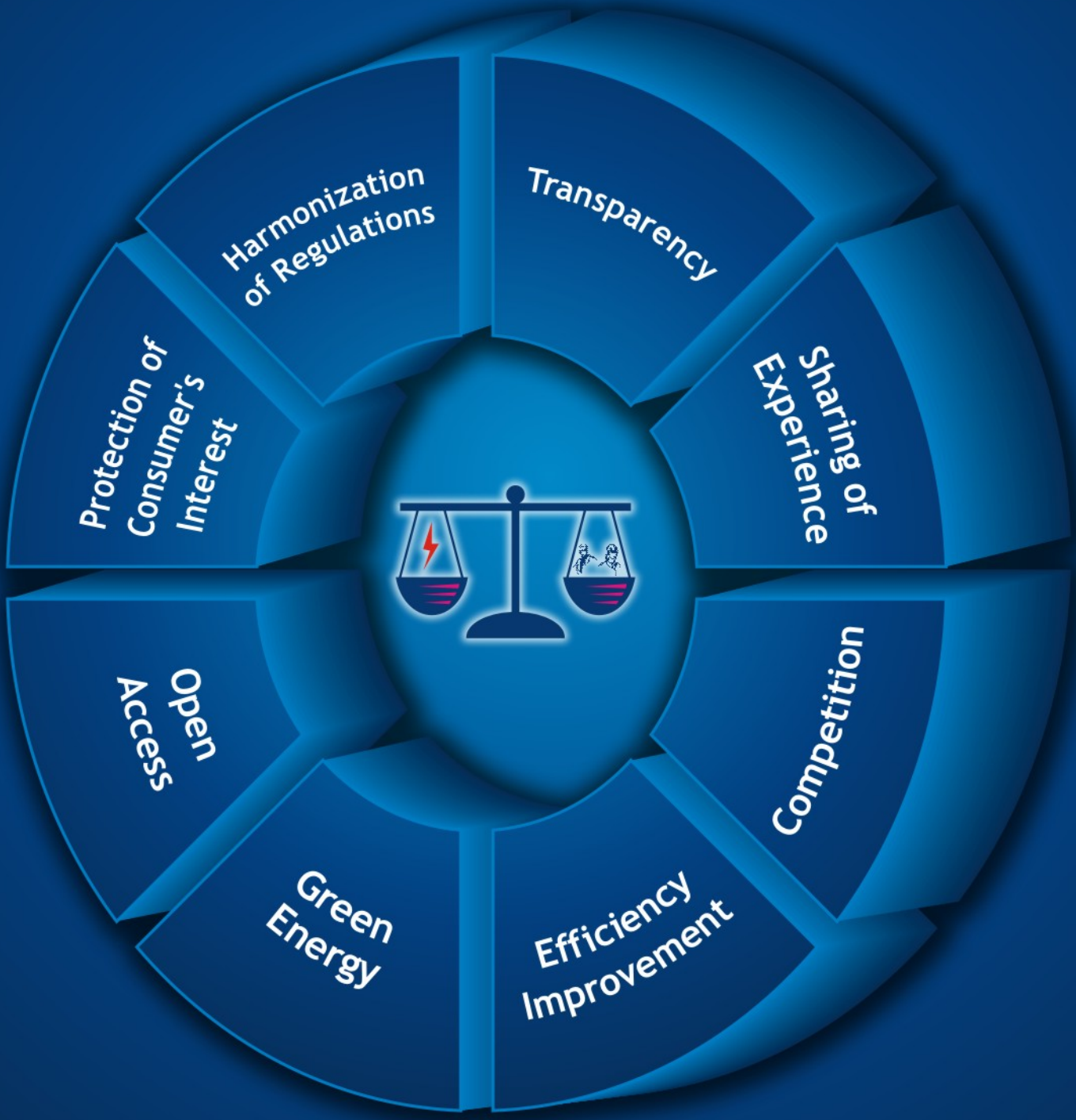
ANNUAL REPORT 2008-09



FORUM OF REGULATORS

Chairperson's Statement

Electricity being a concurrent subject, the Electricity Act, 2003 provides for a Central Electricity Regulatory Commission (CERC) and a State Electricity Regulatory Commission (SERC) for each State. These Commissions have been given functions that they have to discharge under the Act. While the jurisdictions of the Central and State level Commissions are to be observed in accordance with the provisions stipulated under the law, there is a need for a harmonized approach in regulation across the jurisdictions in order to provide regulatory consistency and certainty. To achieve this harmonized and consensual approach in regulation, the Act has established a Forum of Regulators (FOR) consisting of the Chairperson of the Central Commission and Chairpersons of the State Commission. The FOR Rules, 2005 notified by the Central Government list out the functions to be discharged by the Forum. These functions range from harmonization of regulation in the power sector to undertaking research work on issues relevant to power sector regulation.

At the start of the financial year 2008-09, the Forum decided to set up a number of Working Groups on various crucial issues to deliberate and evolve recommendations to facilitate implementing the Act. These Working Groups comprised the Chairperson / Members of the State Commissions as well as professional experts from the relevant areas. The eight Working Groups completed their work and finalized their reports within the stipulated time frame. After consideration of these reports, the Forum has brought out its recommendations on Policies on Renewables, Multi-Year Tariff (MYT) Framework and Distribution Margin, Loss Reduction Strategies, Protection of Consumer Interests, Open Access – Theory and Practice, Demand-Side Management and Energy Efficiency, and Code of Ethics.

These recommendations reflect the consensus arrived in the Forum and it is hoped that with their implementation, the regulation in the power sector would become more effective and result oriented.

Another important initiative of FOR during the year was to significantly expand the capacity building of the staff of Regulatory Commissions. During the year 2008-09, 115 personnel of the Electricity Regulatory Commissions (ERCs) were trained in the four training programmes conducted successfully by FOR.

During the year FOR also completed a study with the assistance of the Indian Institute of Management, Ahmedabad. The report on "Electricity Reforms and Regulations – a critical review of last 10 years' experience with focus on constraints and gaps between the vision and achievements" focuses on all the major issues in the power sector and suggests recommendations to address the problems.

In order to benefit from experience sharing with international partners, FOR has entered into a Memorandum of Understanding (MOU) with the California Energy Commission, the California Public Utilities Commission, the University of California, as Management and Operating Contractor for Lawrence Berkeley National Laboratory to promote information exchanges and future joint research activities in the area of energy efficiency and demand-side management policies and programmes. This collaboration will help FOR keep pace with international development in the field of demand-side management and energy efficiency.

I would like to place on record my special appreciation to the members of the Forum who contributed significantly to the deliberations in the Working Groups and Forum meetings. Further, the professional assistance provided by institutions like the Central Electricity Authority (CEA), Bureau of Energy Efficiency (BEE) and Ministry of New and Renewable Energy was also of great help to us. Last but not the least, the officers and staff of the FOR Secretariat worked hard and with dedication to ensure that FOR fulfills its goals and objectives.

(Dr. Pramod Deo)
Chairperson
Forum of Regulators

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1. The Forum of Regulators (FOR)

The conceptualization of independent Regulatory Commission for the electricity sector dates back to early 1990s, when the National Development Council (NDC) Committee on Power headed by the Chief Minister of Maharashtra recommended in 1994, constitution of "independent professional Tariff Boards at the regional level for regulating the tariff policies of the public and private utilities". The Committee reiterated that "the Tariff Boards will be able to bring along with them a high degree of professionalism in the matter of evolving electricity tariffs appropriate to each region and each State".

The need for constitution of the Regulatory Commission was further reiterated in the Chief Minister's Conference held in 1996. The Common Minimum National Action Plan for Power evolved in the Conference inter-alia "agreed that reforms and restructuring of the State Electricity Boards are urgent and must be carried out in definite time frame; and identified creation of Regulatory Commissions as a step in this direction". Thus the Electricity Regulatory Commissions (ERC) Act, 1998 was enacted paving way for creation of the Regulatory Commissions at the Centre and in the States.

The 1998 Act was enacted with the objective of distancing Government from the tariff regulation. The Act provided for Electricity Regulatory Commissions at the Center and in the States for rationalization of electricity tariff, transparent policies regarding subsidies etc. The ERC Act, 1998 has since been replaced by the Electricity Act, 2003. With the introduction of Electricity Act, 2003, the functions of the Regulatory Commissions have been extended by inter-alia assigning role of development of power market and advisory function to the government. The Central Electricity Regulatory Commission (CERC) and most of the State Electricity Commissions (SERCs) was constituted under the ERC Act, 1998. However, some SERCs like MsERC, JERC-M&M and JERC- UTs constituted after the Electricity Act, 2003.

The Forum of Regulators (FOR) was constituted vide Ministry of Power Notification dated 16th February, 2005 in pursuance of the provision under section 166(2) of the Electricity Act, 2003 with the primary objective of harmonization of regulation in the power sector. The Forum consists of Chairperson of Central Electricity Regulatory Commission (CERC) and Chairpersons of State Electricity Regulatory Commissions (SERCs). The Chairperson of CERC is the Chairperson of the Forum. The Central Government has made the following rules for Forum of Regulators.

Constitution of the Forum:

(1) The Forum shall consist of the Chairperson of the Central Commission and Chairpersons of the State Commissions. The Chairperson of the Central Commission shall be the Chairperson of the Forum of Regulators.

(2) The Secretary to the Central Commission shall be the ex-officio Secretary to the Forum.

(3) Secretarial assistance to the Forum shall be provided by the Central Commission.

(4) The headquarter of the Forum will be located at New Delhi.

Functions of the Forum:

The Forum shall discharge the following functions, namely:-

(1) analysis of the tariff orders and other orders of Central Commission and State Commissions and compilation of data arising out of the said orders, highlighting, especially the efficiency improvements of the utilities;

(2) harmonization of regulation in power sector;

(3) laying of standards of performance of licensees as required under the Act;

(4) sharing of information among the members of the Forum on various issues of common interest and also of common approach;

(5) undertaking research work in-house or through outsourcing on issues relevant to power sector regulation;

(6) evolving measures for protection of interest of consumers and promotion of efficiency, economy and competition in power sector; and

(7) such other functions as the Central Government may assign to it from time to time.

Finances of the Forum:

(1) The Central Commission may take necessary financial contributions from the State Commissions for carrying out the activities of the Forum.

(2) The Central Commission will keep separate accounts for the activities of the Forum.

Mission Statement

Forum of Regulators was conceived with the mission of nurturing the growth of independent regulation and empowerment of all having stake in the electricity sector in India. In pursuit of this objective, the Forum aims to:

- Harmonization of regulation in power sector;
- Compliance of National Policies across India;
- Provide platform to Electricity Regulatory Commissions to maintain regulatory certainty in the power sector of India;
- Facilitate initiatives to promote investment in the power sector by way of implementation of widespread policies/regulations in the interest of Consumers;
- Develop human and institutional capacities in regulatory bodies, utilities and other stake holders
- Conducting research for the efficiency and effectiveness of independent regulation and matters incidental thereto.
- Sharing of information base among the members of the Forum for inherent decision making;
- Do all such other lawful things as are conducive or incidental to the attainment of the above aims and objects.

2. The Year in Retrospect

The Forum of Regulators (FOR) is an umbrella organization formed by power sector regulators of the Centre and the States with the objective of harmonization of regulations in the Indian power sector. It provides a platform for electricity regulators to discuss common issues and evolve a way forward to address them. The Forum also deliberates issues by conducting research on various policy and regulatory problems. The Forum also conducts capacity building programmes for the staff of Electricity Regulatory Commissions (ERCs) to keep SERCs up to date with developments in the power sector. The list of Members of 'FOR' as on 31.03.2009 is at **Annexure-I**. The landmark activities of FOR in the year 2008-09 are as follows:

2.1. Meetings of Forum of Regulators: In year 2008-09, five meetings of the Forum were held at New Delhi, Khajuraho, Bhubaneshwar, Chennai and New Delhi. Issues such as intra-state open access, fund rules of SERCs, staffing of ERCs, demand-side management, levy of service tax on transmission charges, scope of performance audit, ring-fencing of SLDCs, methodology of calculation of AT&C loss, directives of State Governments under section 11, implementation of the Regulatory Management System (RIMS) etc. were discussed in these meetings. In the seventh meeting of FOR, it was decided to constitute eight Working Groups on the crucial issues of distribution such as Policies on Renewables, MYT Framework and Distribution Margin, Loss Reduction Strategies, Protection of Consumers' Interests, Open Access – Theory and Practice, Demand- Side Management and Energy Efficiency, Code of Ethics and in the eighth meeting of FOR a Working Group on metering issues was constituted. These Working Groups have deliberated on their respective problems during various rounds of discussions and made recommendations on these issues as per the mandate of the Working Groups. Out of eight Working Groups formed during the year, seven have submitted their reports to FOR, which have been approved by FOR. The summarized recommendations of FOR on Policies on Renewables, MYT Framework and Distribution Margin, Loss Reduction Strategies, Protection of Consumer Interests, Open Access – Theory and Practice and Demand-Side Management and Energy Efficiency are given below. The full text of the minutes of meetings and reports are available on the Forum's website i.e. www.forumofregulators.gov.in

2.2. The Forum of Regulators' Recommendations on Distribution Issues: In year 2008-09, FOR came up with reports and recommendations on crucial issues of distribution such as Demand-Side Management and Energy Efficiency, Loss Reduction Strategies, Protection of

Consumers' Interests, MYT Framework and Distribution Margin, Open Access – Theory and Practice, Policies on Renewables, Staffing of ERCs, and Code of Ethics. The major recommendations made by FOR on these issues are as under.

2.2.1. Demand-Side Management (DSM) and Energy Efficiency (EE): The Forum recommended that SERCs may direct all distribution utilities to submit DSM plans along with ARR rates for the next tariff period and the recovery of cost of approved DSM programmes should be allowed as pass-through in ARR. The Forum also recommended that BEE may be requested to undertake development of monitoring and verification protocols for various DSM programmes which may be undertaken by utilities and also prepare a draft of a suggested regulation for appraisal of programmes of DSM and energy efficiency in the distribution sector. The Forum also emphasised the need to financially support the DSM programmes aimed at such category of consumers that are receiving tariff subsidy from the State Governments. The State Governments should enhance the effectiveness of State Designated Agencies (SDAs) and may take necessary action for reduction in taxes on energy-efficient appliances.

2.2.2. Loss Reduction Strategies: On the issue of Loss Reduction Strategies, FOR recommended that transmission losses should not to be clubbed with distribution losses and that the focus should be on reduction of distribution losses. The Forum also recommended sharing of gains between the licensee and consumer viz. under-achievement of loss reduction target should be borne by the licensee, whereas in case of achievement over and above the targets, the gain should be shared between the licensee and the consumers in the ratio to be determined by SERCs.

2.2.3. Protection of Consumer's Interests: In the interest of consumers, the Forum has recommended the following: (a) a Model Consumer Charter which incorporates rights and obligations of consumers; (b) the engagement of lawyers in the Consumer Grievance Redressal Forum (CGRF) be prohibited; (c) SERCs should make provisions in their regulations clearly stipulating that non-compliance of the orders of CGRF would be treated as contravention of the regulations of SERC. Consequently, it made the licensee liable for action under section 142 of the Act. There should be a time limit for disposal of grievances by the CGRF after which the consumer should have the right to approach the ombudsman for settlement of non-redressal of his grievance. The Forum proposed that the office of the ombudsman should be funded by SERCs and NGOs should be involved in consumer education and empowerment.

2.2.4. MYT Framework and Distribution Margin: As regards implementation of the

MYT framework and distribution margin, FOR recommended that recovery of fixed cost should be linked to achievement for Composite Index of Supply Availability (timely contracting adequate power to meet forecast load) and Network Availability to be specified by SERC and for every 1% under-achievement in composite availability for urban and/or rural areas, return on equity shall be reduced by 0.1% of equity. The Forum also recommended that SERCs should disallow adjustment of due subsidy against the outstanding loans. However, adjustment of subsidy against electricity duty actually collected by the DISCOM may be allowed. The Forum also recommended that if the State Government does not pay due amount of subsidy in time and in cash, SERC regulations should provide for issue of bills on the basis of tariff determined by SERC.

2.2.5. Open Access – Theory and Practice: In the report on Open Access - Theory and Practices, FOR emphasized the need for independence of State Load Dispatch Centres (SLDCs) and recommended change in the reporting structure of SLDCs. In the report, State Governments are advised to phase out single buyer model. A model scheme for technological upgradation of SLDCs has also been recommended by FOR. The Forum felt that there is an urgent need for financial autonomy to SLDCs and advised CERC to make regulations for RLDCs which may be treated as a model by SERCs for LDCs. For greater transparency and to enable informed decision on open access, FOR recommended that information on Open Access charges should be displayed on the websites of SERCs/FOR. The Forum also recommended that cross subsidy surcharge should be computed as per the Tariff Policy formula.

2.2.6. Policies on Renewables: On lines of the National Action Plan on Climate Change, the Forum recommended a minimum level of Renewable Purchase Obligation (RPO) at 5% till 2010. In order to promote investment in RE sources, the Forum recommended that a suitable mechanism like Renewable Energy Certificate (REC) should be in place. As regards preferential treatment of RE sources, the Forum recommended that preferential tariff based on the cost-plus approach for non-firm RE-based projects for the loan period be levied after which RE developers should be allowed to compete. On generation based incentives, the Forum recommended that are preferable to capital subsidies for promotion of RE technologies and it should be announced upfront, which could be factored in the tariff to be set by ERCs.

2.2.7. Staffing of Electricity Regulatory Commissions (ERCs) : In view of the shortfall of manpower in the ERCs, the Forum deliberated the issue of staffing and made recommendations in line with those of the Indian Institute of Public Administration (IIPA) i.e., the Commissions should have full autonomy in matters relating to staffing

pattern, organizational structure and adequate power to recruit staff. An overall ceiling on expenditure could, however, be fixed. The Forum also suggested that in order to attract competent people, a compensation package (including pay and other perquisites) as applicable in Central PSUs Schedule 'A' should be adopted.

2.3. International Cooperation: The Forum has entered into a Memorandum of Understanding (MOU) with the California Energy Commission, the California Public Utilities Commission, the University of California, as Management and Operating Contractor for Lawrence Berkeley National Laboratory.

Scope of Cooperation

The organizations will endeavour to promote information exchanges and future joint research activities in the following areas:

- Energy efficiency and demand-side management policies and programmes
- Integrated Resource Planning
- Regulatory framework for facilitating demand-side management
- Training of the staff of the regulatory commissions and the utilities in the area of demand-side management.

Such activities and cooperation will be developed by:

- Exchange of information, mainly data and publications.
- Visit and exchange of researchers/experts.
- Joint seminars, conferences, and workshops on energy issues which are of common interest to both parties.
- Implementing future collaborative research projects.

