of the regional grid or in relation to any direction given under sub-section (1), it shall be referred to the Central Commission for decision:

**Provided** that pending the decision of the Central Commission, the directions of the Regional Load Despatch Centre shall be complied with by the State Load Despatch Centre or the licensee or the generating company, as the case may be.

(6) If any licensee, generating company or any other person fails to comply with the directions issued under sub-section (2) or sub-section (3), he shall be liable to a penalty not exceeding rupees fifteen lacs.

### *Intra-State Transmission*

**30. Transmission within a State:-** The State Commission shall facilitate and promote transmission, wheeling and inter-connection arrangements within its territorial jurisdiction for the transmission and supply of electricity by economical and efficient utilization of the electricity.

**31. Constitution of State Load Despatch Centers :-** (1) The State Government shall establish a centre to be known as the State Load Despatch Centre for the purposes of exercising the powers and discharging the functions under this Part.

(2) The State Load Despatch Centre shall be operated by Government company or any authority or corporation established or constituted by or under any State Act, as may be notified by the State Government .

**Provided** that until a Government company or any authority or corporation is notified by the State Government, the State Transmission Utility shall operate the State Load Despatch Centre

**Provide** further that **no** State Load Despatch Centre shall engage in the business of trading in electricity.

**32. Functions of State Load Despatch Centers :-** (1) The State Load Despatch Centre shall be the apex body to ensure integrated operation of the power system in a State.

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- (a) The State Load Despatch Centre shall :-
  - f) Be responsible for optimum scheduling and dispatch of electricity within a State, in accordance with the contracts entered into with the licensees or the generating companies operating in that State ;
  - g) Monitor grid operation;
  - h) Keep accounts of the quantity of electricity transmitted through the State grid.
  - i) Exercise supervision and control over the intra-State transmission system;
  - j) Be responsible for carrying out real time operations for grid control and dispatch of electricity within the State through secure and economic operation of the State grid in accordance with the Grid Standards and the State Grid Code;
- 3. The State Load Despatch Centre may levy and collect such fee and charges from the generating companies and licensees engaged in intra-State transmission of electricity as may be specified by the State Commission.

**33. Compliance of directions :** - (1) The State Load Despatch Centre in a State may give such directions and exercise such supervision and control as may be required for ensuring the integrated grid operations and for achieving the maximum economy and efficiency in the operation of power system in the State.

- (b) Every licensee, generating company, generating station, sub-station and any other person connected with the operation of the power system shall comply with the directions issued by the State Load Despatch Centre under sub-section (1)
- (c) The State Load Despatch Centre shall comply with the directions of the Regional Load Dispatch Centre.
- (d) If any dispute arises with reference to the quality of electricity or safe, secure and integrated operation of the State grid or in relation to any direction given under sub-section (1), it shall be referred to the State Commission for decision:

**Provided** that pending the decision of the State Commission, the directions of the State Load Despatch Centre shall be complied with by the licensee or generating company.

- (e) If any licensee, generating company or any other person fails to comply with the directions issued under sub-section (1), he shall be liable to a penalty not exceeding rupees five lacs.

### ***Other Provision relating to transmission***

**34. Grid Standards :-** every transmission licensee shall comply with such technical standards, of operation and maintenance of transmission lines, in accordance with the Grid Standards, as may be specified by the Authority.

**35. Intervening Transmission facilities :-** The Appropriate Commission may, on an application by any licensee, by order require any other licensee owning or operating intervening transmission facilities to provide the use of such facilities to the extent of surplus capacity available with such licensee:

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**Provided** that any dispute, regarding the extent of surplus capacity available with the licensee shall be adjudicated upon by the Appropriate Commission.

**36. Charges for intervening transmission facilities :-** (1) Every licensee shall, on an order made under section 35, provide his intervening transmission facilities at rates, charges and terms and conditions as may be mutually agreed upon :

**Provided** that the Appropriate Commission may specify rates, charges and terms and conditions if these cannot be mutually agreed upon by the licensees.

(2) The rates, charges and terms and conditions referred to in sub-section (1) shall be fair and reasonable, and may be allocated in proportion to the use of such facilities.

**Explanation :** - For the purposes of sections 35 and 36, the expression “ intervening transmission facilities” means the electric lines owned or operated by a licensee where such electric lines can be utilized for transmitting electricity for and on behalf of another licensee at his request and on payment of a tariff or charge.

**37. Direction by Appropriate Government:** - The appropriate Government may issue directions to the Regional Load Despatch Centers or State Load Despatch Centers, as the case may be, to take such measures as may be necessary for maintaining smooth and stable transmission and supply of electricity to any region or State.

**38. Central Transmission Utility and Functions :-** (1) The Central Government may notify any Government company as the Central Transmission Utility:

**Provided** that the Central Transmission Utility shall not engage in the Business of generation of electricity or trading in electricity:

**Provided** further that the Central Government may transfer, and vest any property, interest in property, rights and liabilities connected with, and personnel involved in transmission of electricity of such Central Transmission Utility, to a company or companies to be incorporated under the Companies Act, 1956 to function as a transmission licensee, through a transfer scheme to be effected in the manner specified under Part XIII and such company or companies shall be deemed to be transmission licensees under this Act.

2. The functions of the Central Transmission Utility shall be :-

- e) To undertake transmission of electricity through inter-state transmission system;
- f) To discharge all functions of planning and co-ordination relating to inter state transmission system with :-

- (ix) State Transmission Utilities;
- (x) Central Government;
- (xi) State Government;
- (xii) Generating companies;
- (xiii) Regional power Committees;
- (xiv) Authority;
- (xv) Licensees;
- (xvi) Any other person notified by the Central government in this behalf

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- g) To ensure development of an efficient, co-ordinate and economical system of inter-State transmission lines for smooth flow of electricity from generating stations to the load centers;
- h) To provide non-discriminatory open access to its transmission system for use by :-
  - (i) any licensee or generating company on payment of the transmission charges; or
  - (ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the Central Commission:

**Provided** that such surcharge shall be utilized for the purpose of meeting the requirement of current level cross subsidy:

**Provided** further that such surcharge and cross subsidies shall be progressively reduced and eliminated in the manner as may be specified by the Central Commission:

**Provided** also that such surcharge may be levied till such time the cross subsidies are not eliminated:

**Provided** also that the manner of payment and utilization of the surcharge shall be specified by the Central Commission:

**Provided** also that such surcharge shall not be livable in case open access is provided to a person who has established a captive generating plant for carrying the electricity to the destination of his own use.

**39. State Transmission Utility and Functions :-** (1) The state Government may notify the Board or a Government company as the State Transmission Utility:

**Provided** that the State Transmission Utility shall not engage in the business of trading in electricity:

**Provided** further that the State Government may transfer, and vest any property, interest in property, rights and liabilities connected with, and personnel involved in transmission of electricity, of such State Transmission Utility, to a company or companies to be incorporated under the Companies Act, 1956 to function as transmission licensee through a transfer scheme to be effected in the manner specified under Part XIII and such company or companies shall be deemed to be transmission licensees under this Act.

2. The functions of the State Transmission Utility shall be :-

- (a) To undertake transmission of electricity through intra-State transmission system;
- (b) To discharge all functions of planning and co-ordination relating to intra-State transmission system with :-

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- (i) Central Transmission Utility;
  - (ii) State Governments;
  - (iii) Generating companies;
  - (iv) Regional Power Committees;
  - (v) Authority;
  - (vi) Licensees;
  - (vii) Any other person notified by the State Government in this behalf;
- (c) To ensure development of an efficient, coordinated and economical system of intra-State transmission lines for smooth flow of electricity from a generating station to the load centers;
- (d) To provide non-discriminatory open access to its transmission system for use by :-
- (i) any licensee or generating company on payment of the transmission charges; or
  - (ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission:

**Provided** that such surcharge shall be utilized for the purpose of meeting the requirement of current level cross-subsidy:

**Provided** further that such surcharge and cross subsidies shall be progressively reduced and eliminated in the manner as may be specified by the State Commission:

**Provided** also that such surcharge may be levied till such time the cross subsidies are not eliminated:

**Provided** also that the manner of payment and utilization of the surcharge shall be specified by the State Commission:

**Provided** also that such surcharge shall not be livable in case open access is provided to person who has established a captive generating plant for carrying the electricity to the destination of his own use.

**40. Duties of Transmission licensees:-** It shall be the duty of a transmission licensee :-

- (a) To build, maintain and operate an efficient, co-ordinate and economical inter-State transmission system or intra-State transmission system, as the case may be;
- (b) To comply with the directions of the Regional Load Despatch Centre and the State Load Despatch Centre as the case may be;
- (c) To provide non-discriminatory open access to its transmission system for use by :-
  - (i) any licensee or generating company on payment of the transmission charges; or

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- (ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission:

**Provided** that such surcharge shall be utilized for the purpose of meeting the requirement of current level cross-subsidy:

**Provided** further that such surcharge and cross subsidies shall be progressively reduced and eliminated in the manner as may be specified by the Appropriate Commission:

**Provided** also that such surcharge may be levied till such time the cross subsidies are not eliminated:

**Provided** also that the manner of payment and utilization of the surcharge shall be specified by the Appropriate Commission:

**Provided** also that such surcharge shall not be livable in case open access is provided to a person who has established a captive generating plant for carrying the electricity to the destination of his own use .

**41. Other business of transmission licensee:-** A transmission licensee may, with prior intimation to the Appropriate Commission, engage in any business for optimum utilization of its assets:

**Provided** that a proportion of the revenues derived from such business shall, as may be specified by the Appropriate Commission, be utilized for reducing its charges for transmission and wheeling:

**Provided** further that the transmission licensee shall maintain separate accounts for each such business undertaking to ensure that transmission business neither subsidies in any way such business undertaking non encumbers its transmission assets in any way to support such business:

**Provided** also that no transmission licensee shall enter into any contract or otherwise engage in the business of trading in electricity.

## PART VI

### DISTRIBUTION OF ELECTRICITY

#### Provisions with respect to distribution licensees

**42. Duties of distribution licensee and open access :-** (1) It shall be the duty of a distribution licensee to develop and maintain an efficient, co-ordinated and economical distribution system in his area of supply and to supply electricity in accordance with the provisions contained in this Act

2. The State Commission shall introduce open access in such phases and subject to such conditions, (including the cross subsidies, and other operational constraints) as may be specified within one year of the appointed date by it and in specifying the extent of open access in successive phase and in determining the



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charges for wheeling, it shall have due regard to all relevant factors including such cross subsidies, and other operational constraints:

**Provided** that such open access may be allowed before the cross subsidies are eliminated on payment of a surcharge in addition to the charges for wheeling as may be determined by the State Commission:

**Provided** further that such surcharge shall be utilized to meet the requirements of current level of cross subsidy within the area of supply of the distribution licensee:

**Provided** also that such surcharge and cross subsidies shall be progressively reduced and eliminated in the manner as may be specified by the State Commission:

**Provided** also that such surcharge shall not be livable in case open access is provided to a person who has established a captive generating plant for carrying the electricity to the destination of his own use.

(3)Where any person, whose premises are situated within the area of supply of a distribution licensee, (not being a local authority engaged in the business of distribution of electricity before the appointed date) requires a supply of electricity from a generating company or any licensee other than such distribution licensee, such person may, by notice, require the distribution licensee for wheeling such electricity in accordance with regulations made by the State Commission and the duties of the distribution licensee with respect to such supply shall be of a common carrier providing non-discriminatory open access.

(4)Where the State Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the distribution licensee of his area of supply, such consumer shall be liable to pay an additional surcharge on the charges of wheeling, as may be specified by the State Commission, to meet the fixed cost of such distribution licensee arising out of his obligation to supply.

(5)Every distribution licensee shall, within six months from the appointed date or date of grant of license, whichever is earlier, establish a forum for redressal of grievances of the consumers in accordance with the guidelines as may be specified by the state commission.

(6)Any consumer, who is aggrieved by non-redressal of his grievances under subsection (5), may make a representation for the redressal of his grievance to an authority to be known as Ombudsman to be appointed or designated by the state Commission.

(7)The Ombudsman shall settle the grievance of the consumer within such time and in such manner as may be specified by the State Commission.

(8)The provisions of sub-section (5), (6) and (7) shall be without prejudice to right which the consumer may have apart from the rights conferred upon him by those subsections .

**43. Duty to Supply on request :-** (1) Every distribution licensee, shall on an application by the owner or occupier of any premises, give supply of electricity to such premises, within one month after receipt of the application requiring such supply:

**Provided** that where such supply require connection of distribution mains, or commissioning of new sub-station, the distribution licensee shall supply the electricity to such premises immediately after such extension or commissioning or within such period as may be specified by the Appropriate Commission:

**Provided** further that in case of a village or hamlet or area wherein no provision for supply of electricity exists, the Appropriate Commission may extend the said period as it may consider necessary for electrification of such village or hamlet or area.

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2. It shall be the duty of every distribution licensee to provide, if required, electric plant or electric line for giving electric supply to the premises specified in sub-section (1):

**Provided** that no person shall be entitled to demand, or to continue to receive, from a licensee a supply of electricity for any premises having a separate supply unless he has agreed with the licensee to pay to him such price as determined by the Appropriate Commission.

3. If a distribution licensee fails to supply the electricity within the period specified in sub-section (1), he shall be liable to a penalty which may extend to one thousand rupees for each day or default.

**44. Exceptions from duty to supply electricity:-** Nothing contained in section 43 shall be taken as requiring a distribution licensee to give supply of electricity to any premises if he is prevented from so doing by cyclone, floods, storms or other occurrences beyond his control.

**45. Power to recover charges :-** (1) Subject to the provisions of this section, the prices to be charged by a distribution licensee for the supply of electricity by him in pursuance of section 43 shall be in accordance with such tariffs fixed from time to time and conditions of his license.

(2).The charges for electricity supplied by a distribution licensee shall be :-

- a) Fixed in accordance with the methods and the principles as may be specified by the concerned State Commission;
  - b) Published in such manner so as to give adequate publicity for such charges and prices.
3. The charges for electricity supplied by a distribution licensee may include :-
- (a) A fixed charge in addition to the charge for the actual electricity supplied;
  - (b) A rent or other charges in respect of any electric meter or electrical plant provided by the distribution licensee.
4. Subject to the provisions of section 62, in fixing charges under this section a distribution licensee shall not show undue preference to any person or class of persons or discrimination against any person or class of persons.
5. The charges fixed by the distribution licensee shall be in accordance with the provisions of this Act and the regulations made in this behalf by the concerned State Commission.

**46. Power to recover expenditure :** - The State Commission may, by regulations, authorize a distribution licensee to charge from a person requiring a supply of electricity in pursuance of section 43 any expenses reasonably incurred in providing any electric line or electrical plant used for the purpose of giving that supply.

**47. Power to Require Security :-** (1) Subject to the provisions of this section, a distribution licensee may require any person, who requires a supply of electricity in pursuance of section 43, to give him reasonable security, as may be determined by regulations, for the payment to him of all monies which may become due to him :-

- (a) in respect of the electricity supplied to such person ; or
- (b) where any electric line or electrical plant or electric meter is to be provided for supplying electricity to such person, in respect of the provision of such line or plant or meter, and if that person fails to give such security, the distribution licensee may, if he thinks fit, refuse to give the supply of electricity or to provide the line or plant or meter for the period during which the failure continues.

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3. Where any person has not given such security as is mentioned in sub-section (1) or the security given by any person has become invalid or insufficient, the distribution licensee may, by notice, require that person, within thirty days after the service of the notice, to give him reasonable security for the payment of all monies which may become due to him in respect of the supply of electricity or provision of such line or plant or meter.
4. If the person referred to in sub-section (2) fails to give such security, the distribution licensee may, if he thinks fit, discontinue the supply of electricity for the period during which the failure continues.
5. The distribution licensee shall pay interest equivalent to the bank rate or more, as may be specified by the concerned State Commission, on the security referred to in sub section (1) and refund such security on the request of the person who gave such security.
6. A distribution licensee shall not be entitled to require security in pursuance of clause (a) of sub-section (1) if the person requiring the supply is prepared to take the supply through a pre-payment meter.

**48. Additional terms of supply :-** A distribution licensee may require any person who requires a supply of electricity in pursuance of section 43 to accept :-

- (c) any restrictions which may be imposed for the purpose of enabling the distribution licensee to comply with the regulations made under section 53;
- (d) any terms restricting any liability of the distribution licensee for economic loss resulting from negligence of the person to whom the electricity is supplied.

**49. Agreements with respect to supply or purchase of electricity :-** Where the appropriate Commission has allowed open access to certain consumers under section 42, such consumers, notwithstanding the provisions contained in clause (d) of sub-section (1) of section 62, may enter into an agreement with any person for supply or purchase of electricity on such terms and conditions (including tariff) as may be agreed upon by them.

**50. The Electricity Supply Code:-** The State Commission shall specify an Electricity Supply Code to provide for recovery of electricity charges, intervals for billing of electricity charges, disconnection of supply of electricity for non-payment thereof, restoration of supply of electricity, tampering, distress or damage to electrical plant, electric lines or meter, entry of distribution licensee or any person acting on his behalf for disconnecting supply and removing the meter, entry for replacing altering or maintaining electric lines or electrical plant or meter.