2.4. Capacity Building Programmes: In year 2008-09, FOR had successfully conducted four training programmes on different subjects for officers of ERCs. These include:

2.4.1. Capacity Building / Training Programme for officers of ERCs at the Indian Institute of Technology, Kanpur.

2.4.2. A six-day Residential Training Course on "Open Access and Role of Load Despatch Centre (OA&LDC)" for officers of ERC at National Power Training Institute (NPTI), Faridabad.

2.4.3. A four-day Residential Training Course on "Consumer Protection" for officers of ERCs at New Delhi.

2.4.4. A six-day Residential Training Course on "Demand-Side Management and Energy Efficiency" for officers of ERC at NPTI, Faridabad.

A total 115 officers of ERCs were trained in the above training programmes.

2.5. The IIMA Report on "Electricity Reforms and Regulations- A Critical Review of the Last 10 Years' Experience": The Forum entrusted IIMA to review electricity reforms and regulations during the last 10 years in India. One of the key suggestions of the report is that SERCs should insist on adequate contracting of capacities by the utilities rather than relying on Unscheduled Interchange (UI). The report also mentioned that ABT-based management of imbalances does not provide incentives over medium to long term for balancing demand and supply and an alternative to ABT-based management of imbalances would create a real time market (gross pool). It also emphasized that meaningful competition is possible only if the capacity allocations and subsidies are fixed for multiple years in advance and administratively the utilities are made independent. The report also recommended that the terms of off-take from captive generators should be at least as favourable as short-term traded power/ UI charges and periodic review of regulatory independence and dissemination of such reviews would identify and highlight problem areas. The report recommended that "price cap" regulations or competitive bids for regulating private sector may be used wherever possible.

2.6. Studies Commissioned during 2008-09: The following three studies have been awarded during the year:

- Study on "Model Regulation on Standards of Performance."
- Study on "Evolving an Appropriate Model for Distribution Margin."
- Study to "Determine Capital Cost Benchmarks for Distribution Business."

3. Activities during 2008-09

In the year 2008-09, five meetings of the Forum were held. These meetings were held at New Delhi, Khajuraho, Bhubaneshwar, Chennai and New Delhi. In the seventh meeting of FOR, it was decided to constitute eight Working Groups on crucial issues of distribution such as Policies on Renewables, MYT Framework and Distribution Margin, Loss Reduction Strategies, Protection of Consumer Interests, Open Access–Theory and Practice, Demand-Side Management and Energy Efficiency, Code of Ethics and in the eighth meeting of FOR, a Working Group on Metering Issues was constituted. These Working Groups have deliberated on their respective issues in various rounds of discussions and made recommendations as per the mandate of the Working Groups. Out of eight Working Groups formed during the year, seven have submitted their reports to FOR, which were considered and approved by FOR. The Report of the Working Group on Metering Issues is to be finalized. The detailed recommendations of FOR on Policies on Renewables, MYT Framework and Distribution Margin, Loss Reduction Strategies, Protection of Consumers' Interests, Open Access–Theory and Practice, Demand-Side Management and Energy Efficiency, Code of Ethics are in Chapter 5 of this Annual Report. Full reports are available on the Forum's website ie. www.forumofregulators.gov.in.

3.1. Meetings of Forum of Regulators: In year 2008-09, five meetings of the Forum were held. The major decisions taken during the meetings are as follows:

3.1.1. Seventh meeting of FOR: In the seventh meeting of FOR held on June 13, 2008 at New Delhi, the following decisions were taken:

- The Forum decided to constitute Working Groups on Policies on Renewables, MYT Framework and Distribution Margin, Loss Reduction Strategies, Protection of Consumers' Interests, Open Access–Theory and Practice, Demand-Side Management and Energy Efficiency, Staffing of Regulatory Commissions and Code of Ethics.
- The Working Group on Policies on Renewables should deal with issues like Renewable Purchase Obligations, Competitive Bidding for Procurement of Renewables, Feasibility of introducing Renewable Energy Certificates, Connectivity to the Grid for Renewable Source-based Power Plants and sharing of CDM benefits. The Working Group on Protection of Consumers' Interests should consider all the relevant issues including best practices on Consumer Charter, Consumer Advocacy, Consumer Communication, possible models for consumer education in the States where credible NGOs are not available and the need for consumer advocacy with the support of State Governments.
- Regarding the display of status of open access on the website of FOR, the following decisions were taken :

(a) The information regarding regulations and

various charges as notified by SERCs should be updated after every six months.

(b) The status on the applications for open access and the decision thereon should be updated every month.

(c) The website should also display the details of the pending applications so as to facilitate analysis of reasons for pendency.

(d) Illustrative cases showing the applicable open access charges for typical open access consumers should also be posted on the website.

- It was decided that the Chairperson of the Forum would write to the Minister of Power drawing attention to the vacancies of the posts of Chairpersons/Members of the SERCs with the request that this may be taken up by the Ministry with the State Governments.

3.1.2. Eighth Meeting of FOR: In the eighth meeting of FOR held on September 26, 2008 at Khajuraho, the following decisions were taken:

- On the issue of Fund Rules of SERCs, the Chairperson, FOR asked the SERCs to bring to the notice of the FOR Secretariat the instances where the Fund Rules were restrictive, so that the matter could be taken up with the CAG office for necessary action. He also mentioned that the Forum needed to undertake an exercise in consultation with the CAG office for agreeing on the scope of performance audit which CAG audit teams could follow.
- The Forum considered and approved reports of the Working Group on Demand-Side Management and Energy Efficiency, Staffing of Regulatory Commissions, Loss Reduction Strategies and Protection of Consumers' Interests with some modifications.
- A Working Group on Metering Issues was constituted.
- The Forum suggested that the Secretariat should examine the issue of levy of service tax on transmission charges and Consumer Courts intervening in the cases under Section 126 of the Electricity Act and also obtain legal opinion, if required.
- The Secretariat may legally examine the provision for suo-motu revision of the orders of the CGRF by an Ombudsman in case it was considered necessary to protect the genuine interests of the utility.
- Referring the Power Grid request that the transmission charges for open access may be specified by the SERCs only in Rs./MWh so as to facilitate smooth implementation of open access. It was agreed that the SERCs would duly consider the issue raised for taking necessary action.

3.1.3. Ninth Meeting of FOR: In the ninth meeting of FOR held on November 14-15, 2008 at Bhubaneswar, the following decisions were taken:

- The draft Code of Ethics as recommended by the Working Group of the Forum was taken up for discussion. It was noted that the Electricity Act had provisions requiring the

Selection Committee to satisfy itself that the person being recommended for appointment did not have any financial or other interest which was likely to affect prejudicially his functions as the Chairperson or Member. The Act also has provisions for and the grounds on which action could be initiated for removal of a Member. It was agreed that an individual Electricity Regulatory Commission may take further action in the matter as considered appropriate.

- o An individual SERC may use the following inputs while considering the scope of performance audit, as and when required:

✓ Whether regulations as required under the Act have been notified?

✓ Status of disposal of petitions – pendency.

✓ Monitoring of compliance of Standards of Performance .

✓ Monitoring of Implementation of Open Access and disposal of Open Access applications.

✓ Status of constitution/operation of CGRF.

✓ Status of consumer advocacy and the Consumer Charter

✓ Implementation of MYT.

- o Report of the Committee on "Manpower, Certification and Incentives for System Operation and Ring Fencing Load Despatch Centres" were discussed and the following points were agreed:

✓ The CERC may come out with regulations on fees and charges to be levied by the Regional Load Despatch Centres. This could be suitably adopted by the SERCs for application to SLDCs.

✓ The Standard Operating Procedure (as envisaged by the Committee) to be adopted by the SLDCs would need to be approved by the Appropriate Commission.

✓ In order to effectively implement the provisions of Open Access, there is an urgent need to ring fence the SLDCs by completely isolating their administrative and functional reporting channels from the distribution or trading entities of the State.

✓ Necessary action may be taken at State level for implementation of the report of the Committee.

✓ Keeping in view the suggestion of the Ministry of Power, the Forum also approved setting up a Forum of Load Despatchers (FOLD). The Secretariat was directed that a detailed proposal may be obtained from NLDC accordingly and the approval of the Forum on the same may be obtained by circulation.

- It was agreed that the SERCs should direct the distribution utilities to plan in advance the power purchases both in the long term and short term and not to rely on overdrawal from the grid. This could be enforced at the time of examining and approving the Annual Revenue Requirement (ARR).
- The SERC concerned may take appropriate action under section 86(1)(b) of the Act taking into account the fact that the presently available legal framework does not permit regulation of price of inter-state sale of free power being received by the State Governments from hydro power stations.
- The Forum concurred to the proposal of the Ministry of Power that the annual AT&C loss figures of various distribution utilities may be compiled and vetted by the Forum. It was desired that the Secretariat may develop a standardized format for collection of information from the utilities and the information submitted by utilities may be got vetted by the concerned SERC before being compiled by the FOR Secretariat.
- Report of the Task Force on Scheduling, Metering and Settlement of Intra-State Open Access Transactions was discussed and recommendations given by the Task Force were endorsed.
- The Forum approved the training programmes for the officers of the SERCs on Demand- Side Management, Open Access and Protection of Consumers' Interests in year 2008-09.

3.1.4. Tenth Meeting of FOR: In the tenth meeting of FOR held on January 30, 2009 at Muttukadu, the following decisions were taken:

- The format for compiling the data regarding ATC losses of distribution utilities was considered and approved with the modification ie. the amount collected as arrears during a year should not be excluded.
- The Forum considered and approved the reports of Working Groups on MYT Framework and Distribution Margin, Policies on Renewables, Open Access– Theory and Practice etc. with necessary modifications.
- The Forum decided to constitute a Task Force for examination of issues and detailing the proposed national level REC framework.
- The proposal regarding constitution of FOLD was considered and approved.
- The following capacity building programmes were approved:

✓ Orientation Programme for Chairpersons / Members of the ERCs

✓ Seminar on Electricity Tariff in Regulatory Regime in association with NPTI.

✓ Training Programme on Regulation, Competition and Consumers' issues in the electricity sector by CUTS

✓ Training Programme for Officers of SERCs by the Indian Institute of Technology (IIT), Kanpur

- The Forum decided to commission a study on "Analysis of Tariff Orders and Other Orders

of Electricity Regulatory Commissions."

- As regards the CERC's order on Planning of Short-Term Supply, SERCs agreed that distribution licensees should be made accountable for advance planning for procurement of electricity in the short term to meet the estimated demand.
- Gaming by Generators seeking Open Access: The Chairperson, CSERC made a presentation. After discussions, it was felt that CERC could consider including the following in inter-state Open Access regulations:

✓ The notice period for revision of the schedule may be reduced.

✓ There should be limits on deviating from the schedule both for the generators and the licensees.

✓ If the load dispatch centre reports gaming by a constituent, there could be penalties including suspension of scheduling for a specified period.

- On the issue of Potential of Electricity Generation from Waste Heat from Sponge Iron Industry raised by CSERC, a view emerged that the SERCs could consider making the cross-subsidy surcharge zero for the co-generation plant under the provisions of section 86(1)(e) of the Act.
- The orders issued by the Government of Karnataka under section 11 of the Electricity Act directing all the generators and co-generators in the state to maximize generation and putting the electricity in the State grid were discussed. There was a consensus that this may prompt other States also to react and put restrictions on export of electricity, which would be against the spirit of the Electricity Act to promote an electricity market in the country and would also seriously hinder the efforts being made for operationalization of Open Access. The stance of the Government of Karnataka is also contrary to the resolution passed by the Chief Ministers' conference on Power in May 2007. Though the matter was subjudice and the legality of the orders would be decided in due course, the Forum resolved that this matter be taken up with the Ministry of Power. The Chairperson, FOR was authorized to send an appropriate communication to the Ministry of Power in this regard suggesting that the Ministry may discuss this with the states for reiterating their commitment to proactively support the efforts for expeditious implementation of Open Access.

3.1.5. Eleventh Meeting of FOR: In the eleventh meeting of FOR held on March 2, 2009 at New Delhi, the following decisions were taken:

- On the issue of compilation of information for Regulatory Information Management System, there was a consensus that utilities should be asked to institutionalize an IT-based system to regularly compile information required for RIMS and submit the same to the SERC concerned.
- The Forum endorsed the final draft of the MOU between FOR and CPUC, CEC, LBNL and approved it by the signature of the Chairperson.
- Regarding the recommendations of FOR for implementing the pay package of Central Public Sector Undertakings (CPSUs) for the staff of the ERCs (both at Centre and State level), there was a consensus that the pay package as applicable in Schedule 'A' CPSUs should be adopted. The Secretary, Ministry of Power agreed to take appropriate action for the implementation of this recommendation of FOR, including advising the State Governments in the matter.
- It was suggested by the Secretary, Ministry of Power that the SERCs may simplify the procedure for recovery of additional energy charges by the generators on account of use of imported coal. It was agreed that SERCs would further streamline the process and also ask the utilities to plan the procurement of imported fuel in advance as far as possible.
- The Secretary, Ministry of Power said that there was a need for proper coordination at the State level for forecasting the demand and planning the procurement of electricity in advance. After discussions, there was a consensus that power procurement was the statutory obligation of the distribution companies under the Electricity Act and the State Governments should facilitate capacity building of distribution utilities to discharge this obligation in an efficient and effective manner. The Central Electricity Authority might help the distribution utilities in setting up their planning cells for demand forecasting and power procurement. The state-level coordination forums as envisaged in the Electricity Act, 2003 may also facilitate this matter.
- There was also a suggestion that an exercise could be started to identify the areas where certain amendments were required in the Electricity Act. It was, however, felt that caution needs to be exercised in the matter as the implementation of a number of reform oriented provisions of the Act was in progress and the same should not be affected by such an exercise.
- A presentation was made by Bureau of Energy Efficiency (BEE) on 'Bachat Lamp Yojana' and 'Scheme for Star Rating of Office Building'.The Forum also interacted with US Regulators on Demand-Side Management and Energy Efficiency.

3.2. **Ministry of Power's Plan Assistance to FOR:** The Ministry of Power conveyed its approval on January 15, 2008 for a scheme to provide plan assistance of Rs. 10 crore to FOR for capacity building and availing consultancy services, during the Eleventh Five Year Plan period. Under the capacity building scheme, FOR has to organize:

- Full-time training programmes every year to provide training to the staff of the Central/State Electricity Regulatory Commissions. The duration of each of such programmes would be around two weeks. The number of participants in these programmes in a year would be approximately 100.
- Orientation programmes of 3-4 days each in a year for Chairperson/Members of the Central/ State Electricity Regulatory Commissions. The number of participants in a year would be approximately 50.
- The Forum would conduct these programmes through reputed institutions.
- The Forum will identify its requirements for consultancy services for a year.

Under this scheme FOR has successfully conducted training programmes and awarded consultancy assignments.

3.2.1. Capacity Building:

In compliance with the above directions of the Ministry of Power, FOR had successfully conducted four training programmes on different subjects for officers of ERCs under Plan Assistance from the Ministry of Power. The subject, venue and schedule of the training programmes conducted in 2008-09 are as under:

S.No.	Subject	Venue	Schedule
1	Capacity Building / Training Programme for officers of ERCs	IIT, Kanpur	30th June, 2008 to 05th July, 2008
2	Six-day Residential Training Course on "Open Access & Role of Load Despatch Centre (OA&LDC)" for officers of ERC	NPTI, Faridabad	02nd to 07th February,2009
3	Four-day Residential Training Course on "Consumer Protection" for officers of ERCs.	M/s CUTS, New Delhi	16th to 20th February,2009
4	Six-day Residential Training Course on "Demand Side Management & Energy Efficiency" for officers of ERC	NPTI, Faridabad	02nd to 07th March,2009

3.2.2. Consultancy Studies:

1) **Commissioned Studies:** During the period 2008-09, FOR commissioned the following three studies:

S. No.	Name of Study	Consultant
1	Model Regulation on Standards of Performance	M/s PricewaterhouseCoopers (PwC) Pvt. Ltd.
2	Evolving an Appropriate Model for Distribution Margin	M/s ABPS Infrastructure Advisory Pvt. Ltd., Mumbai
3	Capital Cost Benchmarks for Distribution Business	M/s Administrative Staff College of India, Hyderabad

1. *Study on "Model Regulation on Standards of Performance"*

   The objective of this study is to develop a model regulation of Standards of Performance by Regulatory Commissions which could serve as a template for consideration of SERCs in discharge of their responsibilities under section 57 of the Act. This study covers best practices in terms of performance standards as observed in different states in the country as also by including the best international practices in this regard.

2. *Study on "Evolving an Appropriate Model for Distribution Margin"*

   The report of FOR on "MYT Framework and Distribution Margin" recommended that a study be conducted to examine the need and feasibility for implementing distribution margin as the basis for allowing returns in distribution business and to formulate an appropriate model for distribution margin. In view of this recommendation, FOR has conducted the study to evolve an Appropriate Model for Distribution Margin. The objectives of the study are as follows:

   - To examine the need for implementing distribution margin as a basis for allowing returns in distribution business.
   - To examine the feasibility of implementing distribution margin as a basis for allowing returns in distribution business, in place of the existing basis of Return on Equity (ROE) and Return on Capital Employed (ROCE) and the time frame for implementation of the same.
   - To formulate an appropriate model for implementing the distribution margin concept, in case found feasible, which could serve as guiding principles for determination of tariff for distribution business by State Commissions in terms of Section 61 of the Electricity Act, 2003 and the Tariff Policy.

3. *Study to "Determine Capital Cost Benchmarks for Distribution Business"*

The report of FOR on "MYT Framework and Distribution Margin" recommended that a study be conducted to evolve benchmarks for capital costs in distribution business, since capital cost is the basis of cost-plus tariff, and prudence check of the capital expenditure incurred by the distribution licensee is essential. Such a benchmarking exercise would facilitate the capital expenditure approval process being undertaken by ERCs as well as ensure that only reasonable capital costs are allowed to be considered for the purpose of tariff determination. Also, the benefit of normalization of capital cost data across different States in the country would also be realized. The objectives of the study are as follows:

- To develop benchmarks for capital costs of key elements of distribution business, by analysing all-India data with clear distinction between capital costs incurred in
  - Rural distribution network
  - Urban distribution network
  - Overhead systems
  - Underground systems
- To develop the capital cost benchmarks of the following key components of the distribution, inter-alia, which could act as guiding principles for approval of capital cost of distribution business by SERCs in terms of section 61 of the Electricity Act, 2003:
  - Distribution feeders/lines – 33 kV, 22 kV, 11 kV (overhead & underground)
  - Receiving sub-stations (indoor and outdoor type)– 3.15 MVA, 5 MVA,10 MVA,16 MVA,20 MVA, etc., including civil work, switchgear, lightning arrestors, capacitor bank, etc.
  - Distribution transformer sub-stations including that of use of Amorphous Core distribution transformers (indoor and outdoor type)– 25 kVA, 63 kVA, 100 kVA, 200 kVA, 315 kVA, 500 kVA, 1000 kVA,1600 kVA, 2000 kVA, etc. Implication of BEE Energy Efficiency Star rating should also be considered.
  - Metering equipment, including meters of all types, CT, PT, etc.
  - LT network (underground) including cable, LT feeder pillars/mini pillars, etc.
  - LT network (overhead) including poles, conductor and other accessories such as insulators, clamps, connectors etc.
  - Service lines.
- To identify cost escalation factors that would impact the capital cost of distribution system components.
- To develop a system for updating the benchmarks for capital cost on year to year basis with minimum requirement of additional data.
- To suggest norms for other cost overheads such as labour charges, transportation, supervision, contingencies, etc., which are normally considered while determining capital cost.

2) **Completed Studies:** In 2007-08 FOR commissioned a study on "Electricity Reforms and Regulations – a critical review of last 10 years experience with focus on constraints and gaps between the vision and achievements." The Indian Institute of Management, Ahmedabad was engaged for this assignment. The IIMA has submitted its report to FOR. The major recommendations of the report are as follows:

I. Adding and Utilizing Generating Capacity

- Review the basis of domestic coal and associated rail linkages given to the domestic coal based plants.
- Some of the regions where security risks are perceived as high, any capacity addition using potential available in those areas have to be exploited by CPSUs rather than relying on the private sector.
- Given the low utilization for existing gas based capacity, it is important that new gas-based capacities are discouraged otherwise existing capacities will be utilized even less and will become stranded.
- Review the gas utilization policy as it only sets the priority of allocation of domestic gas from private producers.
- In addition to new capacities, there is a need to facilitate such takeover if the State sector plants continue to perform poorly despite potential. Incentives/disincentives need to be created to either improve the performance in a time-bound manner or takeover/privatization.

II. Competitive Procurement of Power, ABT and High Price of Traded Power

- Non-compliance can at best only evoke penalty ex-post.
- To incentivize adequate contracting and to disincentivize load shedding and overdrawing, tariff fixation itself should penalize and reward such behaviour.
- Not allowing high cost of short-term procured power or UI charges are unlikely to be effective.
- The regulators must insist on demand-side management measures to flatten the load curve through time of the day tariffs and energy-efficiency measures in the short run.

III. Trading in Power and Its Regulation

- Given the nature of trading and difficulties involved in regulation of trading, either trading margin regulation provisions should not be used or the definitions of inter- state and intra-state trading needs to be defined tightly.

IV. Developing Market in the Electricity Sector

- An alternative to ABT would be to tie-up existing capacity and energy contracts between generators and discoms as they exist and create a market on a gross pool basis with separate capacity and energy markets, and prices emerging for both.
- In a gross pool, the discoms should tie-up the capacity before they requisition for energy. In case not tied-up, they have to pay for capacity

as well as energy simultaneously but separately.

- It is not easy to create spot markets without eliminating gaming opportunities. However, if all existing long-term contracts are retained as financial contracts then the incentive to game would be very low for the existing generators if they were to bid in the spot market.
- For the markets to respond to real time prices, the wholesale prices need to be passed on to the end consumers at least to large consumers through TOD metering and TOD tariffs.

V. Transmission Pricing Issues

- There is a case for incorporating costs associated with transmission network expansion or strengthening to be factored in while evaluating the cost of adding new generation capacity at alternative locations. These costs should be borne by the beneficiaries of those who are going to consume the power from that capacity.
- Some proportion of the capacity costs (capital and O&M costs) related to other existing transmission assets should be allocated based on some distance related measures based on typical or average flow patterns on the network given loads and generators.
- Losses and congestion costs should be recovered at different levels from different nodes or zones depending upon the marginal loss induced by increase of load at that node or in that zone.

VI. Competition among Distribution Companies

- The political will of the State Government is required to let distribution companies compete in terms of performance with only board level influence as the shareholder.

VII. Competition through Multiple Distribution Licensees

- The independence of STU/SLDC has to be signaled credibly by having only an arm's length relationship between them and the State Government and with the distribution utility.

VIII. Reduction in Distribution Losses

- Transmission losses need to be separated from distribution losses.
- The feeder level meter readings should be automated. The energy accounting system should be integrated with the billing system.
- A time-bound program should be mandated for all utilities to resort to AMR for specific consumers.
- Linking quality of supply (including load-shedding) with the losses and collections on a feeder.
- Stronger linkage of rewards and punishment of distribution company's employees, engineers and managers with the losses for the areas under their control.

IX. Prompt payment of Subsidy by the State Government

- Empower the ERCs to insist on demanding proof of payment from the utilities and change the tariffs accordingly if the payment has not been made.

- The first best solution to the subsidy problem not envisaged at present in the Act or policy framework is "direct subsidy" to the intended beneficiaries.

X. Independent STUs and SLDCs

- The State Governments have to let go at least the STU and SLDC as part of their administrative framework of the Ministry of Power and Energy.
- Ring-fencing STU and SLDC may require administrative, financial and organizational changes so that they can operate independently.
- Manning of SLDC is critical in terms of training and protecting them from the ire of any other entity and they should be completely accountable internally or to the SERC.
- The data on transmission system capacity, load flow studies and decision-rules for determination of "non-discriminatory" open access should be displayed on the web-sites of SLDCs on real time basis, wherever required.

XI. Privatization Models

- For very large commercial urban centres, the Delhi model creates better risk allocation and higher rewards but it entails minimal State interventions.
- For other commercial urban centres, the franchisee model may be better due to lower risks for the private sector and the consumers continue to pay tariffs being paid by other non-privatized areas within the jurisdiction of the distribution licensee.

XII. Regulatory Independence and Powers

- Insulating the SERCs from direct pressure of State Governments through creation of independent forums constituted at the national level rather than State Advisory Committees.
- There is need to evolve greater clarity on the understanding of the role of regulators among key stakeholders.

XIII. Regulating Private Sector Players and Utilities

- Using price cap or "competitive bidding" based on simple payoffs minimizes the incentives of the private sector regulated entities to pad up costs. They should be used wherever feasible instead of cost plus regulations.
- Prudent checks and strict auditing (cross auditing) may help to an extent in detecting over invoicing expenditures and under invoicing revenues. Yardsticks and benchmarks for specific cost and revenue items may be used to regulate rather than actual costs to deter such behaviour.
- Case laws and due diligence is required as much as possible to avoid exploitation of incompleteness and inconsistencies in the laws and regulations.
- To avoid regulatory capture, a code of conduct should be spelt out by the regulators and enforced to avoid conflict-of-interest situations.

XIV. Regulatory Resources: Financial

- Treating ERCs as autonomous institutions from the financial point of view subject to

oversight by CAG and the legislature rather than being dependent on the receipts from the Government on a regular basis. For this, the regulatory fees charged by them should be allowed to build a corpus of some reasonable amount.

XV. Regulatory Resources: Human Resources and its Development

- Review of compensation and career path to attract quality officers with expertise in regulatory economics, law, finance and engineering skills.
- Provision of adequate budget for employing external consultants whenever required.
- Provision of budget for at least two weeks training per officer at a reputed institution or regulator within India or abroad.
- Thrust needs to be given to training at all levels among the staff with emphasis on perspective and competency development training at the junior level and exposure at the senior levels.

XVI. Harmonization of Regulations across SERCs and Building Case Law

- An initiative by FOR or some centralized body to act as a repository of rulings by SERCs and AT, which is accessible to the public as well as regulators.
- Regulators and AT to adopt a practice of citing all relevant rulings while building arguments for ruling in a particular case and laying out the reasons for agreeing or not agreeing with the previous rulings and orders.
- These would require research support to the regulators, for which adequate human resource and budgetary resources may have to be provided.

4. Achievements of Electricity Regulatory Commissions during 2008-09

4.1. Status Pertaining to the National Electricity Policy

In compliance with section 3 of the Electricity Act, 2003, the Central Government notified the National Electricity Policy (NEP) on February 12, 2005. The NEP aims at laying guidelines for accelerated development of the power sector, providing supply of electricity to all areas and protecting interests of consumers and other stakeholders. The Policy keeps in view availability of energy resources, technology available to exploit these resources, economics of generation using different resources, and energy security issues.

One of the functions of FOR is "sharing of information among the members of the Forum on various issues of common interest and also of common approach." To discharge its functions, FOR selected major issues pertaining to SERCs in NEP such as notification of grid code, technology upgradation, open access transmission charges and distribution network charges, time-bound programme on aggregate technical and commercial losses, metering plans, implementation of HVDS, SCADA and data-base management, norms for standard of performance etc. and compile implementation status of these major issues on a yearly basis.

The status compiled in this report is based on the inputs received from SERCs. The updated status for the year 2008-09 has been received from the SERCs of Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Kerala, Karnataka, Madhya Pradesh, Maharashtra, Meghalaya, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal. However, the previous year's status has been considered in case of the remaining States that is, Delhi, Jammu and Kashmir, Orissa and Tripura. The detailed status on NEP regarding the issues mentioned above is provided in **Annexure-II**.

4.2. Status Pertaining to Tariff Policy

In compliance with section 3 of the Electricity Act, 2003, the Central Government notified the Tariff Policy (TP) on January 6, 2006 in continuation of the NEP notified on February12, 2005. The objectives of this tariff policy are to:

a) Ensure availability of electricity to consumers at reasonable and competitive rates;

b) Ensure financial viability of the sector and attract investments;

c) Promote transparency, consistency and predictability in regulatory approaches across

jurisdictions and minimize perceptions of regulatory risks; and

d) Promote competition, efficiency in operations and improvement in quality of supply.

One of the functions of FOR is "sharing of information among the members of the Forum on various issues of common interest and also of common approach." To discharge its functions, FOR selected major issues pertaining to SERCs in Tariff Policy such as return on equity, depreciation rates, implementation of intra-state ABT, time of day (TOD) tariff, renewable source of energy, open access etc. and compiled implementation status of these major issues on a yearly basis.

The status compiled in this report is based on the inputs received from SERCs. The updated status for the 2008-09 have been received from the SERCs of Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Kerala, Karnataka, Madhya Pradesh, Maharashtra, Meghalaya, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal. However, the previous year's status has been considered in case of the remaining States, that is Delhi, Jammu and Kashmir, Orissa and Tripura. The detailed status on the Tariff Policy regarding the issues mentioned above is given in **Annexure-III.**

4.3. Achievements of CERC in 2008-09

4.3.1. Power Markets

Trading in electricity as a licensed activity began in 2003. For more than a year, two power exchanges have commenced operations, namely Indian Energy Exchange and Power Exchange of India Ltd. These exchanges have been providing the platform for transactions in the day-ahead market.

A Market Monitoring Cell (MMC) was set up in CERC in August 2008. The cell monitors short-term transactions and generates monthly reports on transactions in the market. The objective of the report is mainly to: (i) analyse the trends in volume and price of the short-term transactions of electricity; (ii) analyse competition among the market players; and (iii) disclose/disseminate all relevant market information.

The volume of electricity transacted through trading licensees and power exchanges in total electricity generation was 3.57% of total generation during the period 2008-09.

The weighted average prices of electricity transacted through trading licensees and power exchange were Rs.7.29/kwh and Rs 7.60/ Kwh, respectively. These are all short-term transactions.

4.3.2. Major Regulations issued in 2008-09

a) Terms and Conditions of Tariff, Regulations for 2009-14

The Commission continues to regulate the

tariff of the generating companies and transmission companies under its jurisdiction based on cost plus but performance linked tariff principles. Capital cost is the starting point of the tariff determination process. The capital cost is approved by CERC after prudence check. The Commission also notifies various norms of operation linked to recovery of cost for the generating or transmission company. The 2009-14 regulations mark a significant departure in the approach to return on equity, whereby CERC has adopted pre-tax return as against the earlier approach of post-tax return. Unlike the past, the beneficiaries would no longer be burdened with income tax liability of the generating or the transmission companies. The regulatory philosophy of CERC has been to incentivize for efficiency gains and to periodically pass on the improvement to beneficiaries. The same philosophy has been followed for the control period 2009-14. The norms of operation have been tightened while leaving room for efficiency gains for the developers. The earlier practice of provisional tariff has been dispensed with, seeking to bring in greater regulatory certainty.

b) Unscheduled Interchange Charge Regulations, 2009

The UI charges were earlier part of the regulations covering the terms and conditions of tariff. This year, however, CERC has issued separate regulations on UI charges. Thus, while sending a clear message that UI is not a route for trading of electricity; the Commission has for the first time specified limits for the overdrawal from the grid within the permissible operating range. This follows the philosophy that the main purposes of UI are to enforce grid discipline and provide for settlement rates for unintended UI. This step would force the distribution utilities to abide by planned procurement of electricity and thereby create an environment for investors to set up new power plants.

c) Procedure, Terms and Conditions for Grant of Trading License and other Related Matters Regulations, 2009

The CERC issued the terms and conditions for grant of trading license in 2004 and brought about periodic amendments to meet emerging requirements. In 2009, the Commission revised the regulations and issued consolidated regulations by tightening the conditions for the grant of license, keeping in view the current price of the trading power liquidity requirements of the power trading business. The intention was also to ensure that only serious players intending to operate in the trading business remain in the market.

4.3.3. Open Access and Grid Discipline

Denial of Open Access: The CERC took stern action in cases involving denial of open access. In the case of Karnataka, the SLDC denied open access on the basis of the direction by the State Government issued under Section 11 of the Act. In this context, the CERC in its order dated January 22, 2008 observed that the direction under Section 11 of the Act cannot be issued to over reach any statutory provision and directed KPTCL to grant open access. The Government of Karnataka has filed a Writ Petition in the High Court of Karnataka seeking a writ of certiorari or direction to quash the Commission's order dated January 21, 2009. The High Court thereafter issued an interim order on January 28, 2009 staying the operation of the order of the CERC. The Commission is contesting the case.

Grid Indiscipline: The CERC took stern action in cases involving grid indiscipline in terms of overdrawals from the grid and default in payment of UI dues. The Commission imposed penalty for non-compliance with the Indian Electricity Grid Code (IEGC), on APTRANSCO, KPTCL, Kerala SEB, TNEB and UPPCL.

The principal reason for huge gaps in demand and supply of power is the lack of proper planning by the States. The State utilities are required to plan in advance as to how they would meet their consumer demand without overdrawing from the grid. The IEGC places this responsibility squarely on all State Load Dispatch Centres (SLDCs)/State Transmission Utilities (STUs). Compliance with this clause is essential for overcoming this perennial problem. The CERC has therefore directed all the state transmission utilities to furnish its data regarding their plans to periodically meet the load.

The CERC also took serious note of non-payment of UI dues by the beneficiaries and imposed penalty on utilities like UPPCL and J&K PDD under section 142 of the Act.

4.3.4. Statutory Advice to the Government of India

During 2009-10, the CERC tendered statutory advice to the Government of India on critical issues facing the power sector, especially on issues relating to open access. While the CERC has passed orders against defaulters involved in denial of open access and non-impartial role of SLDCs in granting open access, it was realized that the issues had deeper roots. The CERC, therefore, also tendered its statutory advice to the Government of India highlighting instances of misuse of power under the Act and its ill effects. Besides, CERC suggested measures for operationalization of open access.

4.3.5. New Initiatives

I. Developing benchmarks of capital cost for thermal power station and transmission elements and creation of data base of capital cost of projects.

The tariff for generation and transmission is regulated on the basis of a cost plus approach, with capital cost being the basis of cost plus tariff. The CERC realized that a mechanism was needed to approve costs, using the benchmarks developed to ensure that tariffs are based on capital cost after application of greater objective prudence check and scrutiny. In the case of tariff regulations for 2009-14, the CERC has therefore provided for development of capital cost benchmarks for generation and transmission which could be used for prudence check of capital cost quoted by generating and transmission companies. The CERC has initiated this exercise and benchmarks are being created on the basis of historical data available with it.

II. Transmission pricing

The CERC has brought out an approach paper on the pricing mechanism for the Inter State Transmission System in the country. The proposed new method addresses the key mandates of NEP, which require transmission prices to be distance and direction sensitive, independent of Bulk Power Transmission Agreements and also reflect the utilization of the network by each network user. The proposed methodology is based on the Marginal Participation (MP) method based on load flow studies indicating the "use" of the system. A consultation process is presently on together with further analysis of the proposed methodology.

III. Operationalization of the Coordination Forum

The Electricity Act, 2003 envisages the creation of a coordination forum for smooth and coordinated development of the power system in the country. The Government of India constituted this Forum under the chairmanship of the Chairperson, CERC. The other members of the Forum include the Ministry of Power, CEA, central generation units, central transmission utility, private thermal and private hydro generation. The mandate of the Forum is to facilitate: (i) investment for development of the power system; (ii) smooth and reliable operation of electricity grid at interstate level; (iii) connectivity to grid for generation companies and open access to transmission system; and (iv) broad consensus on any aspect of power system as referred it to by the Central Government. The Forum started functioning during 2009.

The Forum discussed several matters during the year including: (i) facilitating long-term open access at interstate level by reducing the time for approval; (ii) providing interstate system access to state generation units for short-term trades; (iii) rationalization of short- term open access charge (STOA) in line with long-term open access charge (LTOA); (iv) assessment of transfer capability of interstate transmission; (v) tightening of operating frequency band from 49.5HZ to 50.2 Hz under IEGC; and (vi) dedicated transmission system of IPPs through JV and SPV route. These discussions have facilitated decision making in important matters and helped fulfill these objectives of the Forum.

IV. Empowered Committee on procuring transmission services through the competitive route

The revised guidelines of the Ministry of Power for encouraging competition in development of transmission projects and tariff based competitive bidding for transmission services have defined the functions of the Empowered Committee to : (i) identify the project under this Scheme; (ii) facilitate preparation of bid documents and invitation of bids through a suitable agency; (iii) facilitate evaluation of bids; (iv) facilitate finalization and signing of transmission service agreement (TSA) between developer and concerned utilities; and (v) facilitate development of projects under this scheme.

The Empowered Committee, under the chairmanship of Shri R.Krishnamoorthy, Member, CERC has a representation from CEA, the concerned Regional Power Committee and an independent member with expertise in finance. The Committee held several meetings during the year, including those with the Special Purpose Vehicle (SPV) of the Rural Electrification Corporation (REC) and the Power Finance Corporation (PFC) to facilitate the competitive bidding process and remove any bottlenecks. Through this process, the SPV of PFC bidding for one transmission project has been completed, namely the transmission scheme for enabling import of North Eastern Region (NER) – Eastern Region (ER) surplus power by the Northern Region (NR). This is the first ever transmission project being implemented through competitive bidding. Besides, through the SPV of REC route, two transmission projects are in the final stage of processing, namely North Karanpura Transmission Line. The Empowered Committee has also identified four additional projects through the competitive bidding route.