**51. Other businesses of distribution licensees :-** A distribution licensee may, with prior intimation to the Appropriate Commission, engage in any other business for optimum utilization of its assets:

**Provided** that a proportion of the revenues derived from such business shall, as may be specified by the concerned State Commission, be utilized for reducing its charges for wheeling:

**Provided** further that the distribution licensee shall maintain separate accounts for each such business undertaking to ensure that distribution business neither subsidies in any way such business undertaking nor encumbers its distribution assets in any way to support such business:

Provided also that nothing contained in this section shall apply to a local authority engaged, before the commencement of this Act, in the business of distribution of electricity.

### *Provision with respect to electricity traders*

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**52. Provisions with respect to electricity trader :-** (1) Without prejudice to the provisions contained in clause (c) of section 12, the Appropriate Commission may, specify the technical requirement, capital adequacy requirement and credit worthiness for being an electricity trader.  
(2) Every electricity trader shall discharge such duties, in relation to supply and trading in electricity, as may be specified by the Appropriate Commission.

### *Provisions with respect to supply generally*

**53. Provision relating to safety and electricity supply :-** The Authority may, in consultation with the State Government, specify suitable measures for :-

- (a) protecting the public ( including the persons engaged in the generation, transmission or distribution or trading) from dangers arising from the generation, transmission or distribution or trading of electricity, or use of electricity supplied or installation, maintenance or use of any electric line or electrical plant;
- (b) eliminating or reducing the risks of personal injury to any person, or damage to property of any person or interference with use of such property;
- (c) prohibiting the supply or transmission of electricity except by means of a system which conforms to the specifications as may be specified;
- (d) giving notice in the specified form to the Appropriate Commission and the Electrical Inspector, of accidents and failures of supplies or transmissions of electricity;
- (e) keeping by a generating company or licensee the maps , plans and sections relating to supply or transmission of electricity;
- (f) inspection of maps, plans and sections by any person authorized by it or by Electrical Inspector or by any person on payment of specified fee;
- (g) specifying action to be taken in relation to any electric line or electrical plant, or any electrical appliance under the control of a consumer for the purpose of eliminating or reducing the risk of personal injury or damage to property or interference with its use.

**54. Control of transmission and use of electricity :-** (1) Save as otherwise exempted under this Act, no person other than the Central Transmission Utility or a State Transmission Utility, or a licensee shall transmit or use electricity at a rate exceeding two hundred and fifty watts and one hundred volts:-

- (a) in any street, or
- (b) in any place,-

- (i) In which one hundred or more persons are ordinarily likely to be assembled; or
- (ii) Which is a factory within the meaning of the Factories Act, 1948 or a mine within the meaning of the Mines Act, 1952; or
- (iii) To which the state Government, by general or special order, declares the provisions of this sub-section to apply,

Without giving, before the commencement of transmission or use of electricity, not less than seven days' notice in writing of his intention to the Electrical Inspector and to the District

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Magistrate or the Commissioner of Police, as the case may be containing particulars of the electrical installation and plant, if any, the nature and the purpose of supply and complying with such of the provisions of Part XVII of this Act, as may be applicable:

**Provided** that nothing in this section shall apply to electricity used for the public carriage of passengers, animals or goods, on or for the lighting or ventilation of the rolling stock of any railway or tramway subject to the provisions of the *Railways Act, 1989*.

2. Where any difference or dispute arises as to whether a place is or is not one in which one hundred or more persons are ordinarily likely to be assembled, the matter shall be referred to the State Government, and the decision of the State Government thereon shall be final
3. The provisions of this section shall be binding on the Government.

**55. Use etc., of meters :-** (1) No licensee shall supply electricity after the expiry of two years from the appointed date, except through installation of a correct meter in accordance with the regulations to be made in this behalf by the Authority;

**Provided** that the licensee may require the consumer to give him security for the price of meter and enter into an agreement for the hire thereof, unless the consumer elects to purchase a meter :

**Provided** further that the State Commission may, by notification, extend the said period of two years for a class or classes of persons or for such area as may be specified in that notification.

2. For proper accounting and audit in the generation, transmission and distribution or trading of electricity, the Authority may direct the installation of meters by a generating company or licensee at such stages of generation, transmission or distribution or trading of electricity and at such locations of generation, transmission or distribution or trading, as it may deem necessary.
3. If a person makes default in complying with the provisions contained in this section or the regulations made under sub-section (1), the Appropriate Commission may make such order as it thinks fit for requiring the default to be made good by the generating company or licensee or by any officers of a company or other association or any other person who is responsible for its default.

**56. Disconnection of supply in default of payment :-** (1) Where any person neglects to pay any charge for electricity or any sum other than a charge for electricity due from him to a licensee or the generating company in respect of supply, transmission or distribution or wheeling of electricity to him the licensee or the generating company may, after giving not less than fifteen clear days notice in writing to such person and without prejudice to his rights to recover such charge or other sum by suit, cut off the supply of electricity and for the purpose cut or disconnect any electric supply line or other works being the property of such licensee or the generating company through which electricity may have been supplied, transmitted, distributed or wheeled and may discontinue the supply until such charge or other sum, together with any expenses incurred by him in cutting off and reconnecting the supply, are paid but no longer;

**Provided** that the supply of electricity shall not be cut off if such person deposits, under protest,-

- (a) an amount equal to the sum claimed from him, or
- (b) the electricity charges due from him for each month calculated on the basis of average charge for electricity paid by him during the preceding six months,

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Whichever is less, pending disposal of any dispute between him and the licensee.

(2) Notwithstanding anything contained in any other law for the time being in force, no sum due from any consumer, under this section shall be recoverable after the period of two years from the date when such sum became first due unless such sum has been shown continuously as recoverable as arrear of charges for electricity supplied and the licensee shall not cut off the supply of the electricity.

**57. Standards of performance of licensee:** - (1) The Appropriate Commission may, after consultation with the licensees and persons likely to be affected, specify standards of performance of a licensee or a class of licensees.

2. If a licensee fails to meet the standards specified under sub-section (1), without prejudice to any penalty which may be imposed or prosecution be initiated, he shall be liable to pay such compensation to the person affected as may be determined by the Appropriate Commission:

**Provided** that before determination of compensation, the concerned licensee shall be given a reasonable opportunity of being heard.

2. The compensation determined under sub-section (2) shall be paid by the concerned licensee within ninety days of such determination.

**58. Different Standards of performance by licensee :-** The Appropriate Commission may specify different standards under sub-section (1) of section 57 for a class or classes of licensees.

**59. Information with respect to levels of performance:** - (1) Every licensee shall, within the period specified by the Appropriate Commission, furnish to the Commission the Following information, namely:-

- a. the level of performance achieved under sub-section (1) of section 57;
- b. the number of cases in which compensation was made under sub-section (2) of section 57 and the aggregate amount of the compensation.

(2) The Appropriate Commission shall at least once in every year arrange for the publication, in such form and manner as it considers appropriate, of such of the information furnished to it under sub-section (1).

**60. Market Domination :-** The Appropriate Commission may issue such directions as it considers appropriate to a licensee or a generating company if such licensee or generating company enters into any agreement or abuses its dominant position or enters into a combination which is likely to cause or causes an adverse effect on competition in electricity industry.

## PART VII

### TARIFF

**61. Tariff regulations :-** The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following namely :-

- (a) the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;
- (b) the generation transmission, distribution and supply of electricity are conducted on commercial principles;
- (c) the factors which would encourage competition efficiency economical use of the resources, good performance and optimum investments;
- (d) safeguarding of consumers interest and at the same time, recovery of the cost of electricity in a reasonable manner;
- (e) the principles rewarding efficiency in performance;
- (f) multiyear tariff principles;
- (g) that the tariff progressively reflects the cost of supply of electricity, and also, reduces and eliminates cross-subsidies within the period to be specified by the Appropriate Commission;
- (h) the promotion of co-generation and generation of electricity from renewable sources of energy;
- (i) the National Electricity Policy and tariff policy :

**Provided** that the terms and conditions for determination of tariff under the Electricity (supply) Act. 1948, the Electricity Regulatory Commissions Act, 1998 and the enactments specified in the Schedule as they stood immediately before the appointed date, shall continue to apply for a period of one year or until the terms and conditions for tariff are specified under this section, whichever is earlier.

**62. Determination of tariff :-** (1) The Appropriate Commission shall determine the tariff in accordance with the provisions of this Act for.

- (a) supply of electricity by a generating company to a distribution licensee:

**Provided** that the Appropriate Commission may, in case of shortage of supply of electricity, fix the minimum and maximum ceiling of tariff for sale or purchase of electricity in pursuance of an agreement, entered into between a generating company and a licensee or between licensees for a period not exceeding one year to ensure reasonable prices of electricity;

- (b) transmission of electricity;
- (c) wheeling of electricity;
- (d) retail sale of electricity ;

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**Provided** that in case of distribution of electricity in the same area by two or more distribution licensees, the Appropriate Commission may, for promoting completion among distribution licensees, fix only maximum ceiling of tariff for retail sale of electricity.

- (2) The Appropriate Commission may require a licensee or a generating company to furnish separate details, as may be specified in respect of generation, transmission and distribution for determination of tariff.
  - (3) The Appropriate Commission shall not, while determining the tariff under this Act, show undue preference to any consumer of electricity but may differentiate according to the consumers load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.
  - (4) No tariff or part of any tariff may ordinarily be amended, more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified.
  - (5) The Commission may require a licensee or a generating company to comply with such procedure as may be specified for calculating the expected revenues from the tariff and charges which he or it is permitted to recover.
  - (6) If any licensee or a generating company recovers a price or charge exceeding the tariff determined under this section, the excess amount shall be recoverable by the person who has paid such price or charge along with interest equivalent to the bank rate without prejudice to any other liability incurred by the licensee.
7. **Determination of tariff by bidding process** :- Notwithstanding anything contained in section 62, the Appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government.
64. **Procedure for tariff order.** :- (1) An application for determination of tariff under section 62 shall be made by a generating company or licensee in such manner and accompanied by such fee, as may be determined by regulations.

2. Every applicant shall publish the application, in such abridged form and manner, as may be specified by the Appropriate Commission.
3. The Appropriate Commission shall, within one hundred and twenty days from receipt of an application under sub-section (1) and after considering all suggestions and objections received from the public,-
2. issue a tariff order accepting the application with such modifications or such conditions as may be specified in that order;
3. reject the application for reasons to be recorded in writing if such application is not in accordance with the provisions of this Act and the rules and regulations made there under or the provisions of any other law for the time being in force:

**Provided** that an applicant shall be given a reasonable opportunity of being heard before rejecting his application.

4. The Appropriate Commission shall, within seven days of making the order, send a copy of the order to the Appropriate Government, the Authority, and the concerned licensees and to the person concerned.
5. Notwithstanding anything contained in Part X, the tariff for any inter-State supply, transmission or wheeling of electricity, as the case may be, involving the territories of two States may, upon application made to it by the parties intending to undertake



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such supply, transmission or wheeling, be determined under this section by the State Commission having jurisdiction in respect of the licensee who intends to distribute electricity and make payment therefore :

6. A tariff order shall, unless amended or revoked, continue to be in force for such period as may be specified in the tariff order.

**65. Provision of subsidy by State Government :-** If the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the State Commission under section 62, the State Government shall, notwithstanding any direction which may be given under section 108, pay in advance and in such manner as may be specified, the amount to compensate the person affected by the grant of subsidy in the manner the State Commission may direct, as a condition for the licensee or any other person concerned to implement the subsidy provided for by the State Government:

**Provided** that no such direction of the State Government shall be operative if the payment is not made in accordance with the provisions contained in this section and the tariff fixed by the State Commission shall be applicable from the date of issue of orders by the Commission in this regard.

**66. Development of market:-** The Appropriate Commission shall endeavor to promote the development of a market (including trading) in power in such manner as may be specified and shall be guided by the National Electricity Policy referred to in section 3 this regard.

## PART VIII

### WORKS

#### Works of licensees

**67. Provision as to opening up of streets, railways etc :-** (1) A licensee may, from time to time but subject always to the terms and conditions of his license, within his area of supply or transmission or when permitted by the terms of his license lay down or place electric supply lines without the area of supply, without that area carry out works such as :-

- (a) to open and break up the soil and pavement of any street, railway or tramway;
- (b) to open and break up any sewer, drain or tunnel in or under any street, railways or tramway,
- (c) to alter the position of any line or works or pipes, other than a main sewer pipe;
- (d) to lay down and place electric lines, electrical plant and other works ;
- (e) to repair, alter or remove the same;
- (f) to do all other acts necessary for transmission or supply of electricity.

- (2) The Appropriate Government may , by rules made by it in this behalf, specify,-

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- (a) the cases and circumstances in which the consent in writing of the appropriate Government, local authority, owner or occupier, as the case may be, shall be required for carrying out works;
  - (b) the authority which may grant permission in the circumstance where the owner or occupier objects to the carrying out of works;
  - (c) the nature and period of notice to be given by the licensee before carrying out works;
  - (d) the procedure and manner of consideration of objections and suggestions received in accordance with the notice referred to in clause (c);
  - (e) the determination and payment of compensation or rent to the persons affected by works under this section;
  - (f) the repairs and works to be carried out when emergency exists;
  - (g) the right of the owner or occupier to carry out certain works under this section and the payment of expenses therefore;
  - (h) the procedure for carrying out other works near sewers, pipes or other electric line or works;
  - (i) the procedure for alteration of the position of pipes, electric lines, electrical plant, telegraph lines, sewer lines, tunnels, drains, etc.;
  - (j) the procedure for fencing, guarding lighting and other safety measures relating to works on streets, railways, tramways, sewers, drains or tunnels and immediate reinstatement thereof;
  - (k) the avoidance of public nuisance environmental damage and unnecessary damage to the public and private property by such works;
  - (l) the procedure for undertaking works which are not reparable by the Appropriate Government, licensee or local authority;
  - (m) the manner of deposit of amount required for restoration of any railways, tramways, waterways, etc.;
  - (n) the manner of restoration of property affected by such works and maintenance thereof;
  - (o) the procedure for deposit of compensation payable by the licensee and furnishing of security; and
  - (p) such other matters as are incidental or consequential to the construction and maintenance of works under this section.
3. A licensee shall, in exercise of any of the powers conferred by or under this section and the rules made there under, cause as little damage, detriment and inconvenience as may be, and shall make full compensation for any damage, detriment or inconvenience caused by him or by any one employed by him.
4. where any difference or dispute [ including amount of compensation under sub-section (3)] arises under this section, the matter shall be determined by the Appropriate Commission.
5. The Appropriate Commission, while determining any difference or dispute arising under this section in addition to any compensation under sub-section (3), may impose a penalty not exceeding the amount of compensation payable under that sub-section.

### *Provisions relating to overhead lines*

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**68. Overhead lines :** - (1) An overhead line shall, with prior approval of the Appropriate Government, be installed or kept installed above ground in accordance with the provisions of sub-section (2).

2. The provisions contained in sub-section (1) shall not apply –
  - (a) in relation to an electric line which has a nominal voltage not exceeding 11 kilovolts and is used or intended to be used for supplying to a single consumer;
  - (b) in relation to so much of an electric line as is or will be within premises in the occupation or control of the person responsible for its installation; or
  - (c) in such other cases, as may be prescribed.
3. The Appropriate Government shall, while granting approval under sub-section (1), impose such conditions (including conditions as to the ownership and operation of the line) as appear to it to be necessary.
4. The Appropriate Government may vary or revoke the approval at any time after the end of such period as may be stipulated in the approval granted by it
5. Where any tree standing or lying near an overhead line or where any structure of other object which has been placed or has fallen near an overhead line subsequent to the placing of such line, interrupts or interferes with, or is likely to interrupt or interfere with, the conveyance or transmission of electricity or the accessibility of any works, an Executive Magistrate or authority specified by the Appropriate Government may, on the application of the licensee, cause the tree, structure or object to be removed or otherwise dealt with as he or it thinks fit.
6. When disposing of an application under sub-section (5), an Executive Magistrate or authority specified under that sub-section shall, in the case of any tree in existence before the placing of the overhead line award to the person interested in the tree such compensation as he thinks reasonable, and such person may recover the same from the licensee.

**Explanation:** - For the purposes of this section, the expression “tree” shall be deemed to include any shrub, hedge, jungle growth or other plant.

**69. Notice to telegraph authority :-** (1) A licensee shall, before laying down or placing, within ten meters of any telegraph line, electric line, electrical plant or other works, not being either service lines or electric lines or electrical plant, for the repair, renewal or amendment of existing works of which the character or position is not to be altered.-

- (a) submit a proposal in case of a new installation to an authority to be designated by the Central Government and such authority shall take a decision on the proposal within thirty days;
- (b) give not less than ten days notice in writing to the telegraph authority in case of repair, renewal or amendment of existing works specifying :-
  - (i) the course of the works or alterations proposed;
  - (ii) the manner in which the works are to be utilized;
  - (iii) the amount and nature of the electricity to be transmitted;
  - (iv) the extent to, and the manner in which (if at all) earth returns are to be used,

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and the licensee shall conform to such reasonable requirements, either general or special, as may be laid down by the telegraph authority within that period for preventing any telegraph line from being injuriously affected by such works or alterations:

**Provided** that in case of emergency (which shall be stated by the licensee in writing to the telegraph authority) arising from defects in any of the electric lines or electrical plant or other works of the licensee, the licensee shall be required to give only such notice as may be possible after the necessity for the proposed new works or alterations has arisen.