V. Norms for fixation of tariff for generation of power from renewable sources of energy

Section 61 of the Act empowers the CERC to specify the terms and conditions for determination of tariff in accordance with the provisions of this section, the NEP and Tariff Policy. Sub section (h) of Section 61 of the Act stipulates that, while determining the tariff, the CERC shall be guided by the promotion of co-generation and generation from renewable sources of energy. Clause 6.4 of the Tariff Policy entrusts the responsibility with CERC to frame guidelines for pricing of non-firm power, especially from non-conventional sources when procurement is not through the competitive bidding process. To fulfill these mandates, CERC initiated the evolution of norms to determine tariffs for generation of electricity from renewable sources of energy under section 79 of the Act, which could be the guiding principles for State Commissions in terms of section 61(a) of the Electricity Act, 2003.

4.3.6. Other Activities

Central Advisory Committee

In 2008-09, two meetings of the Central Advisory Committee (CAC) were held. Important regulations such as Trading Regulations, Trading Margin, CERC Terms and Conditions of Tariff Regulations for the period 2009-14 were discussed. The CAC also discussed issues related to "Implementation of open access" such as independence of SLDCs, role of State Governments in operatinalizing open access and regulatory interventions for facilitating open access.

4.4. Important Activities of State Electricity Regulatory Commissions

Thirteen SERCs submitted their achievements during 2008-09. The major highlights of the achievements of SERCs are as follows:

4.4.1. Assam Electricity Regulatory Commission

The Assam Electricity Regulatory Commission (AERC) has finalized tariff through competitive bidding and approved Power Purchase Agreements of generators with Discoms. The Commission has issued regulations for Power Procurement from Renewable Sources and Co-generation by Distribution Licensee. The Consumer Advocacy Cell of the Commission brought out a "Consumer Special" issue of the information bulletin "The Electricity Consumer Grid" in July 2008.

4.4.2. Andhra Pradesh Electricity Regulatory Commission:

The Andhra Pradesh Electricity Regulatory Commission (APERC) has reviewed the performance of the CGRFs, DISCOMs and APTRANSCO with respect to the directives issued by the Commission. The Commission issued regulations on "Terms and conditions for determination of tariff for supply of electricity by a generating company to a distribution licensee and purchase of electricity by distribution licensees." The Commission issued the following Tariff Orders on March 20, 2009: (a) Tariff Order for Distribution Business for a five- year period (2009-14); (b) Retail Supply Tariff Order for FY 2009-10; (c) SLDC Fee and Charges Order for a five-year period (2009-14); and (d) Transmission Tariff Order for a five-year period (2009-14). The Commission also issued a Renewable Power Purchase Obligation (RPPO) Order.

4.4.3. Gujarat Electricity Regulatory Commission

The Gujarat Electricity Regulatory Commission (GERC) conducted frequent meetings among the State Advisory Committee, the State Co-ordination Forum and members of the CGRF during the year. The GERC issued MYT Orders for generating company and licensees in the State for the first control period of three years (FY 08-09 to FY 10-11). The GERC has directed SLDC to file separate ARR from next year. According to GERC, all categories of consumers are metered except agricultural consumers; in this category also 35% consumers are metered and 41% of distribution transformers are metered. The Secretary of the Commission is designated as the Electricity Ombudsman. A total of 55 cases were resolved by the office of the Ombudsman during the year, out of which 26 cases were decided in favour of consumers. During the year, the Commission has organized a brain-storming session for solar based generation and for grid connectivity of wind-based generation. The Commission reviewed the mock exercise of Intra-State ABT mechanism and will shortly announce the commercial operation of Intra-State ABT mechanism.

4.4.4. Haryana Electricity Regulatory Commission

The Haryana Electricity Regulatory Commission (HERC) issued regulations on Terms and Conditions of Transmissions Tariff, Terms and Conditions of Generation Tariff, Terms and Conditions of Determination of Wheeling Tariff and

Distribution and Retail Supply Tariff and Conditions of Transmission Licence. During the year, HERC has also approved tariff for generation, Bulk Supply Tariff, Trading Margin, Transmission and SLDC Charges, Solar Power Tariff, Distribution and Retail Supply ARR and Tariff Determination of DHBVN and UHBVN etc.

4.4.5. Jammu & Kashmir State Electricity Regulatory Commission

The Jammu & Kashmir State Electricity Regulatory Commission (J&K SERC) has notified Open Access charges in Intra-State Transmission and Distribution charges for FY 2008-09. The Commission has also notified reconstitution of the State Advisory Committee. The Commission issued generation Retail Tariff Order for FY 2008-09.

4.4.6. Karnataka Electricity Regulatory Commission

The Karnataka Electricity Regulatory Commission (KERC) issued Tariff Order under MYT framework in respect of 6 Distribution Licensees and one Transmission licensee for the Control Period FY08 to FY10. The Commission has so far issued 13 Tariff Orders. The Commission issued regulations on "Manner of Payment of Subsidy by Government" and "Load Forecast" in 2008-09. The Commission has reduced the cross subsidy of HT industries from 62% in FY 2000 to 25% for FY 2006 and LT industries from 48% in FY 2000 to 26% for FY 2006. Time of day tariff has been introduced for HT industries, HT water supply and LT industries categories on an optional basis. With effect from April 1, 2008 consumers with contract demand of one MW and above and a voltage level of 11 KV and above are eligible to avail open access in Karnataka. To facilitate wheeling of renewable energy, the Commission, in July 2008, has approved a Standard Agreement for Wheeling and Banking of renewable energy. The Commission is monitoring energy audit in 53 towns and cities by fixing a target of 15% or less. As a result, loss levels for the state have come down to 29.81% in 2008 as compared to 38% in 2000. The Commission had fixed a target of 24.74% for FY08. The target for FY09 has been fixed at 23.91%. The tariff for solar PV and solar thermal generation has been determined by KERC.

4.4.7. Maharashtra Electricity Regulatory Commission

The Maharashtra Electricity Regulatory Commission (MERC) has promoted traditional measures such as capacity

addition, renovation and modernization, enhanced capacity utilization, reduction in losses, feeder separation and open access. In addition, the Commission has encouraged innovative mechanisms such as appointment of interim franchisee and approval of reliability charges to be recovered from Pune and Baramati consumers for use of power from captive power plants. The MERC has also played a pioneering role in promoting utility driven demand-side management and distribution generation based electricity distribution franchisee (DGBDF). In FY 2008-09, the Commission undertook field inspections through identified agencies to gather information on the implementation of load shedding protocol, status of reliability indices, status of feeder and distribution transformer metering, quality of power supplied by sub-stations, etc. An important area of work for the Commission is monitoring utilities to ensure they are complying with the provisions of the Acts, Regulations and Orders of the Commission.

4.4.8. Punjab Electricity Regulatory Commission

The Punjab Electricity Regulatory Commission (PSERC) has approved the proposal of the Board to develop 1800 MW (+ 10 %) coal fired Talwandi Sabo Thermal Power Station through M/s Sterlite Energy Ltd. Mumbai , which was selected through competitive bidding. The Commission has also granted a trading license.

4.4.9. Rajasthan Electricity Regulatory Commission

In 2008-09, the Rajasthan Electricity Regulatory Commission (RERC) has issued regulations on Rajasthan Electricity Grid Code, State Advisory Committee and Terms and Conditions for Determination of Tariff. The Commission, vide its order dated November 3, 2008, allowed the procurement of 3320 MW power by the Discoms, by 2016-17, under case-1 and case-2. During the eighth meeting of the State Advisory Committee, it was resolved that necessary action may be taken by the Discoms to give priority in release of new connections to energy-efficient agriculturists and a relevant provision may also be included in the Government of Rajasthan policy. The Commission approved four independent, third party, meter testing laboratories for the state of Rajasthan, in terms of provisions, made under clause 5.4.9 of NEP.

4.4.10. Tamil Nadu Electricity Regulatory Commission

The Tamil Nadu Electricity Regulatory Commission (TNERC) issued regulations on

"determination of tariff under MYT framework" and "stipulating the procedure for payment of subsidy by the State Government" in 2008-09. As an enabling provision to avail the generation-based incentive announced by GoI / MNRE, a provisional tariff at Rs. 3.15 per unit for procurement of power from grid interactive solar power generation plants was issued during the year. The Commission has also passed a suo motu comprehensive tariff order on wind energy. The TNEB has constituted 39 CGRFs, one in each distribution circle of TNEB. As reported by the licensee, the Forums have dealt with 336 complaints during the quarter ending 12/2008 for the year (2008-2009) and 289 complaints were disposed of within the stipulated time frame of two months. During 2008-2009, 24 appeals were filed before the State Electricity Ombudsman and 21 were disposed off. For the benefit of the general public and officers of TNEB, the orders of the Ombudsman are placed in an exclusive website for the Ombudsman.

4.4.11. Uttarakhand Electricity Regulatory Commission

The Uttarakhand Electricity Regulatory Commission (UERC) has been rigorously monitoring implementation of its Standards of Performance Regulations including submission of monthly reports on the level of performance achieved by the licensee. The licensee has also been directed by the Commission to reduce its actual loss level by implementing the measures such as installation of smart/prepaid meters, segregation of agriculture feeders, energy accounting /audit, control of theft, implementation of centralized computerized billing, MRI analysis, implementation of automatic meter reading (AMR) and integrated energy management system, periodic testing of meters etc. Till March, 2009 the total number of cases received by the CGRF was 428 from which 380 has been disposed off and 48 cases were pending and total number of cases received by the Ombudsman was 67 from which 61 have been disposed off and 6 cases were pending. The mechanism for payment of compensation to consumers is now operational in the licensee area. The Commission conducted two workshops on "Indian Electricity Rules on Safety Measures to be adopted in Construction, and "Operation and Maintenance of Electrical Power System." The Commission has also issued regulations on "Tariff and Other Terms for Supply of Electricity from Non-Conventional and Renewable Energy

Sources" and "Release of New HT and EHT Connections, Enhancement and Reduction of Loads" during the year.

4.4.12. Uttar Pradesh Electricity Regulatory Commission

In 2008-09, the Uttar Pradesh Electricity Regulatory Commission (UPERC) has issued new regulations on "Terms and Conditions of Generation Tariff ". The UPERC has determined open access charges and tariff of supply of electricity from solar power plants. The CGRFs were constituted as per new notified regulations in the 20 commissionaires of the state. The Cell for Consumer Education and Advocacy (CCEA) got itself registered as a society and organized many workshops and events regarding consumer education, energy efficiency and service quality.

4.4.13. West Bengal Electricity Regulatory Commission

In order to reduce overall system T&D loss as well as to flatten the load curve, the West Bengal Electricity Regulatory Commission (WBERC) has given special emphasis in its tariff order for 2008-09 on voltage wise graded load factor rebate and load factor surcharge if load factor falls below 30% to encourage consumers to improve their load factor. The Commission placed emphasis on demand-side management by providing: (i) attractive rebate on power factor to reduce reactive power loss in the system; and (ii) higher rebate in power factor for the consumers under TOD tariff scheme especially during peak hours, than for the consumers under non-TOD tariff scheme. In order to reduce commercial loss, 4% rebate on energy charge for pre-paid tariff consumers has been introduced by the Commission. Special emphasis was given by the Commission, to conduct safety audit, environmental audit as well as audit on occupational health Hazards along with ongoing energy audit.

5. Recommendations of Forum of Regulators on Distribution Issues

In the seventh meeting of 'FOR', it was decided to constitute Eight (8) Working Groups on crucial issues of Distribution such as Demand Side Management & Energy Efficiency, Loss Reduction Strategies, Protection of Consumer Interests, MYT Framework and Distribution Margin, Open Access – Theory and Practice, Policies on Renewables, Staffing of ERCs, and Code of Ethics. Recommendations made by 'FOR' on these issues are as under:

5.1. Demand Side Management and Energy Efficiency

1. The SERCs should direct all the distribution utilities to constitute a DSM Cell within their organizations, if not already constituted.
2. The SERCs should also identify some of their staff for handling the DSM aspects.
3. The SERCs may also direct all the distribution utilities to submit DSM Plans alongwith ARR rates for the next tariff period. Measures for increasing the consumer awareness about the importance of DSM should also be included in the Plans.
4. The Forum of Regulators should organize training courses in the area of DSM for capacity building of the personnel of the SERCs, the staff of DSM Cells of the utilities in which the representatives of the State Governments may also be invited.
5. The recovery of cost of approved DSM programmes should be allowed as pass-through in ARR. It would be appropriate that the State Commission may indicate a percentage of the ARR to be utilized for DSM programmes. This percentage could be worked out on the basis of the indicated savings from the power purchase costs and peak clipping.
6. The SERCs could also consider appropriate tariff interventions to support DSM. These could be TOD tariffs, power factor incentives and penalty/reactive power charges, load management charges, rebate incentives for energy efficient buildings/appliances and differential pricing for agriculture consumers. Special tariffs may also be designed to induce the concerned authorities towards installation of star rated energy efficient pumpsets in the applications which involves heavy pumping such as municipal water works, sewage works and lift canals.
7. The SERCs could also consider giving a slightly higher return on equity for the investments made towards DSM measures. This would be largely offset by reduction in short-term power purchase costs. The State Commissions may provide for appropriate incentives for the management and staff of the utilities, particularly in case of Government owned utilities.
8. Distribution utilities may be encouraged to create their own energy service companies as unregulated activity.
9. It is recommended that the State Governments may also take proactive role in promoting DSM. They may consider the following:

- The State Governments may consider financially supporting the DSM programmes

aimed at such category of consumers which are receiving tariff subsidy from the State Governments. This would obviously be in the long-term interests of the state finances.

- The State Designated Agency (SDA) have a key role in implementation of the Energy Conservation Act and also in implementing various other schemes. The State Governments need to take steps to enhance effectiveness of the SDAs.
- The State Governments may also consider reduction in taxes on energy efficient appliances.

10. Bureau of Energy Efficiency may be requested for the following tasks:

- Bureau may urgently undertake development of Monitoring and Verification protocols for various DSM programmes which may be undertaken by utilities.
- Bureau may also assist Forum of Regulators in preparation of draft of a suggested Regulation for implementation of DSM and Energy Efficiency in distribution sector in India including the guidelines/criteria for evaluation of various DSM proposals. The draft Regulation so prepared may be adopted by FOR as model draft Regulations. All ERCs may use this model draft Regulation for framing Regulation for DSM and EE in their respective States.
- Agriculture sector is a very important consumer segment from the point of view of DSM. BEE is already facilitating various agricultural DSM programs. BEE may continuously interact with Forum of Regulators to ensure that the proposed DSM programs are implemented in the successful manner and also replicated in other states. ERCs should provide support necessary to ensure success of such programme.
- Similar steps may be taken by BEE in respect of pilots being tried in different parts of the country for DSM resource bidding.

11. It is also necessary that information about various DSM implementations is circulated among various utilities. This will help utilities identify programmes suitable for implementation in their areas. Apparently, BEE has already undertaken exercise of collecting case studies on DSM Implementation in India as a part of 'International Energy Agency – Demand Side Management Implementing Agreement'. BEE is requested to share those case studies initially with ERCs and subsequently with all utilities in the country. BEE is also requested to develop outreach programme so that learnings from various programmes under IEA – DSM are available to Indian utilities.

12. In a number of states, a large proportion of supply is made to the agricultural consumers at highly subsidized rates. The utilities may be encouraged to develop DSM Plans for inducing the farmers to install energy efficient pumpsets. The scheme being developed by Haryana utilities could be one example. Such schemes would require support and approval from the SERCs.

5.2. Loss Reduction Strategies

1. Transmission losses should not be clubbed with distribution losses in order to have a clear focus on reduction of distribution losses. Therefore, the State Commissions should deal

with distribution losses separately and the practice of clubbing transmission and distribution losses (T&D) needs to be immediately discontinued. Need for drawing up a roadmap by each SERC is reiterated for ensuring installation of meters at the premises of all categories of consumers in a time-bound manner.

2. While computing the AT&C loss figure, there is a need for differential analysis of technical losses, non-technical losses and collection efficiency. AT&C loss should be calculated by subtracting the energy realized from the energy input where energy realized should be equal to the product of energy billed and collection efficiency (collection efficiency being the ratio of amount collected to the amount billed). As suggested by CEA while calculating the energy input, the energy traded should be excluded. Further, it should be ensured that the methodology for computing the AT&C loss figure should exclude disputed amounts (amounts which are disputed in any forum including courts etc.) from the demand raised for calculation of collection efficiency. In accordance with para 8.2.1 (iv) of the Tariff Policy, the collection efficiency should take into account provision for bad debts as per the policies developed and subject to the approval of the State Commission.

3. For correct AT&C loss estimation, it was essential that losses were segregated into technical and non-technical (commercial) losses. To segregate the losses, the first step should be to compute the technical losses at the distribution network level. The technical losses so computed should be subtracted from the total energy loss at the distribution network (i.e. from AT&C loss) to derive the commercial loss. Technical losses could be computed by the bottoms up approach by computing losses - at EHV system (33 kV network of the distribution utility), at 11 kV system and at the DT level.

4. 11kV feeders having no commercial losses consistently should be identified and technical losses in such feeders may be arrived at as the difference between the sending end energy and receiving end energy at the consumer end plus energy recorded at the LV side of DTs.

5. The technical losses in the distribution network could also be estimated by computer aided system studies through simulation of the network equipment.

6. The non-technical (commercial) loss should be calculated as the difference between the total energy loss at the distribution level (AT&C loss) and the technical loss computed by following the method explained above.

7. To segregate the technical and non-technical loss, baseline data should be compiled for each electricity division. Third party verification of the technical and financial data submitted by the utility was crucial, before such data was taken into account for determination of tariff.

8. Compilation of baseline data should be the starting point for energy accounting and audit. Energy audit has to start from DTs to 11kV feeders to 33/11kV sub-stations of the entire area selected for auditing. Energy audit should be undertaken to calculate the difference between the distribution transformer-wise energy sent out and total of all the consumers'

consumption.

9. The trajectory for loss reduction should be determined keeping in view the actual loss levels, the capital expenditure made in the past for improving the network and the future capital expenditure plans. This was very important keeping in view the Orissa experience where the loss level allowed in tariff at the beginning of the reforms process was much below the actual loss level. This completely distorted the revenue requirement and the utility went into a perennial loss. Once the actual loss level has been identified by following the methodology suggested above, a trajectory for loss reduction could be specified and followed rigorously.