2. When the works of the laying or placing of any service line is to be executed the licensee shall, not less than forty-eight hours before commencing the work serve upon the telegraph authority a notice in writing of his intention to execute such works.

## PART IX

### CENTRAL ELECTRICITY AUTHORITY

#### *Constitution and functions of Authority*

**70. Constitution etc., of Central Electricity Authority :-** (1) There shall be a body to be called the Central Electricity Authority to exercise such functions and perform such duties as are assigned to it under this Act.,

2. The Central Electricity Authority, established under section 3 of the Electricity (Supply) Act, 1948 and functioning as such immediately before the appointed date, shall be the Central Electricity Authority for the purposes of this Act and the Chairperson, Members, Secretary and other officers and employees thereof shall be deemed to have been appointed under this Act and they shall continue to hold office on the same terms and conditions on which they were appointed under the Electricity (Supply) Act 1948.
3. The Authority shall consist of not more than fourteen Members (including its Chairperson) of whom not more than eight shall be full time Members to be appointed by the Central Government .
4. The Central Government may appoint any person, eligible to be appointed as Member of the Authority, as the Chairperson of the Authority, or, designate one of the full time Members as the Chairperson of the Authority.

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5. The members of the Authority shall be appointed from amongst persons of ability, integrity and standing who have knowledge of, and adequate experience and capacity in, dealing with problems relating to engineering, finance, commerce, economics or industrial matters, and at least one Member shall be appointed from each of the following categories, namely :-
  - (a) engineering with specialization in design, construction, operation and maintenance of generating stations;
  - (b) engineering with specialization in a transmission and supply of electricity;
  - (c) applied research in the field of electricity;
  - (d) applied economics, accounting, commerce or finance.
6. The Chairperson and all the Members of the Authority shall hold office during the pleasure of the Central Government.
7. The Chairperson shall be the Chief Executive of the Authority.
8. The headquarters of the Authority shall be at Delhi.
9. The Authority shall meet at head office or any other place at such time as the Chairperson may direct, and shall observe such rules of procedure in regard to the transaction of business at its meetings (including the quorum at its meetings) as it may specify.
10. The Chairperson, or if he is unable to attend a meeting of the Authority, and other Member nominated by the Chairperson in this behalf and in the absence of such nomination or where there is no Chairperson, any Member chosen by the Members present from among themselves shall preside at the meeting.
11. All questions which come up before any meeting of the Authority shall be decided by a majority of votes of the Members present and voting, and in the event of an equality of votes, the Chairperson or the person presiding shall have the right to exercise a second or casting vote.
12. All orders and decisions of the Authority shall be authenticated by the Secretary or any other officer of the Authority duly authorized by the Chairperson in this behalf.
13. No act or proceeding of the Authority shall be questioned or shall be invalidated merely on the ground of existence of any vacancy in, or any defect in, the constitution of, the Authority.
14. The Chairperson of the Authority and other full-time Members shall receive such salary and allowances as may be determined by the Central Government and other Members shall receive such allowances and fees for attending the meetings of the Authority, as the Central Government may prescribe.
15. The other terms and conditions of service of the Chairperson and Members of the Authority including, subject to the provisions of sub-section (6), their terms of office shall be such as the Central Government may prescribe.
- 71 Members not to have certain interest.** :-No Member of the Authority shall have any share or interest, whether in his own name or otherwise, in any company or other body corporate or an association of persons (whether incorporated or not) or a firm engaged in the business of generation, transmission, distribution and trading of electricity or fuel for the generation thereof or in the manufacture of electrical equipment.
- 72 Officers and staff of Authority.** :- The Authority may appoint a secretary and such other officers and employees as it considers necessary for the performance of its functions under this Act and on such terms as to salary, remuneration, fee, allowance, pension, leave and gratuity, as the Authority may in consultation with the Central Government, fix :

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**Provided** that the appointment of the Secretary shall be subject to the approval of the Central Government.

**73 Function and duties of Authority :** - The Authority shall perform such functions and duties as the Central Government may prescribe or direct, and in particular to :-

- (a) advise the Central Government on the matters relating to the national electricity policy, formulate short- term and perspective plans for development of the electricity system and co-ordinate the activities of the planning agencies for the optimal utilization of resources to sub serve the interests of the national economy and to provide reliable and affordable electricity for all consumers;
- (b) specify the technical standards for construction of electrical plants, electric lines and connectivity to the grid;
- (c) specify the safety requirements for construction, operation and maintenance of electrical plants and electric lines;
- (d) specify the Grid Standards for operation and maintenance of transmission lines;
- (e) specify the conditions for installation of meters for transmission and supply of electricity.
- (f) Promote and assist in the timely completion of schemes and projects for improving and augmenting the electricity system ;
- (g) Promote measures for advancing the skill of persons engaged in the electricity industry;
- (h) Advise the Central Government on any matter on which its advice is sought or make recommendation to that Government on any matter if, in the opinion of the Authority, the recommendation would help in improving the generation, transmission, trading, distribution and utilization of electricity;
- (i) Collect and record the data concerning the generation, transmission, trading, distribution and utilization of electricity and carry out studies relating to cost, efficiency, competitiveness and such like matters;
- (j) Make public from time to time the information secured under this Act, and provide for the publication of reports and investigations;
- (k) Promote research in matters affecting the generation, transmission, distribution and trading of electricity;
- (l) Carry out, or cause to be carried out, any investigation for the purposes of generating or transmitting or distributing electricity;
- (m) Advise any state Government, licensees or the generating companies on such matters which shall enable them to operate and maintain the electricity system under their ownership or control in an improved manner and where necessary, in coordination with any other Government, licensee or the generating company owning or having the control of another electricity system;
- (n) Advise the Appropriate Government and the Appropriate Commission on all technical matters relating to generation, transmission and distribution of electricity;
- (o) Discharge such other functions as may be provided under this Act. Certain powers and directions.

**74. Power to require statistics and returns :-** It shall be the duty of every licensee, generating company or person generating electricity for its or his own use to

furnish to the Authority such statistics, returns or other information relating to generation, transmission, distribution, trading and use of electricity as it may require and at such times and in such form and manner as may be specified by the Authority.

75. **Directions by Central Government to Authority :- (1)** In the discharge of its functions, the Authority shall be guided by such directions in matters of policy involving public interest as the Central Government may give to it in writing.

(2) If any question arises as to whether any such direction relates to a matter of policy involving public interest, the decision of the Central Government thereon shall be final.

## PART X

### REGULATORY COMMISSIONS

#### *Constitution, powers and functions of Central Commission*

76. **Constitution of Central Commission :- (1)** There shall be a Commission to be known as the Central Electricity Regulatory Commission to exercise the powers conferred on and discharge the functions assigned to it under this Act.

2. The Central Electricity Regulatory Commission established under section 3 of the Electricity Regulatory Commissions Act, 1998 and functioning as such immediately before the appointed date, shall be deemed to be the Central Commission for the purposes of this Act and the Chairperson, Members, Secretary, and other officers and employees thereof shall be deemed to have been appointed under this Act and they shall continue to hold office on the same terms and conditions on which they were appointed under the Electricity Regulatory Commissions Act, 1998:

**Provided** that the Chairperson and other Members of the Central Commission appointed, before the commencement of this Act, under the Electricity Regulatory Commissions Act, 1998, may, on the recommendations of the Selection Committee constituted under sub-section (1) of section 78, be allowed, to opt for the terms and conditions under this Act by the Central Government.

- 3 The Central Commission shall be a body corporate by the name aforesaid, having perpetual succession and a common seal with power to acquire, hold and dispose of property, both movable and immovable, and to contract and shall, by the said name, sue or be sued.
- 4 The head office of the Central Commission shall be at such place as the Central Government may, by notification, specify.
- 5 The Central Commission shall consist of the following Members namely :-
- (a) a Chairperson and three other Members;
  - (b) the Chairperson of the Authority who shall be the Member ex officio.

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4. The Chairperson and Members of the Central Commission shall be appointed by the Central Government on the recommendation of the Selection Committee referred to in section 78.

77. **Qualifications for appointment of Members of Central Commission.** :- (1) The Chair person and the Members of the Central Commission shall be persons having adequate knowledge of, or experience in, or shown capacity in, dealing with, problems relating to engineering, law; economics, commerce, finance or management and shall be appointed in the following manner, namely:-

- (a) one person having qualifications and experience in the field of engineering with specialization in generation, transmission or distribution of electricity;
- (b) one person having qualifications and experience in the field of finance;
- (c) two persons having qualifications and experience in the field of economics commerce, law or management:

**Provided** that not more than one Member shall be appointed under the same category under clause (c).

2. Notwithstanding anything contained in sub-section (1), the Central Government may appoint any person as the Chairperson from amongst persons who is, or has been, a judge of the Supreme Court or the Chief Justice of a High Court:

**Provided** that no appointment under this sub-section shall be made except after consultation with the Chief Justice of India.

3. The Chairperson or any other Member of the Central Commission shall not hold any other office.
4. The Chairperson shall be the Chief Executive of the Central Commission.

78. **Constitution of Selection Committee to recommend Members.**:- (1) The Central Government shall, for the purposes of selecting the Members of the Appellate Tribunal and the Chairperson and Members of the Central Commission, constitute a Selection Committee consisting of :-

- (a) Member of the Planning Commission in charge of the energy sector .....Chairperson;
- (b) Secretary-in-charge of the Ministry of the Central Government dealing with the Department of Legal Affairs ..... Member;
- (c) Chairperson of the Public Enterprises Selection Board .....Member;
- (d) A person to be nominated by the Central Government in accordance with sub-section (2) .....Member;
- (e) A person to be nominated by the Central Government in accordance with sub-section (3) .....Member;
- (f) Secretary-in-charge of the Ministry of the Central Government dealing with power.....Member;

2. For the purposes of clause (d) of sub-section (1), the Central Government shall nominate from amongst persons holding the post of chairperson or managing



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- director, by whatever name called, of any public financial institution specified in section 4A of the Companies Act, 1956.
3. For the purposes of clause (e) of sub-section (1), the Central Government shall, by notification, nominate from amongst persons holding the post of director or the head of the institution, by whatever name called, of any research, technical or management institution for this purpose.
  4. Secretary-in charge of the Ministry of the Central Government dealing with Power Shall be the Convener of the Selection Committee.
  5. The Central Government shall within one month from the date of occurrence of any vacancy by reason of death, resignation or removal of a Member of the Appellate Tribunal or the Chairperson or a Member of the Central Commission and six months before the superannuation or end of tenure of the Member of the Appellate Tribunal or Member of the Central Commission, make a reference to the Selection Committee for filling up of the vacancy.
  6. The Selection Committee shall finalize the selection of the Chairperson and Members referred to in sub-section (5) within three months from the date on which the reference is made to it.
  7. The Selection Committee shall recommend a panel of two names for every vacancy referred to it.
  8. Before recommending any person for appointment as Member of the Appellate Tribunal or the Chairperson or other Member of the Central Commission, the Selection Committee shall satisfy itself that such person does not have any financial or other interest which is likely to affect prejudicially his functions as the Chairperson or Member.
  9. No appointment of the Chairperson or other Member shall be invalid merely be reason of any vacancy in the selection Committee;

**Provided** that nothing contained in this section shall apply to the appointment of a person as the Chairperson of the Central Commission where such person is, or has been, a Judge of the Supreme Court or the Chief Justice of a High Court.

79. **Functions of Central Commission :-** (1) The Central commission shall discharge the following functions, namely :-

- (a) to regulate the tariff of generating companies owned or controlled by the Central Government;
- (b) to regulate the tariff of generating companies other than those owned or controlled by the Central Government specified in clause (a) , if such generating companies enter into or otherwise have a composite scheme for generation and sale of electricity in more than one State.
- (c) to regulate the inter-State transmission of electricity;
- (d) to determine tariff for inter-State transmission of electricity;
- (e) to issue licenses to persons to function as transmission licensee and electricity trader with respect to their inter-State operations;
- (f) to adjudicate upon disputes involving generating companies or transmission licensee in regard to matters connected with clauses (a) to (d) above and to refer any dispute for arbitration;
- (g) to levy fees for the purposes of this Act;

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- (h) to specify Grid Code having regard to Grid Standards.
  - (i) To specify and enforce the standards with respect to quality, continuity and reliability of service by licensees;
  - (j) To fix the trading margin in the inter –State trading of electricity, if considered, necessary;
  - (k) To discharge such other functions as may be assigned under this Act.
2. The Central Commission shall advise the Central Government on all or any of the following matters namely:-
- (a) formulation of National Electricity Policy and tariff policy
  - (b) promotion of competition efficiency and economy in activities of the electricity industry;
  - (c) promotion of investment in electricity industry;
  - (d) any other matter referred to the central commission by that Government
3. The Central Commission shall ensure transparency while exercising its powers and discharging its functions
4. In discharge of its functions, the Central Commission shall be guided by the National Electricity Policy, National Electricity Plan and tariff policy published under section 3.
- 80 **Central Advisory Committee :-** (1) The Central commission may, by notification, establish with effect from such date as it may specify in such notification, a committee to be known as the Central Advisory Committee.

2. The Central Advisory Committee shall consist of not more than thirty-one members to represent the interests of commerce, industry, transport, agriculture, labor, consumers, non-governmental organization and academic and research bodies in the electricity sector.
3. The Chairperson of the Central Commission shall be the ex officio Chairperson of the Central Advisory Committee and the Members of that Commission and Secretary to the Government of India in charge of the Ministry or Department of the Central government dealing with Consumer Affairs and Public Distribution system shall be the ex officio Members of the committee.

**81. Objects of Central Advisory Committee:-** The objects of the Central Advisory Committee shall be to advise the Central Commission on :-

- (i) major questions of policy;
- (ii) matters relating to quality, continuity and extent of service provided by the licensees;
- (iii) compliance by the licensees with the conditions and requirements of their license;
- (iv) protection of consumer interest;
- (v) electricity supply and overall standards of performance by utilities.

### *Constitution, powers and functions of State Commissions*

**82. Constitution of State Commission :-** (1) Every State Government shall, within six months from the appointed date, by notification, constitute for the purposes of this Act, a commission for the State to be known as the (name of the State ) Electricity Regulatory Commission:

**Provided** that the State Electricity Regulatory Commission, established by a State Government under section 17 of the Electricity Regulatory Commission Act, 1998 and the enactments specified in the Schedule, and functioning as such immediately before the appointed date, shall be the State Commission for the purposes of this Act and the Chairperson, Members, Secretary, and officers and other employees thereof shall continue to hold office, on the same terms and conditions on which they were appointed under those Acts:

**Provided** further that the Chairperson and other Members of the State Commission appointed, before the commencement of this Act, under the Electricity Regulatory Commission Act, 1998 or under the enactments specified in the Schedule, may, on the recommendations of the Selection Committee constituted under sub-section (1) of section 85, be allowed to opt for the terms and conditions under this Act by the concerned State Government.

2. The State Commission shall be body corporate by the name aforesaid, having perpetual succession and a common seal, with power to acquire, hold and dispose of property, both movable and immovable, and to contract and shall, by the said name, sue or be sued.

3. The head office of the State Commission shall be at such place as the State Government may, by notification, specify.

4. The State Commission shall consist of not more than three Members, including the Chairperson.

5. The Chairperson and Members of the State Commission shall be appointed by the State Government on the recommendation of a Selection Committee referred to in section 85.

**83. Joint Commission :-** (1) Notwithstanding anything to the contrary contained in section 82, a Joint Commission may be constituted by an agreement to be entered into –

(b) by two or more Governments of States; or

(c) by the Central Government, in respect of one or more Union territories, and one or more Governments of States,

and shall be in force for such period and shall be subject to renewal for each further period, if any, as may be stipulated in the agreement:

**Provided** that the Joint Commission, constituted under section 21 A of the Electricity Regulatory Commission Act, 1998 and functioning as such immediately before the appointed day, shall be the Joint Commission for the purposes of this Act and the Chairperson, Members, Secretary and other officers and employees thereof shall be

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deemed to have been appointed as such under this Act and they shall continue to hold office, on the same terms and conditions on which they were appointed under the Electricity Regulatory Commission Act, 1998.

(2) The Joint Commission shall consists of one Member from each of the participating States and Union territories and the Chairperson shall be appointed from amongst the Members by consensus, failing which by rotation.

(3) An agreement under sub-section (1) shall contain provisions as to the name of the Joint Commission, the manner in which the participating States may be associates in the selection of the Chairperson and Members of the Joint Commission, manner of appointment of Members and appointment of Chairperson by rotation or consensus, places at which the Commission shall sit, appointment among the participating States of the expenditure in connection with the Joint Commission , manners in which the differences of opinion between the Joint Commission and the State Government concerned would be resolved and may also contain such other supplemental, incidental and consequential provisions not inconsistent with this Act as may be deemed necessary or expedient for giving effect to the agreement.

(4) The Joint Commission shall determine tariff in respect of the participating States or Union territories separately and independently.

(5) Notwithstanding anything contained in this section, the Central Government may, if so authorized by all the participating States, constitute a Joint Commission and may exercise the powers in respect of all or any of the, matters specified under sub-section (3) and when so specifically authorized by the participating States.

**84. Qualification for appointment of Chairperson and Members of States Commission:-** (1) The Chairperson and the Members of the States Commission shall be persons of ability, integrity and standing who have adequate knowledge of, and have shown capacity in, dealing with problems relating to engineering, finance, commerce, economics, law or management.

(2) Notwithstanding anything contained in sub-section (1), the State Government may appoint any person as the Chairperson from amongst persons who is, or has been, a judge of a High Court:

**Provided** that no appointment under this sub-section shall be made except after consultation with the Chief Justice of that High Court.

(3) The Chairperson or any other Member of the State Commission shall not hold any other office.

(4) The Chairperson shall be the Chief Executive of the State Commission.

**85. Constitution of Selection Committee to select Members of State Commission:-** (1) The State Government, shall, for the purpose of selecting the Members of the State Commission, constitute a Selection Committee of –

- (a) a person who has been a Judge of the High Court .....Chairperson;
- (b) the Chief Secretary of the concerned State..... Member;
- (c) the Chairperson of the Authority or the Chairperson of the Central Commission .....Member;

**Provided** that nothing contained in this section shall apply to the appointment of a person as the Chairperson who is or has been a Judge of the High Court.

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(2) The State Government shall, within one month from date of occurrence of any vacancy by reason of death, resignation or removal of the Chairperson or a Member and six months before the superannuation or end of tenure of the Chairperson or Member, make a reference to the Selection Committee for filling up of the vacancy.

(3) The Selection Committee shall finalize the selection of the Chairperson and Members within three months from the date on which the reference is made to it.

(4) The Selection Committee shall recommend a panel of two names for every vacancy referred to it.

(5) Before recommending any person for appointment as the Chairperson or other Member of the State Commission, the Selection Committee shall satisfy itself that such person does not have any financial or other interest which is likely to affect prejudicially his functions as such Chairperson or Member, as the case may be.

(6) No appointment of Chairperson or other Member shall be invalid merely by reason of any vacancy in the Selection Committee.

86. **Function of State Commission:-** (1) The State Commission shall discharge the following functions, namely:-

(a) determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State;

**Provided** that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;

(b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies of licensees or from other sources through agreement for purpose of power for distribution and supply within the State;

(c) facilitate intra-State transmission and wheeling of electricity;

(d) issue licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;

(e) promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;

(f) adjudicate upon the disputes between the licensees and generating companies and to refer any dispute for arbitration;

(g) levy fee for the purpose of this Act;

(h) specify State Grid Code consistent with the Grid Code specified under clause (h) of sub-section (1) of section 79;

(i) specify or enforce standards with respect to quality, continuity and reliability of service by licensees;

(j) fix the trading margin in the intra-State trading of electricity, if considered, necessary;

(k) discharge such other functions as may be assigned to it under this Act.

(2) The State Commission shall advise the State Government on all or any of the following matters, namely:-

(a) promotion of competition, efficiency and economy in activities of the electricity industry;

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- (b) promotion of investment in electricity industry;
  - (c) recognition and restructuring of electricity industry in the State;
  - (d) matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.
- (3) The State Commission shall ensure transparency while exercising its powers and discharging its functions.

(4) In discharge of its functions, the State Commission shall be guided by the National Electricity Policy, National Electricity Plan and tariff policy published under section 3.

87. **State Advisory Committee:-** (1) The State Commission may, by notification, establish with effect from such date as it may specify in such notification, a Committee to be known as the State Advisory Committee.

(2) The State Advisory Committee shall consist of not more than twenty-one members to represent the interests of commerce, industry, transport, agriculture, labor, consumers, non-governmental organizations and academic and research bodies in the electricity sector.

(3) The Chairperson of the State Commission shall be the ex officio Chairperson of the State Advisory Committee and the Members of the State Commission and the Secretary to State Government in charge of the Ministry of Department dealing with Consumer Affairs and Public Distribution System shall be the ex officio Members of the Committee.

88. **Object of State Advisory Committee:-** The objects of the State Advisory Committee shall be to advise the Commission on:-

- (a) major questions of policy
  - (b) matters relating to quality, continuity and extent of service provided by the licensees;
  - (c) compliance by licensees with the conditions and requirements of their licensees;
  - (d) protection of consumer interest; and
  - (e) electricity supply and overall standards of performance by utilities.
- Appropriate Commission – Other provisions

89. **Terms of office and conditions of service of Members:-** (1) The Chairperson or other Member shall hold office for a term of five years from the date he enters upon his office:

**Provided** that Chairperson or other Member in the Central Commission or the State Commission shall not be eligible for re-appointment in the same capacity as the Chairperson or a Member in that Commission in which he had earlier held office as such:

**Provided** further that no Chairperson or Member shall hold office as such after he has attained the age of sixty-five years.

(2) The salary, allowances and other terms and conditions of service of the Chairperson and Members shall be such as may be prescribed by the Appropriate Government:

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**Provided** that the salary, allowances and other terms and conditions of service of the Members, shall not be varied to their disadvantage after appointment.

(3) Every Member shall, before entering upon his office, make and subscribe to an oath of office and secrecy in such form and in such manner and before such authority as may be prescribed.

(4) Notwithstanding anything contained in sub-section (1), a Member may –  
(a) relinquish his office by giving in writing to the Appropriate Government a notice of not less than three months; or  
(b) be removed from his office in accordance with the provisions of section 90.

(5) Any member ceasing to hold office as such shall :-  
(a) not accept any commercial employment for a period of two years from the date he ceases to hold such office; and  
(b) not represent any person before the Central Commission or any State Commission in any manner.

**Explanation:-** For the purpose of this sub-section, “commercial employment in any capacity in any organization which has been a party to the proceedings before the Appropriate Commission or Employment in any capacity under, or agency of, a person engaged in trading, commercial, industrial business in electricity industry and includes a director of a company or partner of a firm in setting up practice either independently or as partner of a firm or as an advisor or a consultant.

90. **Removal of Member:-** (1) No member shall be removed from office except in accordance with the provisions of this section.

(2) The Central Government , in the case of a member of the Central Commission, and the state Government , in the case of a Member of the State Commission, may by order remove from office any Member, if he-  
(a) has been adjudged an insolvent;  
(b) has been convicted of an offence which, in the opinion of the Appropriate Government, involves moral turpitude;  
(c) has become physically or mentally incapable of acting as Member;  
(d) has acquired such financial or other interest as is likely to affect prejudicially his functions as a Member;  
(e) has so abused his position as to render his continuance in office prejudicial to the public interest; or  
(f) has been guilty of proved misbehavior;

**Provided** that no Member shall be removed from his office on any ground specified in clauses (d), (e) and (f) unless the Chairperson of the Appellate Tribunal on a reference being made to him in this behalf by the Central Government or the State Government, as the case may be, has, on an inquiry, held by him in accordance with such procedure as may be prescribed by the Central Government, reported that the Member ought on such ground or grounds to be removed.

(3) The Central Government or the State Government, as the case may be, may, in consultation with the Chairperson of the Appellate Tribunal suspend any Member of the Appropriate Commission in respect of whom a reference has

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been made to the Chairperson of the Appellate Tribunal, under sub-section (2) until the Central Government or the State Government, as the case may be, has passed orders on receipt of the report of the Chairperson of the Appellate Tribunal, on such reference:

**Provided** that nothing contained in this section shall apply to the Chairperson of the Appropriate Commission who, at the time of his appointment as such is a sitting judge of the Supreme Court or the Chief Justice of a High Court or a Judge of a High Court

### *Proceedings and powers of Appropriate Commission*

**91. Secretary, officers and other employees of Appropriate Commission :-** (1) The Appropriate Commission may appoint a Secretary to exercise such powers and perform such duties as may be specified.

2. The Appropriate Commission may, with the approval of the Appropriate Government, specify the numbers, nature and categories of other officers and employees.
3. The salaries and allowances payable to, and other terms and conditions of service of the Secretary, officers and other employees shall be such as may be specified with the approval of the Appropriate Government.
4. The Appropriate Commission may appoint consultants required to assist that Commission in the discharge of its functions on the terms and conditions as may be specified.

**92. Proceeding of Appropriate Commission. :-** (1) The Appropriate commission shall meet at the head office or any other place at such time as the Chairperson may direct, and shall observe such rules of procedure in regard to the transaction of business at its meetings (including the quorum at its meetings) as it may specify.

2. The Chairperson, or if he is unable to attend a meeting of the Appropriate Commission, any other Member nominated by the Chairperson in this behalf and, in the absence of such nomination or where there is no Chairperson, any Member chosen by the Members present from amongst themselves, shall preside at the meeting.
3. All questions which come up before any meeting of the Appropriate Commission shall be decided by a majority of votes of the Members present and voting, and in the event of an equality of votes, the Chairperson or in his absence, the person presiding shall have a second or casting vote.
4. Save as otherwise provided in sub-section (3), every Member shall have one vote.
5. All orders and decisions of the Appropriate Commission shall be authenticated by its Secretary or any other officer of the Commission duly authorized by the Chairperson in this behalf.

**93. Vacancies, etc.. not to invalidate proceedings. :-** No act or proceeding of the Appropriate Commission shall be questioned or shall be invalidated merely on the ground of existence of any vacancy or defect in the constitution of the Appropriate Commission.



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**94. Power of Appropriate Commission :-** (1) The Appropriate Commission shall, for the purposes of any inquiry or proceedings under this Act, have the same powers as are vested in a civil court under the Code of Civil Procedure, 1908 in respect of the following matters, namely:-

- (a) summoning and enforcing the attendance of any person and examining him on oath;
  - (b) discovery and production of any document or other material object producible as evidence;
  - (c) receiving evidence on affidavits;
  - (d) requisitioning of any public record;
  - (e) issuing commission for the examination of witnesses;
  - (f) reviewing its decisions, directions and orders;
  - (g) any other matter which may be prescribed.
2. The Appropriate Commission shall have the powers to pass such interim order in any proceeding, hearing or matter before the Appropriate Commission, as that Commission may consider appropriate.
3. The Appropriate Commission may authorize any person, as it deems fit, to represent the interest of the consumers in the proceedings before it.

**95. Proceedings before Commission. :-** All proceedings before the Appropriate Commission shall be deemed to be judicial proceedings within the meanings of sections 193 and 228 of the *Indian penal Code* and the Appropriate Commission shall be deemed to be a civil court for the purposes of sections 345 and 346 of the *Code of Criminal procedure, 1973*.

**96. Power of entry and seizure. :-** The Appropriate Commission or any officer, not below the rank of a Gazette Officer specially authorized in this behalf by the Commission, may enter any building or place where the Commission has reason to believe that any document relating to the subject matter of the inquiry may be found, and may seize any such document or take extracts or copies there from subject to the provisions of section 100 of the *Code of Criminal Procedure, 1973*, in so far as it may be applicable.

**97. Delegation. :-** The Appropriate Commission may, by general or special order in writing, delegate to any Member, Secretary, officer of the Appropriate Commission or any other person subject to such conditions, if any, as may be specified in the order, such of its powers and functions under this Act (except the powers to adjudicate disputes under section 79 and section 86 and the powers to make regulations under section 178 or section 181) as it may deem necessary.

### ***Grants, Fund, Accounts Audit and Report***

**98. Grant and loans by Central Government. :-** The Central Government may, after due appropriation made by Parliament in this behalf, make to the Central Commission grants and loans of such sums of money as that Government may consider necessary.

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**99. Establishment of Fund by Central Government:-** (1) There shall be constituted a Fund to be called the Central Electricity Regulatory Commission Fund and there shall be credited thereto :-

- (d) any grants and loans made to the Central Commission by the Central Government under section 98;
  - (e) all fees received by the Central Commission under this Act;
  - (f) all sums received by the Central Commission from such other sources as may be decided upon by the Central Government.
2. The Fund shall be applied for meeting :-
- (a) the salary, allowances and other remuneration of Chairperson, Members, Secretary, officers and other employees of the Central Commission;
  - (b) the expenses of the Central Commission in discharge of its functions under section 79;
  - (c) the expenses on objects and for purposes authorized by this Act.
3. The Central Government may, in consultation with the Comptroller and Auditor –General of India, prescribe the manner of applying the Fund for meeting the expenses specified in clause (b) or clause (c) of sub-section (2).

**100 Accounts an audit of Central Commission :-** (1) The Central Commission shall maintain proper accounts and other relevant records and prepare an annual statement of accounts in such form as may be prescribed by the Central Government in consultation with the Comptroller and Auditor-General of India.

- 2. The accounts of the Central Commission shall be audited by the Comptroller and Auditor-General of India at such intervals as may be specified by him and any expenditure incurred in connection with such audit shall be payable by the Central Commission to the Comptroller and Auditor-General of India.
- 3. The Comptroller and Auditor-General of India and any person appointed by him in connection with the audit of the accounts of the Central Commission under this Act shall have the same rights and privileges and authority in connection with such audit as the Comptroller and Auditor-General of India has in connection with the audit of the Government accounts and, in particular, shall have the right to demand the production of books, accounts, connected vouchers and other documents and papers and to inspect any of the offices of the Central Commission.
- 4. The accounts of the Central Commission, as certified by the Comptroller and Auditor-General of India or any other person appointed by him in this behalf, together with the audit report thereon, shall be forwarded annually to the Central Government and that Government shall cause the same to be laid, as soon as may be after it is received, before each House of Parliament.

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**101. Annual report of Central Commission:-** (1) The Central Commission shall prepare once every year, in such form and at such time as may be prescribed, an annual report giving a summary of its activities during the previous year and copies of the report shall be forwarded to the Central Government,

2. A copy of the report received under sub-section (1) shall be laid, as soon as may be after it is received, before each House of Parliament.

**102. Grants and Loans by State Government :** - The State Government may, after due appropriation made by legislature of a State in this behalf, make to the State Commission grants and loans of such sums of money as that Government may consider necessary.

**103. Establishment of Fund by State Government :-** (1) There shall be constituted a Fund to be called the State Electricity Regulatory Commission Fund and there shall be credited thereto –

- (a) any grants and loans made to the State Commission by the State Government under section 102.
- (b) All fees received by the State Commission under this Act;
- (c) All sums received by the State Commission from such other sources as may be decided upon by the State Government.

2. The Fund shall be applied for meeting –

- (a) the salary, allowances and other remuneration of Chairperson, Members, Secretary, officers and other employees of the State Commission;
- (b) the expenses of the State Commission in discharge of its functions under section 86;
- (c) the expenses on objects and for purposes authorized by this Act.

3. The State Government may, in consultation with the Comptroller and Auditor-General of India, prescribe the manner of applying the Fund for meeting the expenses specified in clause (b) or clause (c) of sub-section (2).

**104. Accounts and audit of State Commission :-** (1) The State Commission shall maintain proper accounts and other relevant records and prepare annual statement of accounts in such form as may be prescribed by the State Government in consultation with the Comptroller and Auditor-General of India.

2. The accounts of the State Commission shall be audited by the Comptroller and Auditor-General of India at such intervals as may be specified by him and any expenditure incurred in connection

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with such audit shall be payable by the State Commission to the Comptroller and Auditor-General of India.

3. The Comptroller and Auditor-General of India and any person appointed by him in connection with audit of the accounts of the State Commission under this Act shall have the same rights and privileges and authority in connection with such audit as the Comptroller and Auditor-General of India generally has in connection with the audit of Government accounts and, in particular, shall have the right to demand the production of books, accounts, connected vouchers and other documents and papers and to inspect any of the offices of the State Commission.
4. The accounts of the State Commission, as certified by the Comptroller and Auditor-General of India or any other person appointed by him in this behalf, together with the audit report thereon shall be forwarded annually to the State Government and that Government shall cause the same to be laid, as soon as may be after it is received, before the State Legislature.

**105. Annual Report of State Commission :-** (1) The State Commission shall prepare once every year in such form and at such time as may be prescribed, an annual report giving a summary of its activities during the previous year and copies of the report shall be forwarded to the State Government.

2. A Copy of the report received under sub-section (1) shall be laid as soon as may be after it is received, before the State Legislature.

**106. Budget of Appropriate Commission. :-** The Appropriate Commission shall prepare, in such form and at such time in each financial year as may be prescribed, its budget for the next financial year, showing the estimated receipts and expenditure of that Commission and forward the same to the Appropriate Government.

**107. Directions by Central Government :-** (1) In the discharge of its functions, the Central Commission shall be guided by such directions in matters of policy involving public interest as the Central Government may give to it in writing.

2. If any question arises as to whether any such direction relates to a matter of policy involving public interest, the decision of the Central Government thereon shall be final.

**108. Directions by State Government : -** (1) In the discharge of its functions, the State Commission shall be guided by such directions in matters of policy involving public interest as the State Government may give to it in writing.

2. If any question arises as to whether any such direction relates to a matter of policy involving public interest, the decision of the State Government thereon shall be final.

**109. Directions to Commission. :-** Notwithstanding anything contained in this Act Where joint commission is established under section 83 :-

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(a) the Government of the State, for which the Joint Commission is established, shall be competent to give any direction under this Act only in cases where such direction relates to matter within the exclusive territorial Jurisdiction of the State;

(c) the Central Government alone shall be competent to give any direction under this Act where such direction relates to a matter within the territorial jurisdiction of two or more States or Pertaining to Union territory if the participating Governments fail to reach an agreement or the participating States or majority of them request the Central Government to issue such directions.

## PART XI

### APPELLATE TRIBUNAL FOR ELECTRICITY

110.. **Establishment of Appellate Tribunal. :-** The Central Government shall, by notification, establish an Appellate Tribunal to be known as the Appellate Tribunal for Electricity to hear appeals against the orders of the adjudicating officer or the Appropriate Commission under this Act.