10. The resolution of the Chief Ministers' Conference on Power held in May 2007 resolved to achieve and sustain drastic reduction in the overall AT&C losses through the next five years, and at least to a level of 15 percent in the APDRP project areas. It was generally agreed that, as a rule of thumb, reduction of loss level should be at least 10 percent of the existing loss levels every year till the losses are reduced below 20 percent. The actual loss levels at the beginning of the MYT trajectory should be scientifically established on the basis of a separate study for every licensee.

11. Though the technical and commercial losses should be monitored separately, the trajectory could give a combined target for technical and commercial losses in the first control period of MYT. The MYT trajectory has to be specific to every distribution licensee and preferably the same should be specified by the SERC as part of its regulations.

12. In view of the fact the trajectory for loss reduction will be specified, inter alia, keeping in view the capital expenditure plans, the monitoring of capital expenditure should invariably be linked to loss reduction achieved, project-wise and division-wise.

13. Pay back period and life cycle cost analysis should be carried out for selecting the appropriate technological intervention aimed at reducing the technical losses. HVDS was expensive and required larger safety clearance. It was recommended that this system would be more appropriate for areas where LT to HT ratio was poor, rural areas and areas having low connection density. In other areas LT ABC conductors might be used for controlling theft. The load balancing of feeders had also proved useful in reducing technical losses. There was a general view that the cost of sophisticated metering should not be passed on to an individual consumer and the same should be recovered through ARR.

14. The technical interventions adopted by some States for – urban, rural and agricultural sectors were studied. Case studies of some states (Delhi, Punjab, West Bengal and Rajasthan for the urban area; Rajasthan and Gujarat for the rural area; and Andhra Pradesh and Madhya Pradesh for the agricultural area) were highlighted as models for emulation by other States.

15. A large number of agricultural consumers were still un-metered and as such assessment of load being supplied on the basis of un-metered

supply needed special attention. This could be done easily in cases where agricultural feeders had been separated. In other areas, the estimation had to be on the basis of scientific sampling. Agricultural feeder separation was emerging to be an effective method of loss reduction. Segregation of feeder for agriculture supply should be resorted to especially in States where proportion of supply to agriculture sector was substantial.

16. A multi-pronged strategy should be adopted to control theft of electricity. Theft of electricity is the biggest menace in the commercial loss component of AT&C loss and should be tackled sternly and with actions having a deterrent effect. The strong penal provisions in the Electricity Act, 2003 especially after the 2007 amendment were noted. It was recommended that the utilities should effectively use these provisions to curb theft and pilferage of electricity. Specific steps taken by the utilities in some States towards controlling theft were also noted.

17. The incentives / disincentives schemes introduced by some SERCs for inducing the utilities to improve loss reduction were reviewed. It was agreed that under-achievement of the loss reduction target should be borne by the licensee, and in case of achievement over and above the targets the gain was to be shared between the licensee and the consumers in the ratio to be determined by SERCs.

18. SERCs might also encourage suitable local area based incentive and disincentive schemes for the staff of the utilities linked to reduction in losses, as stipulated in para 8.2.1(ii) of the Tariff Policy.

19. The MERC order dated January 9, 2003 in matter of "Determination of Tariff [2001-2002] Applicable to various categories of consumers of Maharashtra State Electricity Board and, Levying of T & D Loss charges on the basis of differential (Circle/Zone) T & D Losses Evaluation" was also noted, in which MERC has determined the differential tariff for MSEB on the basis of the area-wise T&D losses which has been also upheld by the Hon'ble High Court in its order dated February11, 2004.

20. Incentive for the staff for performance above the set targets might be operationalized taking an electricity division as the unit.

5.3. Protection on Consumers Interest

1. Sincere efforts have been made by the Regulatory Commissions in attaining the objectives enshrined in the Act towards safeguarding consumers' interests. This conclusion was reached after: (a) a detailed analysis of the issues at stake; (b) examination of the case laws backed by legal opinion on some critical issues; and (c) by the experience gained through interaction with stakeholders. However, a great deal more needs to be done. The major findings and recommendations are summarized below.

2. The Regulatory Commissions have been given adequate powers under the Act to effectively enforce the provisions including those relating to the protection of consumers' interests. All such powers including imposition of penalty under section 43, compensation under section 57 and invoking section 142 of the Act should

be resorted to wherever required by the Regulatory Commissions.

3. There is a general sentiment against the practice of the licensees engaging lawyers in proceedings before the CGRF and ombudsman. This puts into a disadvantaged position the consumer, who on occasions may not be in a position to engage lawyers. It is recommended that SERCs should specify in the guidelines and regulations framed under section 42(5) and (6) of the Act that in respect of the resolution of the grievances of consumers through the mechanism of CGRF – which is an organ of the licensee and where proceedings may not be adversarial in nature - both parties (i.e. the consumer and the distribution licensee) shall not be represented by lawyers. However, since the proceedings before the ombudsman, being essentially adversarial in nature, the imposition of such a restriction may not be legally tenable in the absence of a specific provision in the Act. It is, therefore, recommended that wherever there is a practice of the licensee being represented by an advocate before the ombudsman, consumer legal assistance cells might be constituted by SERCs, to provide required legal advice, support, and assistance to consumers, wherever necessary. Such a unit could be funded by the SERCs.

4. Some State Commissions have treated the CGRF as a second channel of appeal by creating separate internal grievance redressal machinery as the first channel of appeal. Such a practice does not go with the letter and spirit of the Act. This is clearly evident from the wordings of the provision in section 42(5) of Act and the reiteration of the Standing Committee on Energy while examining the Electricity Bill, 2001. The CGRF should be treated as the internal first-level grievance redressal organ. Some State Commissions had passed orders merging internal grievance redressal mechanisms of discom with CGRF. It is suggested that this practice should be followed by all SERCs across the board. Therefore, it is necessary to ensure that the consumer who has a grievance should have the right to approach the CGRF directly without any precondition of approaching a particular staff or other committee set up by the licensee. Though the consumer should have a right to directly approach the CGRF, periodic meetings and interactions by the local utility staff with the consumers may also be encouraged as these have proved useful in resolving petty and routine issues.

5. In the context of the provisions of section 42(6) of the Act, there are sentiments that the said provision does not give right to the licensees to appeal before the ombudsman against the orders of the CGRF. It is reiterated that given the fact that the CGRF has been conceived as an internal organ of the licensee, it is assumed that the orders of the CGRF would be acceptable to the licensee and that only the aggrieved consumer could have grievance against the order of such an internal organ of the licensee. Thus, logically the Act did not provide for the right of a licensee to appeal against the orders of the CGRF.

6. According to the Rule 7 (as amended) of the Electricity Rules, 2005, the manner of appointment and the qualification and

experience of the persons to be appointed as members of the Forum would be as per the guidelines specified by the State Commission. The qualification and experience required for the appointment of a chairperson of the Forum should be specified in such a manner as to ensure that the person is not serving as a regular employee of the licensee. It is observed that the requirement in Rule 7 of the Electricity Rules, 2005 that the Forum "shall consist of officers of licensee" does not imply that the officer had to be a regular officer of the licensee. So long as the salary of the member of the Forum is paid by the licensee, such a member could be treated as an 'officer of licensee' and the requirement of Rule 7 would be met. It is, however, suggested that association of one or two service officers of the licensee with CGRF is necessary as it facilitates timely availability of information and also the acceptability of the decision of the CGRF.

7. Since the idea behind creating the institution of CGRF is redressal of grievances of consumers, it is incumbent that such a Forum should be easily accessible to a consumer. It is therefore suggested that the CGRF should be located at a place which is easily accessible by the consumer under jurisdiction of such a Forum. Ideally, CGRF should hold sittings at different places but there should be predetermined dates for hearing the grievances of consumers.

8. As the CGRF is an internal organ of the licensee, it is recommended that the expenditure of the CGRF be borne by the licensee.

9. All SERCs should make provisions in their regulations clearly stipulating that non-compliance of the orders of CGRF would be treated as contravention of the regulations of SERC making the licensee liable for action under section 142 of the Act.

10. Each SERC, while specifying the regulation under section 42(5) and (6), should provide a time limit (say 45 days or 60 days) for disposal of grievances by the CGRF. In the event of the CGRF not disposing off the grievances within the stipulated time period, the consumer should have the right to approach the ombudsman for settlement of non-redressal of his grievance by the CGRF. In addition, the provisions of section 142 of the Act may also be invoked for non-compliance of the regulations of the State Commission.

11. It is recommended that the institution of the ombudsman should be created on a full-time basis so that proper attention is given to the resolution of the grievances of consumers. It is, therefore, suggested that the practice of designating an officer of SERC as ombudsman should be discontinued.

12. Section 91(2) deals with creation of a regular post for the Regulatory Commission and that an ombudsman should not be treated as a regular employee of the Commission. Since the provision for the appointment of an ombudsman has been made in the Act itself in Section 42 (6), there is no need for the creation for a separate post for ombudsman and consequently there is no need for seeking approval of the government under Section 91(2) of the Act.

13. There is a general sentiment that the Act does

not provide for a forum of appeal against the orders of the ombudsman. The institution of ombudsman has been conceived as an arbitrator who seeks to settle the grievances through conciliation. This is borne out by the Allahabad High Court judgment in the civil miscellaneous Writ Petition No. 16216 of 2008, dated April 2, 2008. If the grievance is not settled through conciliation, the ombudsman has the power to proceed with the grievance and make orders. In any case, however, a writ petition against the order of the ombudsman could always lie before the High Court under writ jurisdiction.

14. Expenses of the office of the ombudsman should not be met by the distribution licensee, as it might raise a question on the independence of the ombudsman. The office of the Ombudsman should be funded by SERCs and a separate budgetary allocation could be made in the budget of SERC for this purpose. The SERC may recover such expenses from the licensees directly.

15. Several SERCs are yet to put in place a proper mechanism for monitoring the grievance redressal machinery. The provision in the rule issued by GoI stipulating inter alia requirement of submission of the report by the ombudsman should be institutionalized by all SERCs.

16. A six-monthly conference of the CGRF members and ombudsman by SERC would be appropriate for experience sharing and receiving a feedback for improving guidelines and regulations.

17. It is recommended that NGOs should be involved for consumer education and empowerment. Leaflets highlighting the consumers' rights under the standards of performance regulations should be distributed for dissemination of information amongst the consumers. This would be best achieved by printing the 'consumers' rights' on the back of the electricity bill. This would ensure wider access of message and improve awareness amongst the consumers.

18. As regards consumer advocacy, consumers' groups should not be funded from the budget of the SERC as there could be an occasion when consumers' groups could appeal against the order of Regulatory Commissions in other fora. However, if such funding is not on a case to case basis but is given as an annual fixed grant, conflict of interest would not be an issue. In addition, it is suggested that a proposal be formulated for funding of consumers' groups by the Ministry of Consumer Affairs.

19. It is recommended that FOR should financially support identified competent NGOs or eminent persons to take up/contest important consumer related cases in High Courts, APTEL, and the Supreme Court so that consumers' interests are effectively represented.

20. Knowledgeable retired personnel could be appointed by SERCs as consumer advocates for participating in: (a) tariff hearing to represent interests of domestic, agricultural, and SSI-LT category consumers; (b) hearing for load shedding protocols; and (c) hearing for framing standards of performance. However, there is a need for further deliberation for the ways and means for strengthening the consumer advocacy mechanism.

21. SERCs should organize regular orientation courses for capacity building of consumer advocates. Such orientation courses could also be organized by FOR in order to give the consumer advocates wider awareness and opportunity for sharing of experience in other states.

22. Each SERC should notify a consumer charter based on the model charter suggested in this report.

5.4. MYT & Distribution Margin

MYT framework for distribution licensees

1. Annual revision of performance norms and tariff might not be desirable. During the first control period, which should not be more than three years, the opening levels of performance parameters should be specified as close to the actual level of performance as possible and a trajectory of improvement of norms to desired level be provided with an incentive and disincentive mechanism to share efficiency gains with consumers.

2. The first control period shall be specified as three years and subsequent control periods as five years. The tariff for each year of the control period shall be determined at its beginning. Variations in fuel costs should be passed through the Fuel Cost Adjustment Mechanism on a regular basis with periodicity determined by the SERC, and there should be an adjustment mechanism for uncontrollable factors and sharing of efficiency gains based on annual truing up. The mechanism for recovery of fuel cost at periodic intervals shall be approved by the SERCs.

3. The distribution licensee should submit the business plan and power purchase plan for approval of the Commission, at least six months prior to submission of the MYT petition.

4. The Commission should issue the order on the business plan and the power procurement plan within four months of submission, so that the licensee is able to submit the MYT petition on the basis of the approved plan.

5. Under the MYT regime, it is essential that supply and network costs are segregated and capital expenditure during the control period is tracked for segregated costs. Capital expenditure plans for network strengthening should be formulated electricity division-wise with cost-benefit analysis and targeted reduction in technical losses.

6. The sales forecast should be treated as an uncontrollable factor, given the prevailing supply shortages and uncertainty in supply. The other uncontrollable factors for the distribution licensee shall include: (i) increase in power purchase expenses due to sales variations and variation in fuel costs and interest rates; (ii) Interest rates on long-term loans (if RoE approach is adopted) and working capital; (iii) increase in expenses due to force majeure; (iv) past unfunded pension liabilities; and (v) contribution towards terminal benefits to the trust and provisioning.

7. Controllable factors should include: (i) distribution loss / AT&C loss; (ii) capital expenditure; (iii) O&M expenses; (iv) normative working capital; and (v) collection efficiency or provisioning of bad and doubtful

debts (in case of a distribution loss approach).

8. The regulations of SERCs should disallow adjustment of due subsidy against outstanding loans. However, the adjustment of subsidy against electricity duty actually collected by the distribution licensee may be allowed. In addition, the State governments must ensure timely payment of outstanding dues of consumers, such as street lighting and water works, if necessary, by making deductions from the grant payable to local bodies.
9. The regulations of SERCs should provide for issue of bills on the basis of tariff determined by the SERC in case the State government does not pay the due amount of subsidy in time and in cash.
10. Only the distribution loss should be measured, essentially by AMR- based feeder metering and DT metering. Transmission losses should be dealt with separately.
11. Data on distribution loss levels should be verified through a third party as envisaged in the Tariff Policy. The services of accredited energy auditors and academic institutions such as IITs and other engineering colleges could be utilised for this.
12. The loss levels may be considered at actual level at the start of the first control period and an achievable trajectory may be given under the MYT framework. However, the loss level at the start of the subsequent control periods may be fixed keeping in view the targets set in the previous control period, actual performance and efforts at achievement. The norms should be revised after every MYT period with prospective effect.
13. If the distribution licensee does not reduce the losses in accordance with the specified trajectory, despite undertaking capital expenditure towards reducing the losses, this would amount to violation of the direction and in such cases action under section 142 may be considered by the SERC.
14. To accelerate loss reduction, an incentive and dis-incentive mechanism for field staff of the utility at the circle and sub-division level should also be put in place.
15. O&M expenditure should be allowed on normative basis by prescribing this in the regulations.
16. The proposition of keeping tariffs at the same level in the areas of different licensees in a State is not in accordance with EA 2003 and the Tariff Policy. Differential tariff structure in the area of different licensees in a State should be considered and the tariffs should reflect the efficiencies achieved by a particular licensee. However, the State government has the discretion to give differential subsidy in areas of different licensees and also allocate the PPAs and Capacity of State Generating Stations in different proportions to different licensees.
17. Tariff design for various consumer categories should be based on average cost of supply as this is the most common method and has also been envisaged in the Tariff Policy in the context of reduction of cross-subsidy.
18. A consultancy study should be undertaken for evolving the norms for capital expenditure by distribution licensees. Databases developed through RIMS can form the basis for prudence check for capex proposals. For realistic

assessment of capex requirements, standard guidelines should be developed and rules set for prioritisation of schemes.

19. A consultancy study should be undertaken for the methodology to determine the cost of supply to agricultural consumers and alternatives for reduction of cross-subsidy for this category.

20. A study may also be undertaken for incentive and disincentive systems relevant for government owned utilities.

Sharing of benefits of efficiency gains with consumers

21. The losses on account of under achievement in controllable parameters shall not be shared with consumers as norms are being fixed at close to actual levels, except in extraordinary circumstances if decided by the SERC.

22. Efficiency gains with respect to controllable parameters shall be shared between the licensee and the consumer in the ratio of two-third and one-third at the end of every year during the truing up exercise.

23. The entire gains and losses on account of uncontrollable factors shall be passed on to consumers during the truing up process.

Feasibility of adopting DM concept

24. The DM concept has been provided in the Tariff Policy as a possible basis for allowing returns in the distribution business. This is entirely different from the DM concept considered in Karnataka in the context of privatisation. A study should be undertaken on the DM model as envisaged in the Tariff Policy.

Fixed cost linked to availability for distribution licensee

25. A Composite Index of Supply Availability and Network Availability should be specified. The SERCs should give appropriate weightage to these two factors.

26. Supply availability should be measured on the basis of power contracted by the distribution licensee on a long-term basis in accordance with the power procurement plan submitted by the utility. Network availability should be measured on the basis of reliability indices such as SAIDI, CAIDI and SAIFI. Feeder Reliability Indices at 11 KV voltage level as specified by CEA would be appropriate till 100% consumer indexing is achieved in the licensee's area as the exact number of effected consumers by any interruption will be known only thereafter.

27. The target achievement for Composite Index of Supply Availability and Network Availability may be specified as 95% for urban areas and 85% for rural areas. However, the SERC may initially fix a lower norm for network availability for rural areas keeping in view the present levels of service, with a trajectory for time bound improvement.

28. For every 1% under achievement in composite availability for urban or rural areas, ROE shall be reduced by 0.1% of equity. The SERC shall specify the mechanism of computing Composite Index of Supply Availability and Network Availability.

5.5. Open Access-Theory & Its Practices

Capacity building at SLDC

1. The minimum qualifications and certification of competence of personnel to be deployed in

RLDCs should be incorporated in the Grid Code. This may be done first by the CERC and this would serve as a model for SERCs.

2. A model scheme has been prepared for technological upgradation of SLDCs to provide appropriate connectivity for transmission of data relating to system operations up to SLDCs. This scheme could be sent to all SLDCs for implementation for which CTU would provide technical guidance.
3. The recommendations of the Committee constituted by the Ministry of Power on Manpower, Certification and Incentives for System Operation and Ring-fencing of LDCs, for staffing pattern, organisation structure and incentives to attract qualified personnel in LDCs may be considered by the SERCs while approving the budgets of SLDCs. A template for periodical training of personnel deployed in LDCs needs to be prepared in line with the recommendations of this Committee, to include system operation, market operations, logistics and regulatory matters.