111.. **Appeal to Appellate Tribunal. :-** (1) Any person aggrieved by an order made by an adjudicating officer under this Act (except under section 127) or an order made by the Appropriate Commission under this Act may prefer an appeal to the Appellate Tribunal for Electricity

**Provided** that any person appealing against the order of the adjudicating officer levying any penalty shall, while filing the appeal, deposit the amount of such penalty:

**Provided** further that where in any particular case, the Appellate Tribunal is of the opinion that the deposit of such penalty would cause undue hardship to such person, it may dispense with such deposit subject to such conditions as it may deem fit to impose so as to safeguard the realization of penalty.

3. Every appeal under sub-section (1) shall be filed within a period of forty-five days from the date on which a copy of the order made by the adjudicating officer or the Appropriate Commission is received by the aggrieved person and it shall be in such form, verified in such manner and be accompanied by such fee as may be prescribed:

**Provided** that the Appellate Tribunal may entertain an appeal after the expiry of the said period of forty-five days if it is satisfied that there was sufficient cause for not filing it within that period.

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4. On receipt of an appeal under sub-section (1), the Appellate Tribunal may, after giving the parties to the appeal an opportunity of being heard, pass such orders thereon as it thinks fit, confirming, modifying or setting aside the order appealed against.
5. The Appellate Tribunal shall send a copy of every order made by it to the parties to the appeal and to the concerned adjudicating officer or the Appropriate Commission, as the case may be.
6. The appeal filed before the Appellate Tribunal under sub-section (1) shall be dealt with by it as expeditiously as possible and endeavor shall be made by it to dispose of the appeal finally within one hundred and eighty days from the date of receipt of the appeal:

**Provided** that where any appeal could not be disposed of within the said period of one hundred and eighty days, the Appellate Tribunal shall record its reasons in writing for not disposing of the appeal within the said period.

7. The Appellate Tribunal may, for the purpose of examining the legality, propriety or correctness of any order made by the adjudicating officer or the Appropriate Commission under this Act, as the case may be, in relation to any proceeding, on its own motion or otherwise, call for the records of such proceedings and make such order in the case as it thinks fit

**112. Composition of Appellate Tribunal. :-** The Appellate Tribunal shall consist of a Chairperson and three other Members.

3. Subject to the provisions of this Act:-

- (a) the jurisdiction of the Appellate Tribunal may be exercised by Benches thereof;
- (b) a Bench may be constituted by the Chairperson of the Appellate Tribunal with two or more Members of the Appellate Tribunal as the Chairperson of the Appellate Tribunal may deem fit:

**Provided** that every Bench constituted under this clause shall include at least one Judicial Member and one Technical Member;

- (c) the Benches of the Appellate Tribunal shall ordinarily sit at Delhi and such other places as the Central Government may, in consultation with the Chairperson of the Appellate Tribunal, notify;
- (d) the Central Government shall notify the areas in relation to which each Bench of the Appellate Tribunal may exercise jurisdiction.

3. Notwithstanding anything contained in sub-section (2), the Chairperson of the Appellate Tribunal may transfer a Member of the Appellate Tribunal from one Bench to another Bench.

**Explanation-**For the purpose of this Chapter-

- I. **“Judicial Member”** means a Member of the Appellate Tribunal appointed as such under sub-clause (i) of clause (b) of sub-section (1) of section 113, and includes the Chairperson of the Appellate Tribunal;

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- II. “**Technical Member**” means a Member of the Appellate Tribunal appointed as such under sub-clause (ii) or sub-clause (iii) of clause (b) of sub-section (1) of section 113.

**113. Qualification for appointment of Chairperson and Member of Appellate Tribunal:-** (1) A person shall not be qualified for appointment as the Chairperson of the Appellate Tribunal or a Member of the Appellate Tribunal unless he :-

- (a) in the case of the Chairperson of the Appellate Tribunal, is or has been, a judge of the Supreme Court or the Chief Justice of a High Court; and
- (b) in the case of a Member of the Appellate Tribunal,-
  - (i) is, or has been or is qualified to be, a judge of High Court; or
  - (ii) is, or has been, a Secretary for at least one year in the Ministry or Department of the Central Government dealing with economic affairs or matters or infrastructure; or
  - (iii) is, or has been, a person of ability and standing, having adequate knowledge or experience in dealing with the matters relating to electricity generation, transmission and distribution and regulation or economics, commerce law or management.

2. The Chairperson of the Appellate Tribunal shall be appointed by the Central Government after consultation with the Chief Justice of India.

3. The Member of the Appellate Tribunal shall be appointed by the Central Government on the recommendation of the Selection Committee referred to in section 78.

4. Before appointing any person for appointment as Chairperson or other Member of the Appellate Tribunal, the Central Government shall satisfy itself that such person does not have any financial or other interest which is likely to affect prejudicially his functions as such Chairperson or Member.

**114. Term of office :-** The Chairperson of the Appellate Tribunal or Member of the Appellate Tribunal shall hold office as such for a term of three years from the date on which he enters upon his office:

**Provided** that such Chairperson or other Member shall be eligible for reappointment for a second term of three years;

**Provided** further that no Chairperson of the Appellate Tribunal or Member of the Appellate Tribunal shall hold office as such after he has attained:-

- (a) in the case of the Chairperson of the Appellate Tribunal, the age of seventy years;
- (b) in the case of a Member of the Appellate Tribunal, the age of sixty-five years.

**115. Term and conditions of service.:-** The salary and allowances payable to, and the other terms and conditions of service of, the Chairperson of the Appellate Tribunal and Members of the Appellate Tribunal shall be such as may be prescribed by the Central Government.

**Provided** that neither the salary and allowances nor the other terms and conditions of service of the Chairperson of the Appellate Tribunal or a Member of the Appellate Tribunal shall be varied to his disadvantage after appointment.

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**116. Vacancies. :-** If, for reason other than temporary absence, any vacancy occurs in the office of the Chairperson of the appellate Tribunal, or a member of the Appellate Tribunal, the Central Government shall appoint another person in accordance with the provisions of this Act to fill the vacancy and the proceedings may be continued before the Appellate Tribunal from the stage at which the vacancy is filled.

**117. Registration and removal. :** (1) The Chairperson of the Appellate Tribunal or a Member of the Appellate Tribunal may, by notice in writing under his hand addressed to the Central Government, resign his office:

**Provided** that the Chairperson of the Appellate Tribunal or a Member of the Appellate Tribunal shall not be removed from his office except by an order by the Central Government to relinquish his office sooner, continue to hold office until the expiry of three months from the date of receipt of such notice or until a person duly appointed as his successor enters upon his office or until the expiry of term of office, whichever is the earliest.

(2) The Chairperson of the Appellate Tribunal or a Member of the Appellate Tribunal shall not be removed from his office except by an order by the Central Government on the ground of proved misbehavior or incapacity after an inquiry made by a Judge of the Supreme Court, as the Central Government may appoint for this purpose in which the Chairperson or a Member of the Appellate Tribunal concerned has been informed of the charges against him and given a reasonable opportunity of being heard in respect of such charges.

**118. Member to act as Chairperson in certain circumstances. :-** (1) In the event of the occurrence of any vacancy in the office of the Chairperson of the Appellate Tribunal by reason of his death, resignation or otherwise, the senior-most Member of the Appellate Tribunal shall act as the Chairperson of the Appellate Tribunal until the date on which a new Chairperson, appointed in accordance with the provisions of this Act to fill such vacancy, enters upon his office.

2. When the Chairperson of the Appellate Tribunal is unable to discharge his functions owing to absence, illness or any other cause, the senior-most Member of the Appellate Tribunal shall discharge the functions of the Chairperson of the Appellate Tribunal until the date on which the Chairperson of the Appellate Tribunal resumes his duties.

**119 Officers and other employees of Appellate Tribunal :-** (1) The Central Government shall provide the Appellate Tribunal with such officers and other employees as it may deem fit.

(2) The officers and other employees of the Appellate Tribunal shall discharge their functions under the general superintendence of the Chairperson of the Appellate Tribunal.

(3) The salaries and allowances and other terms and conditions of service of the officers and other employees of the Appellate Tribunal shall be such as may be prescribed by the Central Government.

**120 Procedure and powers of Appellate Tribunal :-** (1) The Appellate Tribunal shall not be bound by the procedure laid down by the *Code of Civil Procedure, 1908*, but shall be guided by the principles of natural justice and subject to the other provisions of this Act, the Appellate Tribunal shall have powers to regulate its own procedure.



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- 5 The Appellate Tribunal shall have, for the purposes of discharging its functions under this Act, the same powers as are vested in a civil court under the *Code of Civil Procedure, 1908*, while ---- a suit, in respect of the following matters, namely:-

- (a) summoning and enforcing the attendance of any person and examining him on oath;
- (b) requiring the discovery and production of documents;
- (c) receiving evidence on affidavits;
- (d) subject to the provisions of sections 123 and 124 of the *Indian Evidence Act, 1872*, requisitioning any public record or document or copy of such record or document from any office;
- (e) issuing commissions for the examination of witnesses or documents;
- (f) reviewing its decisions;
- (g) dismissing a representation of default or deciding it ex parte;
- (h) setting aside any order of dismissal or any representation for default or any order passed by it ex parte;
- (i) any other matter which may be prescribed by the Central Government.

- 5 An order made by the Appellate Tribunal under this Act shall be executable by the Appellate Tribunal as a decree of civil court and, for this purpose; the Appellate Tribunal shall have all the powers of a civil court.
- 5 Notwithstanding anything contained in sub-section (3), the Appellate Tribunal may transmit any order made by it to a civil court having local jurisdiction and such civil court shall execute the order as if it were a decree made by that court.
- 5 All proceedings before the Appellate Tribunal shall be deemed to be judicial proceedings within the meaning of sections 193 and 228 of the Indian Penal Code and the Appellate Tribunal shall be deemed to be a civil court for the purposes of sections 345 and 346 of the *Code of Criminal Procedure, 1973*.

**121 Power of Chairperson of Appellate Tribunal.:-** The Chairperson of the Appellate Tribunal shall exercise general power of super-intendence and control over the Appropriate Commission.

**122 Distribution of business amongst Benches and transfer of cases from one Bench to another Bench. :- (1)** Where Benches are constituted, the Chairperson of the Appellate Tribunal may, from time to time, by notification, make provisions as to the distribution of the business of the Appellate Tribunal amongst the Benches and also provide for the matters which may be dealt with by each Bench.

2. On the application of any of the parties and after notice to the parties, and after hearing such of them as the may desire to be heard, or on his own motion without such notice, the Chairperson of the Appellate Tribunal may transfer any case pending before one Bench, for disposal, to any other Bench.

**123. Decision to be by majority. :-** If the Members of the Appellate Tribunal of a Bench consisting of two Members differ in opinion on any point, they shall state the point or points on which they differ, and make a reference to the Chairperson of the Appellate Tribunal who shall either hear the point or points himself or refer the case for hearing on such point or points by one or more of the other Members of the Appellate Tribunal and such point or points shall be decided according to the opinion of the majority of the Members of the Appellate Tribunal who have heard the case, including those who first heard it.

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**124 Right of appellant to take assistance of legal practitioner and of Appropriate Commission to appoint presenting officers. :-** (1) A person preferring an appeal to the Appellate Tribunal under this Act may either appear in person or take the assistance of a legal practitioner of his choice to present his case before the Appellate Tribunal, as the case may be.

2. The Appropriate Commission may authorize one or more legal practitioners or any of its officers to act as presenting officers and every person so authorized may present the case with respect to any appeal before the Appellate Tribunal, as the case may be

**125. Appeal to Supreme Court. :-** Any person aggrieved by any decision or order of the Appellate Tribunal, may, file an appeal to the Supreme Court within sixty days from the date of communication of the decision or order of the Appellate Tribunal, to him, on any one or more of the grounds specified in section 100 of the *Code of Civil Procedure, 1908*

**Provided** that the Supreme Court may, if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal within the said period, allow it to be filed within a further period not exceeding sixty days.

## PART XII

### INVESTIGATION AND ENFORCEMENT

**126. Assessment. :** (1) If on an inspection of any place or premises or after inspection of the equipments, gadgets, machines, devices found connected or used, or after inspection of records maintained by a person, the assessing officer comes to the conclusion that such person is indulging in unauthorized use of electricity, he shall provisionally assess to the best of his judgment the electricity charges payable by such person or by any other person benefited by such use.

2. The order or provision assessment shall be served upon the person in occupation or possession or in charge of the place or premises in such manner as may be prescribed.

3. The Person, on whom a notice has been served under sub-section (2), shall be entitled to file objections. If any, against the provisional assessment before the assessing officer, who may, after affording a reasonable opportunity of hearing to such person pass a final order of assessment of the electricity charges payable by such person.

4. Any person served with the order of provisional assessment may, accept such assessment and deposit the assessed amount with the licensee within seven days of service of such provisional assessment order upon him.

**Provided** that in case the person deposits the assessed amount, he shall not be subjected to any further liability or any action by any authority whatsoever.

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- 5 If the assessing officer reaches to the conclusion that unauthorized use of electricity has taken place, it shall be presumed that such unauthorized use of electricity was continuing for a period of three months immediately preceding the date of inspection in case of domestic and agricultural services and for a period of six months immediately preceding the date of inspection for all other categories of services, unless the onus is rebutted by the person, occupier or possessor of such premises or place.
6. The assessment under this section shall be made at a rate equal to one-and-half times the tariff applicable for the relevant category of services specified in sub-section (5).

**Explanation :-** For the purposes of this section,-

- (a) “**assessing officer**” means an officer of a State Government or Board or licensee, as the case may be designated as such by the State Government;
  - (b) “**unauthorized use of electricity**” means the usage of electricity-
    - (i) by any artificial means; or
    - (ii) by a means not authorized by the concerned person or authority or licensee; or
    - (iii) Through a tampered meter; or
    - (iv) for the purpose other than for which the usage of electricity was unauthorized.
127. **Appeal to appellate authority. :-** (1) Any person aggrieved by the final order made under section 126 may, within thirty days of the said order, prefer an appeal in such form, verified in such manner and be accompanied by such fee as may be specified by the State Commission, to an appellate authority as may be prescribed.
2. No appeal against an order of assessment under sub-section (1) shall be entertained unless an amount equal to one-third of the assessed amount is deposited in cash or by way of bank draft with the licensee and documentary evidence of such deposit has been enclosed along with the appeal.
  3. The appellate authority referred to in sub-section (1) shall dispose of the appeal after hearing the parties and pass appropriate order and send copy of the order to the assessing officer and the appellant.
  4. The order of the appellate authority referred to in sub-section (1) passed under sub-section (3) shall be final.
  5. No appeal shall lie to the appellate authority referred to in sub-section (1) against the final order made with the consent of the parties.
  6. When a person defaults in making payment of assessed amount, he in addition to the assessed amount shall be liable to pay, on the expiry of thirty days from the date of order of assessment, an amount of interest at the rate of sixteen percent, per annum compounded every six months.

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128. **Investigation of certain matters:-** (1) The Appropriate Commission may, on being satisfied that a license has to comply with any of the conditions of license or a generating company or a license has failed to comply with any of the provisions of this Act or the rules or regulations made there under, at any time, by order in writing, direct any person(hereafter in this section referred to as “Investigating Authority”) specified in the order to investigate the affairs of any generating company or license and to report to that Commission on any investigation made by such Investigating Authority:

**Provided** that the Investigating Authority may, wherever necessary, employ any auditor or any other person for the purpose of assisting him in any investigation under this section.

2 Notwithstanding anything to the contrary contained in section 235 of the *Companies Act 1956*, the Investigating Authority may, at any time, and shall, on being directed so to do by the Appropriate Commission, cause an inspection to be made, by one or more of its officers, of any license or generating company and his books of account: and the Investigating Authority shall supply to the licensee or generating company as the case may be, a copy of his report on such inspection.

3 It shall be the duty of every manager, managing director or other officer of the licensee or generating company, as the case may be, to produce before the Investigating Authority directed to make the investigation under sub-section (1), or inspection under sub-section (2), all such books of account, registers and other document in his custody or power and to furnish him with any statement and information relating to the affairs of the licensee or generating company, as the case may be, as the said Investigating Authority may specify.

4 An Investigating Authority, directed to make an investigation under sub-section (1), or inspection under sub-section (2), may examine on oath any manager, managing director or other officer of the licensee or generating company, as the case may be, in relation to his business and may administer oaths accordingly.

5. The Investigating Authority, shall, if it has been directed by the Appropriate Commission to cause an inspection to be made, and any other case, report to the Appropriate Commission on any inspection made under this section.

6. On the receipt of any report under sub-section (1) or sub-section (5) the Appropriate Commission may, after giving such opportunity to the licensee or generating company as the case may be, to make a representation in connection with the report as in the opinion of the Appropriate Commission seems reasonable by order in writing-

- (a) require the licensee or the generating company to take such action in respect of any matter arising out of the report as the Appropriate Commission may think fit; or
- (b) cancel the license; or
- (c) direct the generating company to cease to carry on the business of generation of electricity.

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7. The Appropriate Commission may, after giving reasonable notice to the licensee or the generating company, as the case may be, publish the report submitted by the Investigating Authority under sub section (5) or such portion thereof as may appear to it to be necessary.
8. The Appropriate commission may specify the minimum information to be maintained by the licensee or the generating company in their books, the manner in which such information shall be maintained. The checks and other verification to be adopted by licensee or the generating company in that connection and all other matters incidental thereto as are in its opinion necessary to enable the investigation Authority to discharge satisfactorily its functions under this section.

**Explanation :-** For the purpose of this section. The expression “licensee or the generating company” shall include in the case of a licensee incorporated in India:-

- (a) all its subsidiaries formed for the purpose of carrying on the business of generation or transmission or distribution or trading of electricity exclusively outside India; and
  - (b) all its branches whether situated in India or outside India.
9. All expense of and incidental to, any investigation made under this section shall be defrayed by the licensee or the generating company as the case may be, and shall have priority over the debts due from the licensee or the generating company and shall be recoverable as an arrear of land revenue.

**129. Order for securing compliance. :-** (1) Where the Appropriate Commission, on the basis of material in its possession, is satisfied that a licensee is contravening, or is likely to contravene, any of the conditions mentioned in his license or conditions for grant of exemption or the licensee of the generating company has contravened or is likely to contravene any of the provisions of this Act. It shall by an order, give such directions as may be necessary for the purpose of securing compliance with that condition or provision.

2. While giving direction under sub-section (1), the Appropriate Commission shall have due regard to the extent to which any person is likely to sustain loss or damage due to such contravention.

**130. Procedure for issuing directions by Appropriate Commission:-** The Appropriate Commission, before issuing any direction under section 129, shall

- (a) serve notice in the manner as may be specified to the concerned licensee or the generating company;
- (b) Publish the notice in the manner as may be specified for the purpose of bringing the matters to the attention of persons. Likely to be affected, or affected;
- (c) Consider suggestions and objections from the concerned licensee or generating company and the persons, likely to be affected Or affected.

## PART XIII

### REORGANISATION OF BOARD

131. **Vesting of property of Board in State Government :-** (1) With effect from the date on which a transfer scheme, prepared by the State Government to give effect to the objects and purposes of this Act, is published or such further date as may be stipulated by the State Government (hereafter in this Part referred to as the effective date) any property, interest in property, rights and liabilities which immediately before the effective date belonged to the State Electricity Board (hereinafter referred to as the Board) shall vest in the State Government on such terms as may be agreed between the State Government and the Board.

2. Any property, interest in property, rights and liabilities vested in the State Government under sub-section (1) shall be re-vested by the State Government in a Government company or in a company or companies, in accordance with the transfer scheme so published along with such other property, interest in property, rights and liabilities of the State Government as may be stipulated in such scheme, on such terms and conditions as may be agreed between the State Government and such company or companies being State Transmission Utility or generating company or transmission licensee or distribution licensee, as the case may be:

**Provided** that the transfer value of any assets transferred hereunder shall be determined as far as may be based on the revenue potential of such assets at such terms and conditions as may be agreed between the State Government and the State Transmission Utility or generating company or transmission licensee or distribution licensee, as the case may be

- (3) Notwithstanding anything contained in this section, where –
  - (a) the transfer scheme involves the transfer of any property or rights to any person or undertaking not wholly owned by the State Government, the scheme shall give effect to the transfer only for fair value to be paid by the transferee to the State Government;
  - (b) a transaction of any description is effected in pursuance of a transfer scheme, it shall be binding on all persons including third parties and even if such persons or third parties have not consented to it
- (4) The State Government may, after consulting the Government company or company or companies being State Transmission Utility or generating company or transmission licensee or distribution licensee, referred to in sub-section (2) (hereinafter referred to as the transferor), require such transferor to draw up a transfer scheme to vest in a transferee being any other generating company or transmission licensee or distribution licensee, the property, interest in property, rights and liabilities which have been vested in the transferor under this section. And publish such scheme as statutory transfer scheme under this Act.
- (5) A transfer scheme under this section may-
  - (a) **provide** for the formation of subsidiaries, joint venture companies or other schemes of division, amalgamation, merger, reconstruction or arrangements which shall promote the profitability and viability of the resulting entity, ensure economic efficiency, encourage competition and protect consumer interests;
  - (b) **define** the property, interest in property, right and liabilities to be allocated-

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- (i) by specifying or describing the property, rights and liabilities in question ; or
  - (ii) by referring to all the property, interest in property, rights and liabilities comprised in a described part of the transferor's undertaking; or
  - (iii) partly in one way and partly in the other;
- (c) **provide** that any rights or liabilities stipulated or described in the scheme shall be enforceable by or against the transferor or the transferee;
  - (d) **impose** on the transferor an obligation to enter into such written agreements with or execute such other instruments in favor of any other subsequent transferee. As may be stipulated in the scheme;
  - (e) **mention** the functions and duties of the transferee;
  - (f) make such supplemental, incidental and consequential provisions as the transferor considers appropriate including proposition stipulating the order as taking effect; and
  - (g) **provide** that the transfer shall be provisional for a stipulated period.
- (6) All debts and obligations incurred, all contracts entered into and all matters and things engaged to be done by the Board, with the Board or for the Board, or the State Transmission Utility or generating company or transmission licensee or distribution licensee, before a transfer scheme becomes effective shall, to the extent specified in the relevant transfer scheme, be deemed to have been incurred, entered into or done by the Board, with the Board or for the State Government or the transferee and all suits or other legal proceedings instituted by or against the Board or transferor, as the case may be, continued or instituted by or against the State Government or concerned transferee, as the case may be.
- (7) The Board shall cease to be charged with and shall not perform the functions and duties with regard to transfers made on and after the effective date.

**Explanation :-** For the purposes of this Part,

- (b) **“Government Company”** means a Government company formed and registered under the Companies Act, 1956;
- (c) **“Company”** means a company to be formed and registered under the *Companies Act, 1956* to undertake generation or transmission or distribution in accordance with the scheme under this Part.

**132. Use of proceeds of sale or transfer of Board. Etc :-** In the event that a Board or any utility owned or controlled by the Appropriate Government is sold or transferred in any manner to a person who is not owned or controlled by the Appropriate Government, the proceeds from such sale or transfer shall be utilized in priority to all other dues in the following order, namely :-

- (a) dues (including retirement benefits due) to the officers and employees of such Board or utility, who have been affected by the aforesaid sale or transfer,

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(b) payment of debt or other liabilities of the transferor as may be required by the existing loan covenants.

**133 Provisions relating to officers and employees. :-** (1) The State Government may, by a transfer scheme, provide for the transfer of the officers and employees to the transferee on the vesting of properties, rights and liabilities in such transferee as provided under section 131:

(2) Upon such transfer under the transfer scheme, the personnel shall hold office or service under the transferee on such terms and conditions as may be determined in accordance with the transfer scheme:

**Provided** that such terms and conditions on the transfer shall not in any way be less favorable than those which would have been applicable to them if there had been no such transfer under the transfer scheme:

**Provided** further that the transfer can be provisional for a stipulated period.

**Explanation. :-** For the purposes of this section and the transfer scheme, the expression “officers and employees” shall mean all officers and employees who on the date specified in the scheme are the officers and employees of the Board or transferor, as the case may be.

**134. Payment of compensation or damages on transfer:-** Notwithstanding anything contained in the *Industrial Disputes Act, 1947* or any other law for the time being in force and except for the provisions made in this Act, the transfer of the employment of the officers and employees referred to in sub-section (1) of section 133 shall not entitle such officers and employees to any compensation or damages under this Act, or any other Central or State law, save as provided in the transfer scheme.

## PART XIV

### OFFENCES AND PENALTIES

**135 Theft of electricity :-** (1) Whoever, dishonestly, :-

(a) taps, makes or causes to be made any connection with overhead, under ground or under water lines or cables, or service wires, or service facilities of a licensee; or

(b) tampers a meter, installs or uses a tampered meter, current reversing transformer, loop connection or any other device or method which interferes with accurate or proper registration, calibration or metering of electric current or otherwise results in a manner whereby electricity is stolen or wasted; or

(c) damages or destroys an electric meter, apparatus, equipment, or wire or causes or allows any of them to be so damaged or destroyed as to interfere with the proper



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or accurate metering of electricity, so as to abstract or consume or use electricity shall be punishable with imprisonment for a term which may extend to three years or with fine or with both:

**Provided** that in a case where the load abstracted, consumed, or used or attempted abstraction or attempted consumption or attempted use :-

(i) does not exceed 10 kilowatt, the fine imposed on first conviction shall not be less than three times the financial gain on account of such theft of electricity and in the event of second or subsequent conviction the fine imposed shall not be less than six times the financial gain on account of such theft of electricity;

(ii) exceeds 10 kilowatt, the fine imposed on first conviction shall not be less than three times the financial gain on account of such theft of electricity and in the event of second or subsequent conviction, the sentence shall be imprisonment for a term not less than six months but which may extend to five year and with fine not less than six times the financial gain on account of such theft of electricity;

**Provided** further that if it is proved that any artificial means or means not authorized by the Board or licensee exist for the abstraction, consumption or use of electricity by the consumer, it shall be presumed, until the contrary is proved, that any abstraction, consumption or use of electricity has been dishonestly caused by such consumer.

(2) Any officer authorized in this behalf by the State Government may -

- (a) enter, inspect, break open and search any place or premises in which he has reason to believe that electricity has been, is being or is likely to be used unauthorized;
- (b) Search, seize and remove all such devices, instruments, wires and any other facilitator or article which has been, is being , or is likely to be, used for unauthorized use of electricity;
- (c) Examine or seize any books of account or documents which in his opinion shall be useful for or relevant to , any proceedings in respect of the offence under subsection (1) and allow the person from whose custody such books of account or documents are seized to make copies thereof or take extracts there from in his presence.

(3) The occupant of the place of search or any person on his behalf shall remain present during the search and a list of all things seized in the course of such search shall be prepared and delivered to such occupant or person who shall sign the list:

**Provided** that no inspection, search and seizure of any domestic places or domestic premises shall be carried out between sunset and sunrise except in the presence of an adult male member occupying such premises.

(4) The provisions of the *Code of Criminal Procedure, 1973*, relating to search and seizure shall apply, as far as may be, to searches and seizure under this Act.

**136. Theft of electric lines and materials :-** (1) Whoever, dishonestly:-

- (a) cuts or removes or takes away or transfers any electric line, material or meter from a tower, pole, any other installation or place of installation or any other place, or site where it may be rightfully or lawfully stored, deposited, kept, stocked, situated or located, including during transportation, without the consent of the licensee or the owner, as the case may be, whether or not the act is done for profit or gain; or
- (b) Stores, possesses or otherwise keeps in his premises, custody or control, any electric line, material or meter without the consent of the owner, whether or not the act is committed for profit or gain; or
- (c) Loads, carries, or moves from one place to another any electric line, material or meter without the consent of its owner, whether or not the act is done for profit or gain,

Is said to have committed an offence of theft of electric lines and materials, and shall be punishable with imprisonment for a term which may extend to three years or with fine or with both.

2. If a Person, having been convicted of an offence punishable under sub-section (1) is again guilty of an offence punishable under that sub-section, he shall be punishable for the second or subsequent offence for a term of imprisonment which shall not be less than six months but which may extend to five years and shall also be liable to fine which shall not be less than ten thousand rupees.

**137. Punishment for receiving stolen property :-** Whoever, dishonestly receives any stolen electric line or material knowing or having reasons to believe the same to be stolen property, shall be punishable with imprisonment of either description for a term which may extend to three years or with fine or with both.

**138. Interference with meters or works of licensee:-** (1)Whoever, :-

- (a) unauthorized connects any meter, indicator or apparatus with any electric line through which electricity is supplied by a licensee or disconnects the same from any such electric; or
- (b) unauthorized reconnects any meter, indicator or apparatus with any electric line or other works being the property of a licensee when the said electric line or other works has or have been cut or disconnected; or
- (c) lays or causes to be laid, or connects up any works for the purpose of communicating with any other works belonging to a licensee ; or
- (d) maliciously injures any meter, indicator, or apparatus belonging to a licensee or willfully or fraudulently alters the index of any such meter, indicator or apparatus or prevents any such meter, indicator or apparatus from duly registering,

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Shall be punishable with imprisonment for a term which may extend to three years, or with fine which may extend to ten thousand rupees, or with both, and, in the case of a continuing offence, with a daily fine which may extend to five hundred rupees; and if it is proved that any means exist for making such connection as is referred to in clause (a) or such reconnection as is referred to in clause (b), or such communication as is referred to in clause (c), for causing such alteration or prevention as is referred to in clause (d), and that the meter, indicator or apparatus is under the custody or control of the consumer, whether it is his property or not, it shall be presumed, until the contrary is proved, that such connection, reconnection, communication, alteration, prevention or improper use, as the case may be, has been knowingly and willfully caused by such consumer.

139. **Negligently wasting electricity or injuring works.** :-Whoever, negligently causes electricity to be wasted, or negligently breaks, injures, throws down or damages any material connected with the supply of electricity, shall be punishable with fine which may extend to ten thousand rupees.
140. **Penalty for maliciously wasting electricity or injuring works :** Whoever, maliciously causes electricity, to be wasted or diverted, or with intent to cut off the supply of electricity, cuts or injures, or attempts to cut or injure, any electric supply line or works, shall be punishable with fine which may extend to ten thousand rupees.
141. **Extinguishing public lamps:-** Whoever, maliciously extinguishes any public lamp shall be punishable with fine which may extend to two thousand rupees.
142. **Punishment for noncompliance of directions by Appropriate Commission.** :- In case any complaint is filed before the Appropriate Commission by any person or if that Commission is satisfied that any person has contravened any of the provisions of this Act or the rules or regulations made there under, or any direction issued by the Commission, the Appropriate Commission may after giving such person an opportunity of being heard in the matter, by order in writing, direct that, without prejudice to any other penalty to which he may be liable under this Act, such person shall pay, by way of penalty, which shall not exceed one lakh rupees for each contravention and in case of a continuing failure with an additional penalty which may extend to six thousand rupees for every day during which the failure continues after contravention of the first such direction.
143. **Power to adjudicate.** : - (1) For the purpose of adjudging under this Act, the Appropriate Commission shall appoint any of its Members to be an adjudicating officer for holding an inquiry in such manner as may be prescribed by the Appropriate Government, after giving any person concerned a reasonable opportunity of being heard for the purpose of imposing any penalty.

2. While holding an inquiry, the adjudicating officer shall have power to summon and enforce the attendance of any person acquainted with the facts and circumstances of the case to give evidence or produce any document which in the opinion of the adjudicating officer, may be useful for or relevant to the subject-matter of the inquiry, and if, on such inquiry, he is satisfied that the person has failed to comply with the provisions of section 29 or section 33 section 43, he may impose such penalty as he thinks fit in accordance with the provisions of any of those sections.

144. **Factors to be taken into account by adjudicating officer.** :- While adjudicating the quantum of penalty under section 29 or section 33 or section 43, the adjudicating officer shall have due regard to the following factors, namely :-

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- (a) the amount of disproportionate gain or unfair advantage, wherever quantifiable, made as a result of the default;
  - (b) the repetitive nature of the default.
145. **Civil court not to have jurisdiction.** :- No civil court shall have jurisdiction to entertain any suit or proceeding in respect of any matter which an assessing officer referred to in section 126 or an appellate authority referred to in section 127 or the adjudicating officer appointed under this Act is empowered by or under this Act to determine and no injunctions shall be granted by any court or other authority in respect of any action taken or to be taken in pursuance of any power conferred by or under this Act.
146. **Punishment for non compliance of orders or directions** :- Whoever, fails to comply with any order or direction given under this Act, within such time as may be specified in the said order or direction or contravenes or attempts or abets the contravention of any of the provisions of this Act or any rules or regulations made there under, shall be punishable with imprisonment for a term which may extend to three months or with fine which may extend to one lakh rupees, or with both in respect of each offence and in the case of a continuing failure, with an additional fine which may extend to five thousand rupees for every day during which the failure continues after conviction of the first such offence.
147. **Penalties not to affect other liabilities**:- The penalties imposed under this Act shall be in addition to, and not in derogation of, any liability in respect of payment of compensation or, in the case of a licensee, the revocation of his license which the offender may have incurred.
148. **Penalty where works belong to Government.** :- The provisions of this Act shall, so far as they are applicable, be deemed to apply also when the acts made punishable there under are committed in the case of electricity supplied by or of works belonging to the Appropriate Government..
149. **Offences by companies.** :- (1) Where an offence under this Act has been committed by a company, every person who at the time the offence was committed was in charge of and was responsible to the company for the conduct of the business of the company, as well as the company shall be deemed to be guilty of having committed the offence and shall be liable to be proceeded against and punished accordingly:

**Provided** that nothing contained in this sub-section shall render any such person liable to any punishment if he proves that the offence was committed without his knowledge or that he had exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of or is attributable to any neglect on the part of any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also be deemed to be guilty of having committed such offence and shall be liable to be proceeded against and punished accordingly.

**Explanation** :- For the purposes of this section :-

(a) “**Company**” means a body corporate and includes a firm or other association of individuals; and

(b) “**director**”, in relation to a firm, means a partner in the firm.

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150. (1) **Abetment.** :- Whoever abets an offence punishable under this Act, shall notwithstanding anything contained in the Indian Penal Code, be punished with the punishment provided for the offence.