Ring-fencing of SLDC for functional independence

1. For effective ring-fencing of SLDCs, there is an urgent need to delegate financial powers to SLDCs and also an appropriate reporting system for administrative control and recording of confidential remarks. The SLDCs may remain under the administrative control of STUs until a separate government company is established for their operation. The creation of a subsidiary of the transmission utility can work as a stop-gap arrangement during the transition phase. However, in the long run, a separate entity for system operation and load despatch will have to be created at the Central and State levels.
2. During the transition phase, for proper ring-fencing of SLDCs, the practice of their reporting to STUs along with Discoms or state trading companies should be discontinued. Irrespective of whether the SEB has been reorganised or not, the reporting channels right up to the top for SLDCs and Discoms have to be separate and distinct, in terms of both position and top management personnel. This may be formally communicated to the State governments by the ERCs as advice under section 79 and 86 for promoting competition through OA.
3. State governments need to ensure that SLDCs do not report directly or indirectly to any other power sector entity such as distribution or trading licensee. The reporting requirements ought to be kept similar to the reporting pattern for State Electoral Officers under the Election Commission.
4. State governments should phase out the single buyer model with definite timeframe, to pave the way for multi-buyer and multi-seller market models within the State, as the single buyer model creates a conflict of interest and brings pressure upon SLDCs to favour incumbent distribution licensees.
5. CERC may formulate regulations for fees and charges levied by RLDCs to ensure that they not only recover operating and capital servicing costs but also generate surpluses to provide equity for future investments. The State governments should also establish separate

investment funds for SLDCs apart from transfer of existing assets. The revenues for SLDCs, excluding operational expenses, should be escrowed to such a fund. Lenders would be willing to fund capex expansion plans of SLDCs, as approved by ERC, on the basis of such funds. Depreciation should be allowed in view of the pace of obsolescence of IT equipment. The SLDCs should also have full autonomy in expenditure for their operational expenses.

6. The SERCs may thereafter frame regulations for SLDCs as these are essential for ensuring financial autonomy.

Monitoring mechanism for grant of open access

1. The SERCs should monitor cases for short-term OA in transmission separately, on a monthly basis. Cases for short-term OA in distribution may be monitored in a separate format which may also include OA on STU networks. Compilation by the FOR may similarly be done.
2. Open Access is intended to utilise the surplus capacity available by virtue of inherent design margins, margins available due to variation in power flows, and margins available due to in-built spare transmission capacity created to cater to future load growth or generation addition. Hence, OA will also require grid connectivity. Long–term access to the transmission system requires connectivity to the grid based on long-term commitment to pay transmission charges and sufficient evacuation capacity, and does not require case by case grant of OA.
3. The software being used by RLDCs for receiving OA applications electronically and for processing them should be adopted by the SLDCs.

Rationalization of OA charges

1. The applicability of transmission and wheeling charges in different cases of OA should be clarified in the Orders of the SERCs with the help of illustrations. All SERCs should display illustrative cases of OA charges on their websites for sample consumer categories.
2. Losses for transmission and wheeling should be applied on the basis of applicable voltage for delivery of power at 11 kV and above. However, for OA at LT voltage, the losses at 11 kV may only be considered as most losses below this voltage level are commercial losses and OA consumers should not be asked to bear them. Only technical losses, based on estimate or voltage-wise technical studies, should be applied for OA transactions.
3. To promote RE sources, the transmission and wheeling charges may be partly waived for OA transactions based on non-firm, that is, non-schedulable RE sources with lower capacity utilisation factors for wheeling of power within the State. However, transmission and wheeling losses may be applied uniformly based on applicable voltage level. Further, in case RE is being sold to other States, no concession in transmission and wheeling charges need be given to RE projects.
4. The cross-subsidy surcharge needs to be calculated in accordance with the formula in the Tariff Policy, unless there are valid reasons for deviation. In case there is shortage of

electricity, there is no rationale for imposition of any surcharge as the licensee is unable to serve the entire needs of the consumer, and the consumer is forced to source remaining quantum from other sources.

5. Cross-subsidy surcharge should reduce progressively as stipulated in section 42 of EA 2003 and the Tariff Policy. The surcharge rates should be notified in advance for the next few years to provide confidence to OA consumers.
6. There is urgent need to ensure uniformity of technical requirements of metering, data communication etc. for OA applicants across the country. The SERCs may review their Grid Codes and OA regulations to make them consistent with the Grid Code specified by CERC as provided in section 86(1)(h) of EA 2003 and the Metering Regulations specified by CEA.
7. All disputes of intra-State OA would come before the SERC under its regulations. Similarly, all the disputes in inter-State OA should come before the CERC, including the role of SLDCs in such cases.

Facilitative standby power supply arrangement

1. Standby arrangements for OA consumers should be provided by the incumbent licensee to the extent of OA load sanctioned at day ahead notice, by levying the retail tariff as applicable to respective consumer categories only for the period during which such standby support is requested. This would harmonise the approach towards temporary connection charges envisaged in the Tariff Policy. To avoid misuse of standby support, it should be provided for a maximum period of six weeks in a year, to be counted on the basis of number of days. Beyond this duration of six weeks, the OA consumer should avail of regular supply from the distribution licensee.
2. Standby support should be extended only to OA consumers; besides, OA generators would need start-up power support.
3. The charges for standby power support should comprise only energy charges for the days when standby support is requested, and the demand charge for the six-week period may be uniformly spread across the year. No fixed demand charges should be levied on OA consumers beyond this period of six weeks.

5.6. Policies on Renewables

Guidelines for specifying percentage for RE procurement

1. The RPO should be maintained at least at the level of 5% by year 2010 as suggested in the National Action Plan on Climate Change; Additionally, the RE procurement obligation should be specified in terms of purchase of energy and not in terms of installed RE capacity. The RPO should also increase progressively as envisaged in the National Electricity Policy. The increase could be 1% every year till it reaches 10%. Thereafter, the increase could be moderated taking into account availability of RE sources.
2. The RPO should be calibrated with regard to the energy input in the system of distribution licensee, after adjustment of transmission losses and not energy billed (sales).

3. The RPO prescribed should specify the minimum procurement level. A higher percentage may be specified by the SERC for the purpose of contracting the capacity from RE sources, taking into account the gestation period of RE technologies and projected growth in consumption. The RPO may be specified bearing in mind the impact on power purchase cost of the utility and the available potential in the State, till such time as the REC mechanism is in place.
4. The RPO should coincide with the MYT Control Period when MYT is introduced or, till then the RPO should be specified for a period of three to five years. It is also desirable that the future trajectory of the RPO is announced for a longer period in order to provide relief to investors.
5. Monitoring of compliance with RPO should be undertaken with reference to the Control Period of MYT. A reasonable carry over may be permitted vis-à-vis yearly targets.

Share of different RE sources in percentage

6. Overall RPO percentage may be specified rather than technology-specific percentages, and investors may decide on the basis of techno-economic analysis. A part of RPO should be reserved for such RE resources in the region, such as solar PV and solar thermal, which are in the nascent stage of exploitation and the technology involved has risks from the viewpoint of the investor.
7. Compliance with RPO, subject to availability of energy from RE, not restricted to the State, may be enforced by invoking sections 142 and 149 of EA 2003 against the responsible officer of the utility. The penalty under sections 142 and 149 of EA 2003 should be levied in addition to imposition of financial liability in terms of Rs/unit of shortfall and this amount should not be allowed to pass in ARR. In addition, inclusion of RPOs as a part of distribution licence conditions and duties of the licensee may also be explored. With fulfilment of RE obligations becoming part of the licence condition, non-fulfilment of RPO obligations would be treated as violation of licence conditions and attracts the provisions of the Act.
8. In order to promote RE sources, use of only non-fossil fuel-based co-generation and generation should ordinarily qualify for fulfilment of RPOs. Thus, purchase of energy from co-generation based entirely on fossil fuel may not qualify for fulfilment of RPOs. However, when a mix of fossil fuels and non-fossil fuels is used for generation, the use of non-fossil fuels should exceed at least 180 days of operation during the year, and usage of fossil fuels should be limited as required under MNRE guidelines. The SERCs may also set up a monitoring mechanism for use of fossil fuels.
9. The eligibility of fossil fuel-based co-generation to fulfill obligations under section 86(1)(e) needs to be further studied as the definition of co-generation in EA 2003 is much wider than that being followed by MNRE.

Methodology for pricing of non-firm power from RE

10. Wind, solar and small hydro may be categorised as non-firm power sources for which actual generation may be deemed as scheduled generation, since precise scheduling

is not possible with the technology currently available in the country. These RE sources need to be treated as non-firm sources until forecasting techniques for these RE technologies mature. The energy from non-firm sources of power should be paid for on the basis of cost-plus tariff and the site-specific capacity utilisation factor.

11. In case CERC determines the tariffs for RE-based generating stations under sections 79(1)(a) and 79(1)(b), the concessions given by the State government should be factored in. For non-firm power, CERC may specify the project's independent norms such as capital cost, financing cost, etc. Such capital cost benchmarks should be revised annually, taking escalation indices into account. Site-specific factors should be clarified by the SERC. Appropriate benchmarks could be developed for both capital with and escalation indices for major input costs such as steel, cement, etc.

12. Cost-plus tariff based on reasonable norms should be permitted for RE. However, in order to give preferential treatment to RE purchase, SERC may allow a higher rate of return on equity keeping in view the risks involved in deployment of a specific technology. Such higher ROE should be periodically revised for future projects keeping in view the status of commercialisation of the concerned technology.

13. Non-fossil fuel based co-generation would also, thus, get preferential tariff. Fossil fuel-based co-generation could be separately promoted on the grounds of energy efficiency.

Way forward in competitive procurement of RE

14. Competitive bidding should be undertaken to ascertain capital costs in typical cases. Preferential tariff based on the cost-plus approach may be allowed for non-firm RE-based projects for the period until debt service obligations are covered.

15. Preferential tariff should be determined and power purchase agreements established for a period of at least 10-12 years, depending on technology, covering debt service obligations. During this period, the hydrological risk in case of small hydro should be borne by the procurers.

16. The practice of delivering PPA after commissioning of the project needs to be reconsidered. The PPA should be delivered upfront so that developers do not face uncertainty.

17. Such RE projects who have availed cost plus tariff during debt repayment period should be allowed to compete among themselves for sale beyond this minimum support period. The developers should not be forced to supply energy at very nominal rates.

18. Appropriate Guidelines and Standard Bidding Documents for undertaking competitive bidding under Section 63 of the Act needs to be framed by Ministry of Power in consultation with Ministry of New and Renewable Energy for (a) bidding amongst schedulable RE sources like bagasse based generation and (b) bidding amongst the unschedulable generation based projects which have availed preferential tariff during debt repayment period.

Generation-based incentive for different RE sources

19. GBIs are preferable to capital subsidies for promotion of RE technologies.

20. GBIs would be necessary if renewable sources such as solar power are to be promoted at the scale envisaged in the National Policies, otherwise the burden on consumer tariff would be unbearable.

21. GBIs should be announced upfront, which could be factored in the tariff to be set by ERCs. The GBI should be fixed with the objective of making the costs of energy from different renewable sources comparable. However, any GBI announced by the government as an incentive over and above the tariff, such as GBI for wind projects in lieu of accelerated depreciation, need not be factored into the tariff by SERCs.

Facilitative framework for grid connectivity of RE sources

22. Appropriate technical standards for providing grid connectivity for RE-based power stations should be developed expeditiously. The CEA should develop such standards through its Grid Connectivity Regulations. Connectivity standards for solar PV and solar thermal power projects, for both grid connected and rooftop systems, should also be formulated.

23. Grid connectivity should be provided by transmission licensees and distribution licensees for RE sources in an optimum manner, through their capex plans submitted to the appropriate Commissions for approval. The recovery of costs of transmission and evacuation infrastructure for RE sources should be addressed through the regulatory process of approval of ARR of transmission or distribution licensee. The transmission charges should be computed in a rational manner, ensuring that initial projects in an area are not burdened by the total cost of network expansion. Concessional transmission charges could be levied on RE being sold within the State, keeping in view the spirit of the Electricity Act for promoting RE.

24. A separate co-ordination mechanism should be established for RE in SLDCs and STUs to ensure smoother operations and grid integration of RE sources, also including the creation and maintenance of databases regarding future RE projects.

Facilitative framework for inter-State exchange of RE

25. To begin with, the following conditions shall be applicable for inter-State exchange of schedulable RE power such as biomass power: (i) Minimum capacity of 1 MW of RE power; (ii) Scheduling of inter-State RE power to be permitted at six time-blocks (1.5 hours) in advance instead of day-ahead basis; (iii) Actual injection for any time-block shall not be lower or higher than 50% of gross scheduled capacity for which open access is sought; and (iv) Actual deviation should be watched and reported if gaming is suspected.

26. Such transactions could also be facilitated through power exchanges where the bid can be as small as one MW.

Feasibility of introducing RE certificate mechanism

27. A suitable mechanism like REC is necessary to promote RE sources on the scale envisaged in

the National Action Plan on Climate Change. The MNRE has commissioned a study to examine the feasibility of developing a model to operationalise RECs. The study should also examine the GBI as a basis for evaluation of RECs. The legal sanctity of REC vis-à-vis EA 2003 needs to be examined.

Sharing of CDM benefits

28. CDM benefits should be shared on a gross basis starting from 100% to developers in the first year after commissioning and, thereafter, reducing by 10% every year till the sharing becomes equal (50:50) between the developers and the consumers, in the sixth year. Thereafter, the sharing of CDM benefits should remain equal till the time that benefits accrue.

5.7. Staffing of Electricity Regulatory Commissions

1. While Section 91 of the Act provides for different categories of officers and employees, in addition to Secretary, it authorizes the ERCs to appoint consultants for assisting the Commissions in discharging their functions. The Regulatory Commissions have full autonomy and flexibility in the matter of appointing consultants. There is a need, at the same time, for greater flexibility in structuring the pay package for the officers and staff to be appointed under the regulations specified under Section 91 of the Act with approval of the Appropriate Government.

2. The statute requires approval of the government for deciding the service conditions for the first mode (regular staff), while in respect of the second mode (consultants) flexibility has been given to the Regulatory Commissions to decide the conditions of appointment. While granting approval for the first mode, the governments so far have imposed pay packages exactly on government lines for the Regulatory Commissions. This has led to a situation where the Regulatory Commissions are constrained to take people only from government as the government pay packages are not commensurate with the pay packages of public sector undertakings (PSUs) nor are they anywhere close to compensation packages of the open market. Some professionals are available in government but the compensation packages should be attractive enough to adequately meet the expectations of the professionals coming from the PSUs or from the open market and also to compensate the government officers for the loss of various facilities such as housing, medical etc. The IIPA recommendation to the Government of India has rightly observed that "the Commissions should have full autonomy in matters relating to staffing pattern…" subject to an overall ceiling on expenditure since government funding is involved.

3. It is recommended that the fund(s) of the Regulatory Commission provided in the Act should be operationalised in all States at the earliest, preferably on lines of CERC Fund Rules. Adequate revenue should be generated through fees and dependence on the government exchequer should be reduced. The deemed licensees should also be required to pay the same fee as leviable on the persons who obtain a license under the Act. Reduced dependence of the ERCs for grant from the

government exchequer would make a more arguable case for structuring adequately attractive pay packages for the officers and staff of the ERCs to be appointed under the service conditions specified in the regulations under Section 91 of the Act. The emoluments need to be adequate in order to attract competent and experienced people.

4. While the ERCs should have full flexibility in matters relating to staffing pattern, organizational structure and adequate power to recruit the staff as required, an overall ceiling on expenditure could, however, be fixed. The ceiling could be seen in terms of the revenue being realized by the Commission through various fees.

5. The staffing structure in various Regulatory Commissions does not adequately take care of the requirement of specialized skills, as the share of posts meant for professionals (requiring skills and qualifications in finance, economics, engineering, law etc), out of the total staff strength is significantly low. Based on the data made available to the Group, it is observed that only around 28 percent of the total number of posts are meant for professional staff and in some ERCs it is as low as 8 percent. After accounting for the vacancies in such posts meant for professionals, it is found that the Regulatory Commissions are managing with professional staff constituting approximately 16 percent of the total staff strength. Such a pattern is seriously jeopardizing the quality of output. The ERCs should, therefore, urgently review the composition of the staffing structure and adequately balance the needs of professional staff and other staff.

6. Broadly, the staffing structure in a SERC is as follows:

Category I	:	Secretary
Category II	:	Professional Staff
Category IIA	:	Consumer Advocacy
Category III	:	Administrative and Supporting Staff
Category IV	:	Peons/ Drivers / Chowkidars etc.

7. The Secretary to the Commission should be appointed by the SERC with due regard to the requirement inter alia of ensuring effective liaison and coordination with the State governments and external agencies. The Secretary of the Commission should be in the super time scale.

8. Regarding Category II, the staff would be required mainly in the areas of engineering, tariff (financial, project appraisal etc.), Economics, DSM, and law. The staff in this category can be divided in two sub-categories. In the first sub-category, a certain number of officers (3 to 4 in engineering, 2 to 3 in tariff, 2 in DSM, 2 in Economics and 2 to 3 in legal) may be taken on deputation/contract against the sanctioned posts. This sub-category may be seen as the core group for the purpose of maintaining continuity and institutional memory.

9. To attract competent people, the compensation package (including pay and other perquisites) as applicable in Central PSUs should be adopted. Till such time this compensation package is implemented, an additional pay in the range of

30-40 percent (net of income tax) may be given over and above the government pay structure so as to compensate the loss of various facilities/ amenities to the staff joining the Commission.

10. The staff on deputation may be allowed re-employment for additional two years after the age of superannuation.

11. It was generally felt that the demands of knowledge and skill level for the Regulatory Commissions being dynamic in nature, it would not be advisable to design the organizational structure of the Commission on traditional lines, where career development for the staff was assured.

12. The other sub-category in Category II would be persons of requisite qualification and experience hired for consultancy assignments. The selection made and remuneration decided would be through a competitive process. These consultants would be hired for supplementing the manpower required to carry out various responsibilities in situations where either government officers are not available for deputation or where the compensation package fails to attract personnel in big cities such as Bangalore or Mumbai. Appointment of consultants would also ensure that the Commissions are fully equipped in new emerging areas. The number of consultants hired would vary depending upon the factors indicated above. To ensure good quality of output from the consultants over a sustained period, it is recommended that they may be engaged for a period up to three years, as the consultants appointed for a short term try to complete the work in haste and discrepancies become apparent later.

13. In Category III, the supporting staff in the area of administration, accounts, PPS/PS/PA, in-house information management (regulatory data/ library), adequate number of posts may be created and filled through deputation according to government pay scales. Direct recruitment/ contractual employment should be allowed, if persons are not available on deputation.