(2) Without prejudice to any penalty or fine which may be imposed or prosecution proceeding which may be initiated under this Act or any other law for the time being in force, if any officer or other employee of the Board or the licensee enters into or acquiesces in any agreement to do, abstains from doing, permits, conceals or connives at any act or thing whereby any theft of electricity is committed, he shall be punishable with imprisonment for a term which may extend to three years, or with fine, or with both.

151. **Cognizance of offences.**:- No court shall take cognizance of an offence punishable under this Act except upon a complaint in writing made by Appropriate Government or Appropriate Commission or any of their officer authorized by them or a Chief Electrical Inspector or an Electrical Inspector or licensee or the generating company, as the case may be, for this purpose.

152. **Compounding of offences :** (1) Notwithstanding anything contained in the *Code of Criminal Procedure 1973*, the Appropriate Government or any officer authorized by it in this behalf may accept from any consumer or person who committed or who is reasonably suspected of having committed an offence of theft of electricity punishable under this Act, a sum of money by way of compounding of the offence as specified in the Table below:-

**TABLE**

Nature of Service	Rate at which the sum of money for compounding to be collected per Kilowatt (KW)/Horse Power (HP) or part thereof for Low Tension (LT) Supply and per Kilo Volt Ampere (KVA) of contracted demand for High Tension (HT)
(1)	(2)
1. Industrial Service	Twenty thousand rupees;
2. Commercial Service	Ten thousand Rupees;
3. Agricultural Service	Two thousand Rupees;
4. Other Services	Four thousand rupees;

**Provided** that the Appropriate Government may, by notification in the Official Gazette, amend the rates specified in the Table above.

(2) On payment of the sum of money in accordance with sub-section (1), any person in custody in connection with that offence shall be set at liberty and no proceedings shall be instituted or continued against such consumer or person in any criminal court.

(3) The acceptance of the sum of money for compounding an offence in accordance with sub-section (1) by the Appropriate Government or an officer empowered in this behalf shall be deemed to amount to an acquittal within the meaning of section 300 of the *Code of Criminal Procedure, 1973*.

- (3) The compounding of an offence under sub-section (shall be allowed only once for any person or consumer .

## PART XV

### SPECIAL COURTS

153. **Constitution of Special Courts. :-** (1) The State Government may, for the purposes of providing speedy trial of offences referred to in sections 135 to 139, by notification in the Official Gazette, constitute as many Special Courts as may be necessary for such area or areas, as may be specified in the notification.

2. A Special Court shall consist of a single Judge who shall be appointed by the State Government with the concurrence of the High Court.
3. A person shall not be qualified for appointment as a Judge of a Special Court unless he was, immediately before such appointment, an Additional District and Sessions Judge.
4. Where the office of the Judge of a Special Court is vacant, or such Judge is absent from the ordinary place of sitting of such Special Court, or he is incapacitated by illness or otherwise for the performance of his duties, any urgent business in the Special Court shall be disposed of :-
  - (a) by a Judge, if any, exercising Jurisdiction in the Special Court;
  - (b) where there is no such other Judge available, in accordance with the direction of District and Sessions Judge having jurisdiction over the ordinary place of sitting of Special Court, as notified under sub-section (1).

154. **Procedure and power of Special Court. :-** (1) Notwithstanding anything contained in the *Code of Criminal Procedure, 1973*, every offence punishable under sections 135 to 139 shall be triable only by the Special Court within whose jurisdiction such offence has been committed.

(2) Where it appears to any court in the course of any inquiry or trial that an offence punishable under sections 135 to 139 in respect of any offence that the case is one which is triable by a Special Court constituted under this Act for the area in which such case has arisen, it shall transfer such case to such Special Court, and thereupon such case shall be tried and disposed of by such Special Court in accordance with the provisions of this Act:

**Provided** that it shall be lawful for such Special Court to act on the evidence, if any, recorded by any court in the case of presence of the accused before the transfer of the case to any Special Court:

**Provided** further that if such Special Court is of opinion that further examination, cross-examination and re-examination of any of the witnesses whose evidence has already been recorded, is required in the interest of justice, it may re-summon any such witness and after

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such further examination, cross-examination or re-examination, if any, as it may permit, the witness shall be discharged.

4. The Special Court may, notwithstanding anything contained in sub-section (1) of section 260 or section 262 of the *Code of Criminal procedure, 1973*, try the offence referred to in sections 135 to 139 in a summary way in accordance with the procedure prescribed in the said Code and the provisions of sections 263 to 265 of the said Code shall, so far as may be, apply to such trial:

**Provided** that where in the course of a summary trial under this sub-section, it appears to the Special Court that the nature of the case is such that it is undesirable to try such case in summary way, the Special Court shall recall any witness who may have been examined and proceed to re-hear the case in the manner provided by the provisions of the said Code for the trial of such offence:

**Provided** further that in the case of any conviction in a summary trial under this section, it shall be lawful for a Special Court to pass a sentence of imprisonment for a term not exceeding five years.

5. A Special Court may, with a view to obtaining the evidence of any person supposed to have been directly or indirectly concerned in or privy to, any offence tender pardon to such person on condition of his making a full and true disclosure of the circumstances within his knowledge relating to the offence and to every other person concerned whether as principal or abettor in the commission thereof, and any pardon so tendered shall, for the purposes of section 308 of the *Code of Criminal Procedure, 1973*, be deemed to have been tendered under section 307 thereof.
6. The Special Court may determine the civil liability against a consumer or a person in terms of money for theft of energy which shall not be less than an amount equivalent to two times of the tariff rate applicable for a period of twelve months preceding the date of detection of theft of energy or the exact period of theft if determined whichever is less and the amount of civil liability so determined shall be recovered as if it were a decree of civil court.
7. In case the civil liability so determined finally by the Special Court is less than the amount deposited by the consumer or the person, the excess amount so deposited by the consumer or the person, to the Board or licensee or the concerned person, as the case may be, shall be refunded by the Board or licensee or the concerned person as the case may be within a fortnight from the date of communication of the order of the Special Court together with interest at the prevailing Reserve Bank of India prime lending rate for the period from the date of such deposit till the date of payment

**Explanation.** :- For the purposes of this section, “civil liability” means loss or damage incurred by the Board or licensee or the concerned person, as the case may be, due to the commission of an offence referred to in sections 135 to 139.

155. **Special Court to have power of Court of Session.:-** Save as otherwise provided in this Act, the *Code of Criminal Procedure, 1973*, insofar as they are not inconsistent with the provisions of this Act, shall apply to the proceedings before the Special Court and for the purpose of the provisions of the said enactments, the Special Court shall be deemed to be a Court of Session and shall have all powers of a Court of Session and the person conducting a prosecution before the Special Court shall be deemed to be a Public Prosecutor.
156. **Appeal and revision.:-** The High Court may exercise, so far as may be applicable, all the powers conferred by Chapter XXIX and XXX of the *Code of Criminal Procedure, 1973*, as

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if the Special Court within the local limits of the jurisdiction of the High Court is a District Court, or as the case may be, the Court of Session, trying cases within the local limits of jurisdiction of the High Court.

157. **Review** :- The Special Court may, on a petition or otherwise and in order to prevent miscarriage of justice, review its judgment or order passed under section 154, but no such review petition shall be entertained except on the ground that it was such order passed under a mistake of fact, ignorance of any material fact or any error apparent on the face of the record:

**Provided** that the Special Court shall not allow any review petition and set aside its previous order or judgment without hearing the parties affected.

**Explanation** :- For the purposes of this Part, “Special Courts” means the Special Courts constituted under sub-section (1) of section 153.

## PART XVI

### DISPUTE RESOLUTION

#### *Arbitration*

158. Where any matter is, by or under this Act, directed to be determined by arbitration, the matter shall, unless it is otherwise expressly provided in the license of a licensee, be determined by such person or persons as the Appropriate Commission may nominate in that behalf on the application of either party; but in all other respects the arbitration shall be subject to the provisions of the *Arbitration and Conciliation Act, 1996*.

## PART XVII

### OTHER PROVISIONS

#### *Protective clauses*

159. **Protection of railways, highways, airports and canals, docks, wharfs and piers**:- No person shall, in the generation, transmission, distribution, supply or use of electricity, in any way injure any railway, highway, airports, tramway, canal or water-way or any dock, wharf or pier vested in or controlled by a local authority, or obstruct or interfere with the traffic on any railway, airway, tramway, canal or water-way.
160. **Protection of telegraphic, telephonic and electric signaling lines** :- (1) Every person generating, transmitting, distributing, supplying or using electricity (hereafter in this section referred to as the “operator”) shall take all reasonable precautions in constructing, laying down and placing his electric lines, electrical plant and other works and in working his



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system, so as not injuriously to affect, whether by induction or otherwise, the working of any wire or line used for the purpose of telegraphic, telephone or electric signaling communication, or the currents in such wire or line.

2. Where any difference or dispute which between the operator, and telegraph authority as to whether the operator has constructed, laid down or placed his electric lines, electrical plant or other works, or worked his system,, in contravention of sub-section (1), or as to whether the working of any wire, line or current is or is not injuriously affected thereby, the matter shall be referred to the Central Government and the Central Government, unless it is of opinion that the wire or line has been placed in unreasonable proximity to the electric lines, electrical plant or works of the operator after the construction of such lines, plant or works, may direct the operator to make such alterations in, or additions to, his system as may be necessary in order to comply with the provisions of this section, and the operator shall make such alterations or additions accordingly :

**Provided** that nothing in this sub-section shall apply to the repair, renewal or amendment of any electric line or electrical plant so long as the course of the electric line or electrical plant and the amount and nature of the electricity transmitted thereby are not altered.

3. Where the operator makes default in complying with the requirements of this section, he shall make full compensation for any loss or damage incurred by reason thereof, and, where any difference or dispute arises as to the amount of such compensation, the matter shall be determined by arbitration.

**Explanation** :- For the purposes of this section, a telegraph line shall be deemed to be injuriously affected if telegraphic, telephonic or electric signaling communication by means of such line is, whether through induction or otherwise, prejudicially interfered with by an electric line, electrical plant or other work or by any use made thereof.

161. **Notice of accidents and inquiries** :- (1) If any accident occurs in connection with the generation, transmission, distribution, supply or use of electricity in or in connection with, any part of the electric lines or electrical plant of any person and the accident results or is likely to have resulted in loss of human or animal life or in any injury to human being or an animal, such person shall give notice of the occurrence and of any such loss or injury actually caused by the accident, in such form and within such time as may be prescribed, to the Electrical Inspector or such other person as aforesaid and to such other authorities as the Appropriate Government may by general or special order, direct.

2. The Appropriate Government may, if it thinks fit, require any Electrical Inspector, or any other person appointed by it in this behalf, to inquire and report:-

- (a) as to the cause of any accident affecting the safety of the public, which may have been occasioned by or in connection with, the generation, transmission, distribution, supply or use of electricity, or
- (b) as to the manner in, and extent to, which the provisions of this Act or rules and regulations made there under or of any license, so far as those provisions affect the safety of any person, have been complied with.

3. Every Electrical Inspector or other person holding an inquiry under sub-section (2) shall have all the powers of a civil court under the *Code of Civil Procedure, 1908* for the purpose

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of enforcing the attendance of witnesses and compelling the production of documents and material objects, and every person required by an Electrical Inspector be legally bound to do so within the meaning of section 176 of the *Indian Penal Code*.

162. **Appointment of Chief Electrical Inspector and Electrical Inspector. :-** (1) The Appropriate Government may, by notification, appoint duly qualified persons to be Chief Electrical Inspector or Electrical Inspectors and every such Inspector so appointed shall exercise the powers and perform the functions of a Chief Electrical Inspector or an Electrical Inspector under this Act and Exercise such other powers and perform such other functions as may be prescribed within such areas or in respect of such class of works and electric installations and subject to such restrictions as the Appropriate Government may direct

2, In the absence of express provision to the contrary in this Act, or any rule made there under, an appeal shall lie from the decision of a Chief Electrical Inspector or an Electrical Inspector to the Appropriate Government or if the Appropriate Government, by general or special order directs, to an Appropriate Commission.

163. **Power of licensee to enter premises and to remove fittings or other apparatus of licensee :-** (1) A licensee or any person duly authorized by a licensee may, at any reasonable time, and on informing the occupier of his intention, enter any premises to which electricity is, or has been supplied by him, of any premises or land, under, over, along across, in or upon which the electric supply-lines or other works have been lawfully placed by him for the purpose of :-

- (a) inspecting, testing, repairing or altering the electric supply-lines meters. Fittings, works and apparatus for the supply of electricity belonging to the licensee; or
- (b) ascertaining the amount of electricity supplied or the electrical quantity contained in the supply; or
- (c) Removing where a supply of electricity is no longer required, or where the licensee is authorized to take away and cut off such supply, any electric supply-lines, meters, fittings, works or apparatus belonging to the licensee.

2. A licensee or any person authorized as aforesaid may also, in pursuance of a special order in this behalf made by an Executive Magistrate and after giving not less than twenty-four hours notice in writing to the occupier,:-

- (a) enter any premises or land referred to in sub-section (1) for any of the purposes mentioned therein ;
- (b) Enter any premises to which electricity is to be supplied by him, for the purposes of examining and testing the electric wires fittings, works and apparatus for the use of electricity belonging to the consumer.

3. Where a consumer refuses to allow a licensee or any person authorized as aforesaid to enter his premises or land in pursuance of the provisions of sub-section (1) or, sub-section (2), when such licensee or person has so entered, refuses to allow him to perform any act which he is authorized by those sub-sections to perform, or allow him to perform any act which he is authorized by those sub-section to perform, or fails to give reasonable facilities for such entry or performance, the licensee may, after the expiry of twenty-four hours from the service of a

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notice in writing on the consumer, cut off the supply to the consumer for so long as such refusal or failure continues, but for no longer.

164. **Exercise of powers of Telegraph Authority in certain cases.:-** The Appropriate Government may, by order in writing, for the placing of electric lines or electrical plant for the transmission of electricity or for the purpose of telephonic or telegraphic communications necessary for the proper co-ordination of works, confer upon any public officer, licensee or any other person engaged in the business of supplying electricity under this Act, subject to such conditions and restrictions, if any, as the Appropriate Government may think fit to impose and to the provisions of the *Indian Telegraph Act, 1885*, any of the powers which the telegraph authority possesses under that Act with respect to the placing of telegraph lines and posts for the purposes of a telegraph established or maintained, by the Government or to be so established or maintained.

165. **Amendment of sections 40 and 41 of Act 1 of 1894. :-** (1) In section 40, sub-section (1) of clause (b) and section 41, sub-section (5) of the *Land Acquisition Act, 1894*, the term “work” shall be deemed to include electricity supplied or to be supplied by means of the work to be constructed.

2. The Appropriate Government may, on recommendation of the Appropriate Commission on this behalf, if it thinks fit, on the application of any person, Not being a company desirous of obtaining any land for its purpose , direct that he may acquire such land under the provisions of the *Land Acquisition Act, 1894* in the same manner and on the same conditions as it might be acquired if the person were a company.

## PART XVIII

### MISCELLANEOUS.

166. **Coordination Forum :-** (1) The Central Government shall constitute a coordination forum consisting of the Chairperson of the Central Commission and Members thereof, the Chairperson of the Authority, representatives of generating companies and transmission licensees engaged in inter-State transmission of electricity for smooth and coordinated development of the power system in the country.

2. The Central Government shall also constitute a forum of regulators consisting of the Chairperson of the Central Commission and Chairpersons of the State Commissions.

3. The Chairperson of the Central Commission shall be the Chairperson of the Forum of regulators referred to in sub-section (2).

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4. The state Government shall constitute a coordination forum consisting of the Chairperson of the State Commission and Members thereof representatives of the generating companies, transmission licensee and distribution licensees engaged in generation, transmission and distribution of electricity in that State for smooth and coordinated development of the power system in the State.
5. There shall be a committee in each district to be constituted by the Appropriate Government :-
- (d) to coordinate and review the extension of electrification in each district;
  - (e) to review the quality of power supply and consumer satisfaction;
  - (f) to promote energy efficiency and its conservation.
- 167. Exemption of electric lines or electrical plants from attachment in certain cases. :-** Where any electric lines or electrical plant, belonging to a licensee are placed in or upon any premises or land not being in the possession of the licensee, such electric lines or electrical plant shall not be liable to be taken in execution under any process of any civil court or in any proceedings in insolvency against the person in whose possession the same may be.
- 168. Protection of action taken in good faith. :-** No suit, prosecution or other proceeding shall lie against the Appropriate Government or Appellate Tribunal or the Appropriate Commission or any officer of Appropriate Government, or any Member, Officer or other employee of the Appellate Tribunal or any Members, officer or other employees of the Appropriate Commission or the assessing officer or any public servant for anything done or in good faith purporting to be done under this Act or the rules or regulations made there under.
- 169. Members, officers, etc., of Appellate Tribunal, Appropriate Commission to be public servants. :-** The Chairperson, Members Secretary, officers and other employees of the Appellate Tribunal and the Chairperson, Members, Secretary, officers and other employees of the Appropriate Commission and the assessing officer referred to in section 126 shall be deemed, when acting or purporting to act in pursuance of any of the provisions of this Act to be public servants within the meaning of section 21 of the *Indian Penal Code*.
- 170.. Recovery of penalty payable under this Act :-** Any penalty payable by a person under this Act, if not paid, may be recovered as if it were an arrear of land revenue.
- 171. Services of notices, orders or documents :-** (1) Every notice, order or document by or under this Act required, or authorized to be addressed to any person may be served on him by delivering the same after obtaining signed acknowledgement receipt therefore or by registered post or such means of delivery as may be prescribed:-
- (a) Where the Appropriate Government is the addressee, at the office of such officer as the Appropriate Government may prescribe in this behalf;
  - (b) where the Appropriate Commission is the addressee, at the office of the Appropriate Commission
  - (c) where a company is the addressee, at the registered office of the company or, in the event of the registered office of the company not being in India, at the head office of the company in India;
  - (d) where any other person is the addressee, at the usual or last known place of abode or business of the person.