14. For Category IV, it would be preferable to take the services through outsourcing if locally feasible and if the posts have not already been created.

15. In addition to the four categories described above, a consumer advocacy cell (Category IIA) also needs be created in SERCs with 3-4 positions. Two positions at the officer level with experience of 8-10 years could be against regular posts and one or two consultants could be hired to bring in necessary expertise in the area of consumer advocacy. The cell could also be utilized for disseminating necessary information to the public.

16. SERCs also require necessary assistance and expertise to cater to the requirement of emerging IT applications, maintenance of software, maintenance of website and data entry. These services could be outsourced.

17. The status of the staff of ERCs needs to be clarified regarding whether they are government employees or the employees of an autonomous body. Logically the staff of ERCs should be treated as belonging to an autonomous body which is self-financed and

therefore the pay structure should not be necessarily on the basis of the government pay structure.

18. Hiring some staff (preferably retired) from the utilities would be helpful as the Commission would have knowledge of the internal functioning of the utilities.

19. The Secretary in the ERC should be necessarily given the key coordinating role among the different divisions.

20. Based on the above, a model staffing pattern is provided in the report.

It is also recommended that:

21. The staff of the SERCs should have the facility of reimbursement of medical expenses. The pattern adopted in CERC should be recommended.

22. With a view to taking timely decisions in the matter of capacity building of the staff, the Chairperson should have the authority to sanction the participation of the staff of the Commission in international programmes. Participation in international professional programmes should be on the basis of functional requirements and within the budget provisions. The requirement for exposure to international programmes needs to be seen as an essential functional requirement of the ERCs which are expert bodies, as in the case of the Council for Scientific Research (CSIR) or the All India Institute of Medical Sciences (AIIMS). The ERCs are responsible for regulating and reforming a vital sector of the economy and should not be subjected to financial constraints.

23. The professional staff should be given: (i) laptops and internet facilities, and (ii) reimbursement of fees for becoming members of the professional organizations.

24. In case the facility of government residential accommodation is not available, the ERC should have powers to hire leased housing for the staff up to the level of plinth area admissible to equivalent level officers in the government. Whether the lease rent is reasonable or not should be judged by the internal committee of the ERC and there should be no requirement of taking approval of any other department or agency of the government.

6. Agenda for Year 2009-10

1. Notification of "Conduct of Business Rules of 'FOR'.
2. Finalization of Study on "Model Regulation on Standards of Performance Regulations for Distribution Licensees".
3. Finalization of Study on "Evolving an Appropriate Model for Distribution Margin".
4. Finalization of Study on "Capital Cost Benchmarks for Distribution Business".
5. Finalization of Study on "Analysis of Tariff Orders & Other Orders of State Electricity Regulatory Commissions (SERCs)."
6. Finalization of Study on "Evolving an Appropriate Model of Incentives Disincentives Mechanism for Distribution Utilities".
7. Commissioning of Study on "Assessment of various Renewable Energy Resources Potential in Different States, Determination of RPO Trajectory and its Impact on Tariff."
8. Commissioning of Study on "Implementation & Impact Analysis of Time of Day tariff (TOD) in India".
9. Training Programme on Regulation, Competition and Consumer Issues in the Electricity Sector
10. Orientation course for the Chairpersons and Members of the Electricity Regulatory Commissions.
11. Workshop on "Demand Side Management".
12. Capacity Building Programme for Officers of Regulatory Commission.
13. Workshop on DSM-Load Research for officers of Regulatory Commissions and of Utilities.
14. Training Programme on 'Open Access, role of LDCs and Power markets' for officers of Regulatory Commissions & SLDCs.
15. Training Programme on "Finance & Economics for Regulatory Commissions".

7. Annual Statement of Accounts – 2008-09

1. Forum of Regulators (FOR) has been constituted by Government of India vide Notification dated 16th February, 2005 and given an amount of Rs.3,70,10,642.73 as Corpus Fund. The highlights of annual accounts of Forum of Regulators for year 2008-09 are as under:

(In Rupees)

FY 2008-09		
Income		
1.	Annual subscription from Members of FOR	19,00,000.00
2.	Interest received on investments/Bank deposits	42,45,629.30
3.	Plan Fund (Capacity Building & Consultancy)	1,16,98,930.56
	Total	1,78,44,559.86
Expenditure		
1.	Consultancy charges	67,86,369.00
2.	Training expenses	41,83,536.00
3.	Salary	4,25,135.00
4.	Other expenses (Meeting/Seminar/TA/DA etc.)	18,64,326.00
5.	Depreciation expenses	57,365.40
6.	Contingent charges (Recurring/Non-recurring)	1,70,016.00
7.	Grant refunded to MoP	2,22,864.00
	Total	1,37,09,611.00

2. As on 31st March, 2009, the balance in Bank A/c was Rs. 5,07,321/- (in credit) and the FOR has total investments of Rs. 5,01,90,674/- in the form of FDRs and Auto Sweep Accounts.

8. Address and contact details of Electricity Regulatory Commissions

Sl. No.	Logo	Electricity Regulatory	Address	Contact No./E-mail
1.		Commissions Central Electricity Regulatory Commission	3 rd & 4 th Floor, Chanderlok Building, 36, Janpath, New Delhi- 110001	Ph: 91-11-23353503 Fax: 91-11-23753923 E-mail : info@cercind.gov.in
2.		Andhra Pradesh Electricity Regulatory Commission	4th & 5th Floors 11-4-660, Singareni Bhavan, Red Hills Hyderabad - 500 004	Ph: 23397381, 23397399 Fax: 23397378 & 23397489 E-mail: commn-secy@aperc.gov.in
3.		Assam Electricity Regulatory Commission	ASEB Campus, Dwarandhar, G.S. Road, Sixth Mile, Guwahati - 781022	Ph: 0361-2234442 / 2234472 Fax: 0361-2234432 Email:aerc_ghy@hotmail.com
4.		Bihar Electricity Regulatory Commission	Ground Floor, Vidyut Bhawan-II, B.S.E.B. Campus, Jawahar Lal Nehru Marg (Bailey Road), Patna - 800021 Bihar (India)	Phone : 091-612-6526749, 2504489, 2504488 Fax : 0612-2504488 Email: bercpat@berc.co.in
5.		Chhattisgarh State Electricity Regulatory Commission	Civil Lines, G.E Road, Raipur (CG.) Pin 492001	Phone : 91-771-4073555, Fax : 4073553 Email : cserc.sec.cg@nic.in
6.		Delhi Electricity Regulatory Commission	Viniyamak Bhavan, C-Block, Shivalik, Malviya Nagar New Delhi -110017	Telefax : 91-11-26673608 Email : secyderc@nic.in
7.		Gujarat Electricity Regulatory Commission	1st Floor, Neptune Tower Opposite Nehru Bridge Ashram Road Ahmedabad - 380 009 Gujarat - India	Phone: 079-26580350, 26580359 Fax: 079-26584542 Email : gerc@gercin.org
8.		Haryana Electricity Regulatory Commission	Bays 33-36, Sector 4, Panchkula-134112 Haryana	Phone: +91(172)2582531 Fax:+91(172)2572359 E-Mail: herc@chd.nic.in
9.		Himachal Pradesh Electricity Regulatory Commission	Keonthal Commercial Complex, Khalini Complex, Khalini Shimla-171 002 Himachal Pradesh	Phone: + 91 - 177 - 2627262 / 2627263 Fax.: + 91 - 177 - 2627162 E-Mail : hperc@rediff.com

10.		J&K State Electricity Regulatory Commission	PDC Complex, Ashok Nagar Satwari, Jammu	Telephone : 0191-2457899 Fax: 0191 -2454420 E-mail: jkserc@hotmail.com
11.		Jharkhand State Electricity Regulatory	2nd floor, Rajendra Jawan Commission Bhawan-cum-Sainik Bazar Main Road, Ranchi-834001	Ph.: 0651-2330926 Fax: 0651-2330924 E-mail: jserc@sancharnet.in
12.		Karnataka Electricity Regulatory Commission	No. 9/2, Mahalaxmi Chambers, 6th & 7th Floor, M.G.Road, Bangalore-560001	Ph: 080-25320355, 25320213, 25320214 Fax: 080-25320338 E-mail: kerc@vsnl.com
13.		Kerala State Electricity Regulatory Commission	K.P.F.C.Bhavanam C.V.Raman Pillai Road Vellayambalam Thiruvananthapuram 695 010	Ph: 0471-2735588 Fax: 0471-2735599 E-mail: kserc@erckerala.org
14.		Madhya Pradesh Electricity Regulatory Commission	"Metro Plaza", 3rd & 4th Floor, E-5 Arera Colony, Bittan Market, Bhopal - 462 016	Ph: 0755-2463585 Fax: 0755-2430158 Email:secmperc@sancharnet.in
15.	MERC	Maharashtra Electricity Regulatory Commission	World Trade Centre, Center No.1,13th Floor, Cuffe Parade, Colaba, Mumbai-400005	Tel:091-22-22163964/65/69 Fax:091-22-22163976 Email:mercindia@mercindia.org.in
16.		Orrisa Electricity Regulatory Commission	Bidyut Niyamak Bhavan, Unit-VIII, Bhubaneswar - 751 012	Ph.:+91-674-2396117, 2393097, 2391580, 2393606 Fax.:+91-674-2393306, 2395781 E-mail- orierc@rediffmail.com, info@orierc.org
17.		Punjab State Electricity Regulatory Commission	SCO: 220-221, Sector-34-A, Chandigarh	Ph: (0172) 2645164 - 65 - 66 Fax: (0172) 2664758, 2645163 E-mail: percchd8@hotmail.com
18.	RERC	Rajasthan Electricity Regulatory Commission	Shed No. 5, Vidhyut Bhawan, Vidhyut Marg, Jyoti Nagar, Jaipur 302 005.	Ph: 2741181, 2741016 Fax: 2741018 Email : rercjpr@yahoo.co.in
19.		Tamil Nadu Electricity Regulatory Commission	19-A, Rukhmani Lakshmipathy Salai (Marshalls Road), Egmore, Chennai - 600 008.	Ph:044-28411378 / 28411379 E-mail: tnerc@vsnl.net

20.		Uttar Pradesh Electricity Regulatory Commission	Kishan Mandi Bhawan, 2nd Floor, Gomti Nagar, Lucknow - 226010.	Phone:2720424, Fax: 2720423 Email: secretary@uperc.org
21.		Uttarakhand Electricity Regulatory Commission	The Institute of Engineers (India), 1st Floor, Near ISBT, Majra, Dehradun (Uttarakhand)	Tel:0135-2763441 Fax: 0135-2641314 E-mail: uerc@indiatimes.com
22.		West Bengal Electricity Regulatory Commission	FD-415A, Paura Bhavan, (3rd Floor), Sector - III, Bidhannagar, Kolkata - 700091.	Ph: 2359-2189,2359-3397 Fax:(033)2359-3397 E-mail: wberc@cal3.vsnl.net.in
23.		Joint Electricity Regulatory Commission for UTs Except Delhi	2nd Floor, HSIIDC Office Complex, Udyog Vihar, Phase-V, Gurgaon (Haryana)	Ph: 0124-2343302, 23714168 Fax: 0124-2342853 Email: sec_jerc@hotmail.com
24.		Joint Electricity Regulatory Commission for Manipur & Mizoram	D-31, Mahatma Gandhi Road, Upper Khatla, Aizawl, Mizoram-796001.	Ph: 0389-2301926 Fax: 0389-2301299/2344301 E-mail: jerc.mm@gmail.com
25.		Tripura Electricity Regulatory Commission	Buthoria, Choumuhani, Agartala - 799 001	Ph: 0381-2326372 Fax: 0381-2326372 Email: ssctercom@yahoo.com
26.		Meghalaya State Electricity Regulatory Commission	Lower Lachumiere, New Administrative Bldg., 1st Floor, East Khasi Hills District, Shillong - 793 001 (Meghalaya)	Ph: 91-364-2500142 / 2500069 Fax: 91-364-2500062 Email : mmserc@gmail.com secy.mserc-meg@nic.in

ANNEXURES

ANNEXURE-I

Members of Forum of Regulators (FOR) (as on 31.03.2009)

Sl. No.	Photograph	Name & Designation	Electricity Regulatory Commissions
		Chairperson, 'FOR'	
1.		Dr. Pramod Deo Chairperson	Central Electricity Regulatory Commission (CERC)
		Members, 'FOR'	
2.		Shri A. Raghotham Rao Chairperson	Andhra Pradesh Electricity Regulatory Commission (APERC)
3.		Shri Jayanta Barkakati Chairperson	Assam Electricity Regulatory Commission (AERC)
4.		Shri B.K. Halder Chairperson	Bihar Electricity Regulatory Commission (BERC)
5.		Shri S.K. Misra Chairperson	Chhattisgarh State Electricity Regulatory Commission (CSERC)
6.		Shri Barjinder Singh Chairperson	Delhi Electricity Regulatory Commission (DERC)
7.		Dr. P.K. Mishra Chairperson	Gujarat Electricity Regulatory Commission (GERC)
8.		Shri Bhaskar Chatterjee Chairperson	Haryana Electricity Regulatory Commission (HERC)
9.		Shri Yogesh Khanna Chairperson	Himachal Pradesh Electricity Regulatory Commission (HPERC)
10.		Shri K.B. Pillai Chairperson	J&K State Electricity Regulatory Commission (J&KSERC)
11.		Shri Mukhtiar Singh Chairperson	Jharkhand State Electricity Regulatory Commission (JSERC)
12.		Shri K.P. Pandey Chairperson	Karnataka Electricity Regulatory Commission (KERC)

Sl. No.	Photograph	Name & Designation	Electricity Regulatory Commissions
13.		Shri C. Balakrishnan Chairperson	Kerala State Electricity Regulatory Commission (KSERC)
14.		Dr. J.L. Bose Chairperson	Madhya Pradesh Electricity Regulatory Commission (MPERC)
15.		Shri V.P. Raja Chairperson	Maharashtra Electricity Regulatory Commission (MERC)
16.		Shri Bijoy Kumar Das Chairperson	Orissa Electricity Regulatory Commission (OERC)
17.		Shri Jai Singh Gill Chairperson	Punjab State Electricity Regulatory Commission (PSERC)
18.		Shri D.C. Samant Chairperson	Rajasthan Electricity Regulatory Commission (RERC)
19.		Shri S. Kabilan Chairperson	Tamil Nadu Electricity Regulatory Commission (TNERC)
20.		Shri Rajesh Awasthi Chairperson	Uttar Pradesh Electricity Regulatory Commission (UPERC)
21.		Shri V.J. Talwar Chairperson	Uttarakhand Electricity Regulatory Commission (UERC)
22.		Shri Prasad Ranjan Ray Chairperson	West Bengal Electricity Regulatory Commission (WBSERC)
23.		Shri V.K. Garg Chairperson	Joint Electricity Regulatory Commission for UTs Except Delhi (JERC-UTs)
24.		Shri Rin Sanga Chairperson	Joint Electricity Regulatory Commission for Manipur & Mizoram (JERC-M&M)
25.		Shri Manoranjan Karmarkar Chairperson	Tripura Electricity Regulatory Commission (TERC)
26.		Shri Vinay Kohli Chairperson	Meghalaya State Electricity Regulatory Commission (MsERC)

ANNEXURE-II

Status Report on Issues Pertaining to National Electricity Policy

1. GRID Codes

Provision in NEP (National Electricity Policy)

5.3.2 .....

- The State Regulatory Commissions who have not yet notified the grid code under the Electricity Act 2003 should notify the same not later than September 2005.

S. No.	SERC	Date of Notification	Status
1.	APERC	1999	APERC is yet to issue Grid Code under Electricity Act 2003, as envisaged under National Electricity Policy. The existing Grid Code was issued in pursuant to the License conditions. State Load Dispatch Centre is still functioning under the State Transmission Utility
2.	AERC	Aug 7th, 2004	Notified
3.	BERC	N/A	Under process of finalization of the Draft Grid code
4.	CSERC	Dec 30, 2006	Notified
5.	DERC	Mar 31st ,2008	Notified
6.	GERC	Aug 25, 2004	Notified vide notification no.05 of 2004 dated 25th August 2004
7.	HERC		Hearing held and the final regulation is under the process of notification.
8.	HPERC	05.08.2008	Notified
9.	JSERC	N/A	Grid Code issued for comments
10.	J&KSERC	N/A	Draft Notified
11.	KERC	Jan 26, 2006	Notified
12.	KSERC	Jan 13, 2006	Notified
13.	MPERC	Aug 20th,, 2005	Notified date of notification August 20th, 2005
14.	MERC	April 1st ,2006	Notified
15.	MsERC	N/A	Not notified.
16.	OERC	June 14, 2006	Notified

S. No.	SERC	Date of Notification	Status
17.	PSERC	Mar 9, 2006	Notified
18.	RERC		The revised grid code in line with IEGC 06 has been notified by the Commission
19.	TERC	N/A	Awaiting for publication
20.	TNERC	Oct. 19, 2005	Notified on 19.10.2005
21.	UERC	April 09, 2007	Notified
22.	UPERC	July 14, 2007	New Grid Code Notified
23.	WBERC	Jan 16, 2006 (replaced by new set of Regulatons on 4.4.2007)	Notified

2. Technology Up-gradation

Provision in NEP:
5.3.3 ..... The Regulatory Commissions need to provide facilitative framework for non-discriminatory open access. This requires load dispatch facilities with state-of-the art communication and data acquisition capability on a real time basis. While this is the case currently at the regional load dispatch centers, appropriate State Commissions must ensure that matching facilities with technology upgrades are provided at the State level, where necessary and realized not later than June 2006.

S. No.	SERC	Status
1.	AERC	SLDC equipped with technology equivalent to RLDC. LDC not yet established
2.	APERC	For all high value services, high quality static meters are being installed, GIS/GPS based consumer indexing and Asset Tracking work is under progress, Computerization of Circle offices and section offices by providing connectivity through WAN is under progress
3.	BERC	SLDC is functioning at BSEB H.Q. Upgradation of SLDC was done by Powergrid under ULDC project. The work of SCADA is under progress by Powergrid.
4.	CSERC	Up-gradation in progress. SCADA installed. Installation of RTU's is in progress.
5.	DERC	1. Billing by all the three discoms completely computerized 2. Electronic meters installed in about 90% cases. 3. HVDS / LT Aerial bunched (AB) Conductors installation being vigorously pursued for AT&C loss reduction. 4. Installation of Gas Insulated Switchgear(GIS) being pursued by Delhi Transco Limited and Discoms to overcome space constraint. 5. Automatic Meter Reading (AMR) for high end consumers. 6. GIS mapping and indexing of consumers in progress. 7. DT metering completed. 8. SCADA system installation completed. 9. SLDC fully functional and properly interfaced with RLDC as well as Discoms' control centres.
6.	GERC	1. Upgrades almost complete with aid of 'Powergrid' as consultant. 2. Torrent Power Ltd has implemented IT enabled technologies in distribution like integrated metering, billing and collection system, Audit metering system, AMR, Outage management system, etc and TPL is planning to set up distribution automation system and GIS technology in Surat. 3. UGVCL has implemented IT technologies like ERP Oracle 11i which contains modules on LT& HT billing and other financial parameters. UGVCL also has ATM for payments, interfacing with DAS, Consumer monitoring system, web based GIS system integrated with network analysis tools, etc.