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2. Every notice, order or document by or under this Act required or authorized to be addressed to the owner or occupier of any premises shall be deemed to be properly addressed if addressed by the description of the owner or occupier of the premises (naming the premises), and may be served by delivering it, or a true copy thereof, to some person on the premises, or if there is no person on the premises to whom the same can with reasonable diligence be delivered, by affixing it on some conspicuous part of the premises.

### 172. **Notwithstanding anything to the contrary contained in this Act, -**

- (a) a State Electricity Board constituted under the repealed laws shall be deemed to be the State Transmission Utility and a licensee under the provisions of this Act for a period of one year from the appointed date or such earlier date as the State Government may notify, and shall perform the duties and functions of the State Transmission Utility and a licensee in accordance with the provisions of this Act and rules and regulations made there under:

**Provided** that the State Government may, by notification, authorize the State Electricity Board to continue to function as the State Transmission Utility or a licensee for such further period beyond the said period of one year as may be mutually decided by the Central Government and the State Government;

- (b) all license, authorizations, approvals, clearances and permissions granted under the provisions of the repealed laws may, for a period not exceeding one year from the appointed date or such earlier period, as may be notified by the Appropriate Government, continue to operate as if the repealed laws were in force with respect to such license, authorizations, approvals, clearances and permissions, as the case may be, and thereafter such licenses, authorizations, approvals, clearances and permissions shall be deemed to be licenses, authorizations, approvals, clearances and permission under this Act and all provisions of this Act shall apply accordingly to such licenses, authorizations, approvals, clearances and permissions;
- (c) the undertaking of the State Electricity Boards established under section 5 of the *Electricity (Supply) Act, 1948* may after the expiry of the period specified in clause (a) be transferred in accordance with the provisions of Part XIII of this Act;
- (d) the State Government may, by notification, declare that any or all the provisions contained in this Act, shall not apply in that State for such period, not exceeding six months from the appointed date, as may be stipulated in the notification

173. **Inconsistency in laws. :-** Nothing contained in this Act or any rule or regulation made there under or any instrument having effect by virtue of this Act, rule or regulation shall have effect in so far as it is inconsistent with any other provisions of the *Consumer Protection Act, 1986* or the *Atomic Energy Act, 1962* or the *Railways Act, 1989*.

174. **Act to have overriding effect:-** Save as otherwise provided in section 173, the provisions of this Act shall have effect notwithstanding anything inconsistent therewith contained in any other law for the time being in force or in any instrument having effect by virtue of any law other than this Act.

175. **Provisions of this Act to be in addition to and not in derogation of other laws. :-** The provisions of this Act are in addition to and not in derogation of any other law for the time being in force.

176. **Power of Central Government to make rules. –** (1) The Central Government may, by notification, make rules for carrying out the provisions of this Act.

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2. In particular and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:-

- (a) the time within which the objection and suggestions on the draft National Electricity Plan to be invited by the Authority under the proviso to sub-section (4) of section 3;
- (b) the additional requirements (including the capital adequacy, creditworthiness or code of conduct) under sixth proviso to section 14;
- (c) the payment of fees for application for grant of license under sub-section (1) of section 15;
- (d) the constitution and functions of the National Load Despatch Centre under sub-section (2) of section 26;
- (e) the works of licensees affecting the property of owner or occupier under sub-section (2) of section 67;
- (f) such other cases which may be prescribed under clause (c) of sub-section (2) of section 68;
- (g) allowances and fees payable to other Members for attending the meetings of Authority under sub-section (14) of section 70;
- (h) other terms and conditions of service of the Chairperson and Members of the Authority under sub-section (15) of section 70;
- (i) the functions and duties of the Central Electricity Authority under section 73;
- (j) the salary, allowances and other conditions of service of Chairperson and Member of Central Commission under sub-section (2) of section 89;
- (k) the form and manner in which and the authority before whom oath of office and secrecy should be subscribed under sub-section (3) of section 89;
- (l) the procedure to be prescribed by the Central Government under the proviso to sub-section (2) of section 90;
- (m) any other matter required to be prescribed under clause (g) of sub-section (1) of section 94;
- (n) the form in which the Central Commission shall prepare its annual statement of accounts under sub-section (1) of section 100;
- (o) the form in which and time at which the Central Commission shall prepare its annual report under sub-section (1) of section 101;
- (p) the form in which and time at which the Central Commission shall prepare its budget under section 106;
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- (z) any other matter which is required to be, or may be prescribed

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177. **Power of Authority to make regulations. :-** (1) The Authority may by notification make regulations consistent with this Act and the rules generally to carry out the provisions of this Act.

2. In particular and without prejudice to the generality of the power conferred in sub-section (1), such regulations may provide for all or any of the following matters, namely :-

- (a) the Grid Standards under section 34;
- (b) suitable measures relating to safety and electric supply under section 53;
- (c) the installation and operation of meters under section 55;
- (d) the rules of procedure for transaction of business under sub-section (9) of section 76;
- (e) the technical standards for construction of electrical plants and electric lines and connectivity to the grid under clause (b) of section 73;
- (f) the form and manner in which and the time at which the State Government and licensees shall furnish statistics, returns or other information under section 74;
- (g) any other matter which is to be, or may be, specified;

3. All regulations made by the Authority under this Act shall be subject to the conditions of previous publication.

178. **Power of Central Commission to make regulations :-** (1) The Central Commission may by notification make regulations consistent with this Act and the rules generally to carry out the provisions of this Act.

2. In particular and without prejudice to the generality of the power contained in sub-section (1), such regulations may provide for all or any of following matters, namely:-

- (a) period to be specified under the first proviso to section 14;
- (b) the form and the manner of the application under sub-section (1) of section 15;
- (c) the manner and particulars of notice under sub-section (2) of section 15;
- (d) the conditions of license under section 16;
- (e) the manner and particulars of notice under clause (a) of sub-section (2) of section 18;
- (f) publication of alternations or amendments to be made in the license under clause (c) of sub-section (2) of section 18;
- (g) Grid Code under sub-section (2) of section 28;
- (h) Levy and collection of fees and charge from generating companies or transmission utilities or licensees under sub-section (4) of section 28;
- (i) Rates, charges and terms and conditions in respect of intervening transmission facilities under proviso to section 36;
- (j) Payment of the transmission charges and a surcharge under sub-clause (ii) of clause (d) of sub-section (2) of section 38;
- (k) Reduction and elimination of surcharge and cross subsidies under second proviso to sub-clause (ii) of clause (d) of sub-section (2) of section 38;
- (l) Payment of transmission charges and a surcharge under sub-clause (ii) of clause (c) of section 40;
- (m) Reduction and elimination of surcharge and cross subsidies under the second proviso to sub-clause (ii) of clause (c) of section 40;
- (n) Proportion of revenues from other business to be utilized for reducing the transmission and wheeling charges under proviso to section 41;
- (o) Duties of electricity trader under sub-section (2) of section 52;

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- (p) Standards of performance of a licensee or class of licensees under sub-section (1) of section 57;
  - (q) The period within which information to be furnished by the licensee under sub-section (1) of section 59;
  - (r) The period within which the cross-subsidies shall be reduced and eliminated under clause (g) of section 61;
  - (s) The terms and conditions for the determination of tariff under section 61;
  - (t) Details to be furnished by licensee or generating company under sub-section (2) of section 62;
  - (u) The procedures for calculating the expected revenue from tariff and charges under sub-section (5) of section 62;
  - (v) The manner of making an application before the Central Commission and the fee payable therefore under sub-section (1) of section 64;
  - (w) The manner of publication of application under sub-section (2) of section 64;
  - (x) Issue of tariff order with modifications or conditions under sub-section (3) of section 64;
  - (y) The manner by which development of market in power including trading specified under section 66;
  - (z) The powers and duties of the secretary of the Central Commission under subsection (1) of section 91;
  - (za) the terms and conditions of service of the secretary, officers and other employees of Central Commission under sub-section (3) of section 91;
  - (zb) the rules of procedure for transaction of business under sub-section (1) of section 92;
  - (zc) minimum information to be maintained by a licensee or the generating company and the manner of such information to be maintained under sub-section (8) of section 128;
  - (zd) the manner of service and publication of notice under section 130;
  - (ze) any other matter which is to be, or may be specified by regulations.
3. All regulations made by the Central Commission under this Act shall be subject to the conditions of previous publication.
- 179 **Rules and regulations to be laid before Parliament :-** Every rule made by the Central Government, every regulation made by the Authority, and every regulation made by the Central Commission shall be laid, as soon as may be after it is made, before each House of the Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately, following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or regulation or agree that the rule or regulation should not be made, the rule or regulation shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule or regulation.
- 180 **Powers of State Governments to make rules :-** (1) The State Government may, by notification, make rules for carrying out the provisions of this Act.
2. In particular and without prejudice to the generality of foregoing power, such rules may provide for all or any of the following matters, namely :-



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- (a) the payment of fees for application for grant of license under sub-section (1) of section 15;
- (b) the works of licensees affecting the property of other persons under sub-section (2) of section 67;
- (c) such other matters which may be prescribed under clause (c) of sub-section 68.
- (d) The salary allowances and other terms and conditions of service of the Chairperson and Members of the State Commission under sub-section (2) of section 89;
- (e) The form and manner in which and the authority before whom oath of office and secrecy should be subscribed under sub-section (3) of section 89;
- (f) Any other matter required to be prescribed by the State Commission under clause (g) of sub-section (1) of section 94;
- (g) The manner of applying the fund under sub-section (3) of section 103;
- (h) The form in which and time at which the State Commission shall prepare its annual accounts under sub-section (1) of section 104;
- (i) The form in which and time at which the State Commission shall prepare its annual report under sub-section (1) of section 105;
- (j) The form in which and time at which the State Commission shall prepare its budget under section 106;
- (k) Manner of service of provisional order of assessment under sub-section (2) of section 126;
- (l) Manner of holding inquiry by an adjudicating officer under sub-section (1) of section 143;
- (m) The form in which and the time at which notice to the Electrical Inspector under sub-section 161;
- (n) The manner of delivery of every notice, order or document under sub-section (1) of section 171; and
- (o) Any other matter which is required to be, or may be prescribed.

**181. Power of State Commission to make regulations.:-** (1) the State Commissions may, by notification, make regulations consistent with his Act and the rules generally to carry out the provisions of this Act.

2. In particular and without prejudice to the generality of the power contained in sub-section (1), such regulations may provide for all or any of the following matters, namely:-

- (a) period to be specified under the first proviso to section 14;
- (b) the form and the manner of application under sub-section (1) of section 15;
- (c) the manner and particulars of application for license to be published under sub-section (2) of section 15;
- (d) the conditions of license under section 16;
- (e) the manner and particulars of notice under clause (a) of sub-section (2) of section 18;
- (f) publication of the alterations or amendments to be made in the license under clause (c) of sub-section (2) of section 18;
- (g) levy and collection of fees and charges from generating companies or licensees under sub-section (3) of section 32;
- (h) rates, charges and the terms and conditions in respect of intervening transmission facilities under proviso to section 36;
- (i) payment of the transmission charges and a surcharge under sub-clause (ii) of clause (d) of sub-section (2) of section 39;

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- (j) reduction and elimination of surcharge and cross subsidies under second proviso to sub-clause (ii) of clause (d) of sub-section (2) of section 39;
- (k) manner and utilization of payment and surcharge under the fourth proviso to sub-clause (ii) of clause (d) of sub-section (2) of section 39;
- (l) payment of the transmission charges and a surcharge under sub-clause (ii) of clause © of section 40;
- (m) reduction and elimination of surcharge and cross subsidies under second proviso to sub-clause (ii) of clause © of section 40;
- (n) the manner of payment of surcharge under the fourth proviso to sub-clause (ii) of clause © of section 40;
- (o) proportion of revenues from other business to be utilized for reducing the transmission and wheeling charges under proviso to section 41;
- (p) reduction and elimination of surcharge and cross-subsidies under the third proviso to sub-section (2) of section 42;
- (q) payment of additional charges on charges of wheeling under sub-section (4) of section 42;
- (r) guidelines under sub-section (5) of section 42;
- (s) the time and manner for settlement of grievances under sub-section (7) of section 42;
- (t) the period to be specified by the State Commission for the purposes specified under sub-section (1) of section 43;
- (u) methods and principles by which charges for electricity shall be fixed under sub-section (2) of section 45;
- (v) reasonable security payable to the distribution licensee under sub-section (1) of section 47;
- (w) payment of interest on security under sub-section (4) of section 47;
- (x) electricity supply code under section 50;
- (y) the proportion of revenues from other business to be utilized for reducing wheeling charges under proviso to section 51;
- (z) duties of electricity trader under sub-section (2) of section 52;
- (za) standards of performance of a licensee or a class of licensees under sub-section (1) of section 57;
- (zb) the period within which information to be furnished by the licensee under sub-section (1) of section 59;
- (zc) the period within which the cross-subsidies shall be reduced and eliminated under clause (g) of section 61;
- (zd) the terms and conditions for determination of tariff under section 61
- (ze) details to be furnished by licensee or generating company under sub-section (2) of section 62;
- (zf) the methodologies and procedures for calculating the expected revenue from tariff and charges under sub-section (5) of section 62;
- (zg) the manner of making an application before the State Commission and the fee payable therefore under sub-section (1) of section 64;
- (zh) issue of tariff order with modifications or conditions under sub-section (3) of section 64;
- (zi) the manner by which development of market in power including trading specified under section 66;
- (zj) the powers and duties of the Secretary of the State Commission under sub-section (1) of section 91;
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- (zn) the manner of service and publication of notice under section 130;

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(zo)the form of preferring the appeal and the manner in which such form shall be redified and the fee for preferring the appeal under sub-section (1) of section 127;  
(zp)any other matter which is to be, or may be, specified.

3.All regulations made by the State Commission under this Act shall be subject to the condition of previous publication.

183. **Rules and regulations to be laid before State Legislature.** :-Every rule made by the State Government and every regulation made by the State Commission shall be laid, as soon as may be after it is made, before each House of the State Legislature where it consists of two Houses, or where such Legislature consists of one House, before that House.
184. **Power to remove difficulties** :- (1) If any difficulty arises in giving effect to the provisions of this Act, the Central Government may, by order published, make such provisions not inconsistent with the provisions of this Act, as may appear to be necessary for removing the difficult;

**Provided** that no order shall be made under this section after the expiry of two years from the date of commencement of this Act.

2. Every order made under this section shall be laid as soon as may be after it is made, before each House of Parliament.

185. **Provisions of Act not to apply in certain cases.** :- The provisions of this Act shall not apply to the Ministry or Department of the Central Government dealing with Defense, Atomic Energy or such other similar Ministries or Departments or undertakings or Boards or institutions under the control of such Ministries or Departments as may be notified by the Central Government.
186. **Repeal and saving.** :- (1) Save as otherwise provided in this Act, the *Indian Electricity Act, 1910, the Electricity (supply) Act. 1948 and the Electricity Regulatory Commissions Act, 1998* are hereby repealed.
2. Notwithstanding such repeal,-
- (f) anything done or any action taken or purported to have been done or taken including any rule, notification, inspection, order or notice made or issued or any appointment, confirmation or declaration made or any license, permission, authorization or exemption granted or any document or instrument executed or any direction given under the repealed laws shall, in so far as it is not inconsistent with the provisions of this Act, be deemed to have been done or taken under the corresponding provisions of this Act;
  - (g) the provisions contained in section 12 to 18 of the *Indian Electricity Act, 1910* and rules made there under shall have effect until the rules under sections 67 to 69 of this Act are made;
  - (h) the *Indian Electricity Rules, 1956* made under section 37 of the Indian Electricity Act, 1910 as it stood before such repeal shall continue to be in force till the regulations under section 53 of this Act are made.

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- (i) All rules made under sub-section (1) of section 69 of the *Electricity (Supply) Act, 1948* shall continue to have effect until such rules are rescinded or modified, as the case may be;
  - (j) All directives issued, before the commencement of this Act, by a State Government under the enactments specified in the Schedule shall continue to apply for the period for which such directions were issued by the State Government.
- 3. The provisions of the enactments specified in the Schedule, not inconsistent with the provisions of this Act, shall apply to the States in which such enactments are applicable.
  - 4. The Central Government may, as and when considered necessary, by notification, amend the Schedule.
  - 5. Save as otherwise provided in sub-section (2), the mention of particular matters in that section, shall not be held to prejudice or affect the general application of section 6 or the *General Clauses Act, 1897*, with regard to the effect of repeals.

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[See sub-section (3) of section 185]

- 9. The Orissa Electricity Reform Act, 1995
- 10. The Haryana Electricity Reform Act 1997
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- 12. The Uttar Pradesh Electricity Reform Act, 1999
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- 14. The Rajasthan Electricity Reform Act, 1999
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