S. No.	SERC	Status
7.	HERC	Up-gradation of SLDC, which is functional at Panipat, is to be done by HVPNL for which direction have been issued by the Commission.
8.	HPERC	SLDC & ALDC have been established, but their functioning is limited to data acquisition. SLDC may require up-gradation once the intra state ABT taken place.
9.	JSERC	No plan has been submitted by JSEB.
10.	J&KSERC	Facilities available.
11.	KERC	KPTCL has taken up the up gradation of SCADA under integrated SCADA scheme and proposes to complete the same by the end of 2008.
12.	KSERC	SCADA already implemented through ULCDs in 2001.
13.	MPERC	The Commission has circulated the draft Balancing and Settlement Code (BSC) amongst stakeholders. The mock trial of intra-state ABT is started from 1st August, 2008. SLDC has made provision to display the online activities and power flow from generation. Sub-SLDC at Bhopal and Indore under ULDC projects have been completed. SLDC is technologically equipped for implementation of Intra-state ABT. Necessary hardware and software have been procured and presently are under trial.
14.	MERC	1. The Commission has approved the proposed increase in Remote Terminal Units (RTU) and also directed to strengthen the comprehensive communication plant utilizing optical fiber backbone and multi access radio equipments. 2. The installation of Intra-State ABT compatible meters and related software will be completed by March 2009 and thereafter the trial run will be started 3. The Commission has approved the proposed real-time data acquisition capability, effective communication system, infrastructure management, while approving the MSLDC budget for FY 2007-08.
15.	MSERC	SLDC is functioning. It is under the de facto control of the S.E.B., SCADA being implemented in Shillong.
16.	OERC	ULDC though set up by OPTCL requires further up-gradation
17.	PSERC	Technology up-gradation of SLDC already done.
18.	RERC	In compliance with para 5.6 of the National Electricity Policy, the Commission has directed Rajasthan Vidyut Prasaran Nigam Ltd. To spend 0.5% of the total capital outlay on IT. IT enabled services and training programmes.
19.	TNERC	Data communication network have been established in 94 Power Houses/Grid Sub-Stations. Work is under progress in 16 stations.
20.	TERC	Project in progress

S. No.	SERC	Status
21.	UERC	SLDC is being upgraded.
22.	UPERC	SLDC has established Multi-Buyer Multi-Seller Unit with necessary infrastructure to undertake energy UI accounting under ABT, however, licensees have informed that real time online data exchange system is yet to be operationalized. Accounting software developed are under test and personnel are being trained in ABT related matter. SLDC is already functioning and carrying out energy accounting from Tanda TPS under ABT. Remote Console for availability of data of Power Houses has been procured which shall be got commissioned by firm after completion of some renovation work. The work of ABT monitoring software is under progress. VSAT links are to be established by STU for automatic and real time transfer of information.
23.	WBERC	SLDC matches the facilities that of RLDC.

3. Open Access Transmission Charges & Distribution networks Charges

Provision in NEP:

5.3.3 ..... Non-discriminatory open access shall be provided to competing generators supplying power to licensees upon payment of transmission charge to be determined by the appropriate Commission. The appropriate Commissions shall establish such transmission charges no later than June 2005.

5.4.5 ..... Section 49 of the Act provides that such consumers who have been allowed open access under section 42 may enter into agreement with any person for supply of electricity on such terms and conditions, including tariff, as may be agreed upon by them. While making regulations for open access in distribution, the SERCs will also determine wheeling charges and cross-subsidy surcharge as required under section 42 of the Act.

WHEELING CHARGES(Paise/Unit)

S.No	SERC	Year	Utility	EHT/132kv	HT/33/66kV	HT/11kV	LT
1	AERC	2008-09	LAEDCL		79.00	79.00	79.00
			CAEDCL		106.00	106.00	106.00
			UAEDCL		73.00	73.00	73.00
2	BERC	These charges have been determined					
3	CSERC	2007-08	CSEB	--	15.00		
4	DERC	2007-08	BRPL	0.00	7.66	32.80	62.19
			BYPL	0.00	7.96	34.13	70.71
			NDPL	0.00	9.32	40.90	72.71
5	HERC	2007-08	40.00				
6	HPERC	2007-08	HPSEB	-	75	-	-
7	KERC	2007-08	BESCOM		6.00	6.00	14.00
			MESCOM		17.00	17.00	40.00
			CESCO		16.00	16.00	36.00
			HESCOM		17.00	17.00	38.00
			GESCOM		20.00	20.00	47.00
8	MsERC				20.05	20.05	20.05
9	OERC	2008-09	WESCO		52		

S.No	SERC	Year	Utility	EHT/132kv	HT/33/66kV	HT/11kV	LT
			NESCO		64		
			SOUTHCO		67		
			CESU		74		
10	RERC	2008-09		1.00	11.00	32.00	
11	TNERC	2005-06			14.74	14.74	14.74
12	UERC	2008-09	UPCL	To be decided on case to case basis			
13	UPERC	2008-09		Long Term	Short Term		
				Above 11kV	11kV	Above 11kV	11kV
			PVVNL	28	45	7	11
			DVVNL	28	45	7	11
			MVVNL	28	45	7	11
			PuVVNL	28	45	7	11
			KESCO	25	40	6	10
			NPCL	32	51	8	13
14	WBERC	2007-08	(a) Long-term customers(b) Short-term customers				
				A	B	A	B
			CESC LTD	31.00	92.99	24.80	74.39
			WBSEDCL	23.06	69.19	18.45	55.35
			DPSCL	10.41	31.23	8.33	24.98
			DPL	4.63	13.89	3.70	11.11
			A= For energy generating from co-generation and non-conventional/renewable energy sources				
			B=For energy generation from other sources				
WHEELING CHARGES(Rs/MW/Month)							
15	GERC*	2007-08	All Discoms	Rs/MW/Month	6721.00	6721.00	6721.00
				Rs/MW/Day	2205.00	2205.00	2205.00
16	J&KERC	2008-09		As per ST rate of NR			

S.No	SERC	Year	Utility	EHT/132kv	HT/33/66kV	HT/11kV	LT
17	MERC	2007-08	MSEDCL	Rs/KW/Month	20	110	191
			REL	Rs/KW/Month	122	122	140
			TPC	Rs/KW/Month	101	101	196
18	MPERC	2008-09	NA				
19	PSERC	2008-09	LTOA	Rs/MW/Day	4431.00		
			STOA	Rs/MW/Day	2659.00		

LTOA - Long Term Open Access
STOA - Short Term Open Access

Transmission Charges(28.08.08)

S. No.	SERC	Year	LTOA (Rs./MW/Month)		STOA (Rs./MW/Day)
1.	APERC	Transmission charges for Open Access and other charges such as cross subsidy surcharge, additional surcharge, SLDC charge etc., have been determined by APERC from time to time			
2.	AERC	2008-09	54 Paise/Unit		54 Paise/Unit
3.	BERC	These charges have been determined			
4.	CSERC	2007-08	63030.00		518.00
5.	DERC	2007-11	As per the MYT order issued on 20.12.2007 for DTL		
6.	GERC	2007-08	2510.00/MW/day		628/MW/day
7.	HERC	2007-08	114.13/kV/month		0.19/kWh
8.	HPERC	2007-08	43,621.00		As per CERC Regulations
9.	JSERC	2006-07	11.00 Paise/Unit		11.00 Paise/Unit
10.	J&KSERC	2007-08	As per ST rate of NR		
11.	KERC	2008-09	95869.00		788.00
12.	KSERC		10.00 Paise/Unit		10.00 Paise/Unit
13.	MPERC	2008-09	2448.23/MW/day		612.06/MW/day
14.	MERC	2007-08	148320		1236
15.	MsERC		20.05 Paise/Unit		20.05 Paise/Unit
16.	OERC	2008-09	151200.00		1260.00
17.	PSERC	2008-09	4431. Rs./MW/Day		2659.00Rs./MW/Day
18.	RERC	2008-09	94.78 per KW/Month		
19.	UERC	2008-09	40320.00		To be taken up separately
20.	UPERC	2008-09	Above 132KV	16.00 Paise/Unit	04.00 Paise/Unit
			132 KV	22.00 Paise/Unit	05.00 Paise/Unit
21.	WBERC	2007-08	1,55,058***		1292.15***

4. Time-Bound Program on Aggregate Technical & Commercial Losses

Provision in NEP:

5.4.6 A time-bound programme should be drawn up by the State Electricity Regulatory Commissions (SERC) for segregation of technical and commercial losses through energy audits. Energy accounting and declaration of its results in each defined unit, as determined by SERCs, should be mandatory not later than March 2007. An action plan for reduction of the losses with adequate investments and suitable improvements in governance should be drawn up. Standards for reliability and quality of supply as well as for loss levels shall also be specified, from time to time, so as to bring these in line with international practices by year 2012.

S. No.	SERC	Utility	Loss Reduction					
			2005-06		2006-07		2007-08	
			Target	Achieve	Target	Achieve	Target	Achieve
1.	APERC	APCPDCL	➢ Long term trajectory for reduction of AT&C losses yet to be lai down by APERC.					
		APEPDCL						
		APNPDCL						
		APSPDCL						
2.	AERC	ASEB					25.13%	28.45%
		CAEDCL	32.02%	31.00%	30.52%	35.60%	26.55%	31.79%
		LAEDCL	25.38%	31.11%	23.88%	29.20%	21.60%	26.83%
		UAEDCL	30.28%	34.35%	28.78%	35.00%	28.35%	28.73%
3.	BERC	BSEB	Road map and trajectory for reduction of AT&C loss and also segregation of AT&C losses given to BSEB (deemed Licensee)					
4.	CSERC	CSEB	35.81%	36.19	33.81	35.54	32.54	--
5.	GERC	DGVCL	21.40%	19.99%	16.59%	16.52%	15.59%	15.45% (Prov.)
		MGVCL	21.40%	20.24%	18.24%	15.10%	16.74%	15.89% (Prov)
		PGVCL	41.00%	38.72%	34.22%	32.54%	30.22%	32.80 (Prov)
		UGVCL	28.6%	22.95%	19.45%	15.82%	16.95	17.31% (Prov)
		TPL	10.28%	9.67%	9.52%	9.34%	9.26%	9.26 % (estimated)
6.	HERC	Distribution losses	32.3%	--	30.5%	--	26%	--
		Transmission losses	4.5%	--	4.4%	--	2.1%	--
7.	HPERC	HPSEB	19.5%	18.1%	18.5%	17.00%	17.5%	-

S. No.	SERC	Utility	Loss Reduction					
			2005-06		2006-07		2007-08	
			Target	Achieve	Target	Achieve	Target	Achieve
8.	KERC (Only T & D Losses)	BESCOM	-	24.63%	21.00%	24.20%	20.50%	23.73%
		GESCOM	-	37.03%	27.05%	39.10%	27.05%	35.52%
		HESCOM	-	27.50%	26.37%	28.18%	25.00%	27.82%
		MESCOM	-	16.67%	15.52%	15.51%	15.00%	15.29%
		CESC	-	25.92%	25.17%	27.03%	22.00%	25.80%
		Hukeri RECS	-	15.56%	15.00%	15.04%	14.75%	15.49%
9.	KSERC	KSEB	21.23%	22.96%	20.47%	21.47%	19.47%	20.11%
10.	MPERC	MP Madhya Kshetra VVCL	--	43.39%	43.00%	42.65%	40.00%	41.43%
		MP Paschim Kshetra VVCL	--	31.91%	30.00%	30.73%	28.50%	33.99%
		MP Purv Kshetra VVCL	--	36.30%	34.50%	35.39%	32.50%	37.72%
11.	MERC	MSEDCL			34.97%	31.6%	26.20%	24.09%
		TPL	2.3%*	2.3%*%	2.93%	2.93%	2.93%	2.93%**
		BEST	12.4%	13.2%%	11.49%	11.90%	11.00%	10.38%**
		REL	13.75%	13.10%%	11.85%	12.10%	11.0%	11.10%**
		BSES						
		* It includes Transmission losses also. ** As submitted by the utilities in their respective APR's						
12.	MsERC	MeSEB	-	-	-	-	28.41%	Not achieved
13.	PSERC	PSEB	22.00%	25.38%	20.75%	24.25%	19.50%	Data not available
14.	RERC	The Commission has already assigned the targets for loss reduction by distribution licensee for the year 2007-08 and 2008-09 in its order issued for Multi Year Tariff						

S. No.	SERC	Utility	Loss Reduction					
			2005-06		2006-07		2007-08	
			Target	Achieve	Target	Achieve	Target	Achieve
15.	UERC	UPPCL (T&D Losses)	32.32%	33.38%	28.32%	32.84%	24.32%	30.73%
16.	UPERC**	DVVNL (incl. Bulk)	32%	32.1%	30%	30.3%	28%	25.4%
		PuVVNL	29%	28.8%	33%	32.8%	30%	22.8%
		PVVNL (incl. Bulk)	31%	31.3%	30%	30.2%	27%	25.4%
		MVVNL	26%	25.8%	28%	27.7%	25%	18.4%
		KESCO		34.25%		37.62%	30%	28.97%

5. Metering Plans

Provision in NEP:
5.4.9 The Act requires all consumers to be metered within two years. The SERCs may obtain from the Distribution Licensees their metering plans, approve these, and monitor the same. The SERCs should encourage use of pre-paid meters. In the first instance, TOD meters for large consumers with a minimum load of one MVA are also to be encouraged. The SERCs should also put in place independent third-party meter testing arrangements.

S. No	SERC	Metering Plan
1.	APERC	Metering of 11 KV feeders are being done on sample basis. All Distribution transformers have not been provided with meters. All consumers except Agricultural services released prior to the enactment of EA 2003 have been supplied with meters.
2.	AERC	(1) TOD meters placed for HT categories such as Tea, Coffee, Rubber, Oil & Coal and industry. Third party arrangement for meter testing done at E.T.D.C (GoI organisation). (2) Action taken by utilities to convert all electromechanical meters to static meters. All new connections are released through static meters.
3.	BERC	Directive for cent percent metering has been given to BSEB in Tariff Order of 2006-07 & repeated in Tariff Order for 2008-09. BSEB has been directed to provide no new connection without meter.
4.	CSERC	Target date of 100% metering has been extended up to March, 2009. No new connection without meter. The Board has been advised to put in place a third party meter testing arrangement. The CSEB is strengthening its Meter Testing Laboratory.
5.	DERC	100% metering has been achieved at 11 KV feeders at all Discoms & for other consumers three Discoms viz. BRPL, BYPL and NDPL has achieved 98.23%, 99.35%, and 97.63% meterization.
6.	GERC	All categories are metered. For metering all Agricultural consumers directives had been given to the Distribution licensees vide Tariff Orders dated 31/03/07.
7.	HERC	HERC has made it mandatory for the Discoms to release only metered supply connections. The Discoms are in the process of putting meters on the un-metered agriculture pump-set supply.
8.	HPERC	TOD meters installed for all categories of consumers having connected load above 20KW, except domestic consumer. Electronic meters being installed for all new domestic consumer and old electro-mechanised meters being replaced in phased manner. After the successful pilot project on pre-paid metering in Shimla for duration of six months, the Commission directed the utility to promote pre-paid metering to the consumers who wish to install their own meters with immediate effect. The third party meter testing has been put in place by the Commission.

S. No	SERC	Metering Plan
9.	JSERC	Commission is trying to put in place a third party meter testing arrangements.
10.	J&KSERC	The commission has directed the J&K state Utilities to furnish details of metering plan and to install TOD meters.
11.	KERC	Discoms have installed meters for all the installations except IP sets and BJ/KJ. Specific metering plan is yet to be furnished by Discoms. Status of % of metering of BJ/KJ installations & IP sets as on 31.3.2008 is as under: BESCOM: BJ/KJ 56.76%, IP Sets 8.40% MESCOM: BJ/KJ 76.35%, IP Sets 91.71% CESC: BJ/KJ 98.21%, IP Sets 20.91% HESCOM: BJ/KJ 73.71%, IP Sets 29.89% GESCOM: BJ/KJ 58.65%, IP Sets 13.21% Hukeri RECS: BJ/KJ -, IP Sets 32.09%
12.	KSERC	TOD meters made compulsory for all HT and EHT consumers across the State.
13.	MPERC	MPERC had extended the time period for 100% metering to all unmetered consumers vide Gazette notification dated 18.10.2005. The time limit to achieve 100% metering for domestic and agricultural consumers had been fixed by the Commission by March 2006 and September 2007, respectively. The licensees could not complete 100% metering program and had again filed a petition with MPERC seeking further extension of the time limit to achieve 100% metering in domestic and agricultural category by March 2010 and March 2011, respectively. MPERC sought the reasons for non achievement of metering target and a firm metering plan vis-à-vis meter procurement program. Accordingly, as per the revised plan the Distribution Companies of the State are to provide meters to all their consumers who are residing in the urban areas, by March 2009. The MPERC is also emphasizing the need for 100% metering of the un-metered domestic connection of rural areas.
14.	MERC	SERC has directed MSEDCL to comply with the statutory provisions as well as the National Tariff Policy in respect of individual consumer metering. The Commission also directed MSEDCL to install appropriate tri-vector meters capable of recording maximum demand for LT industrial consumers.
15.	MSERC	53% of the Consumers in the Distribution are metered leaving aside 47% un-metered. Board has been directed to accelerate the meter installation programme to complete as targeted.
16.	OERC	The provisions have been incorporated in OERC Distribution Code, 2004 in line with CEA (Installation & Operation of Meters) Regulation, 2006. The progress is monitored from Grid substations upto consumer end. Status being reviewed in every two months.
17.	PSERC	Utility has installed electronic meters on all industrial consumers. Replacement of electro mechanical meters with electronic meters in respect of NRS and DS consumers is in progress. Metering of AP consumers is yet to be undertaken.

S. No	SERC	Metering Plan
18.	RERC	All consumers except agriculture consumers metered. Time limit for complete metering of agriculture consumes has been extended up to 09-06-09.
19.	TNERC	Time extended to 31.03.2009 for installation of meter in agriculture and hut services by the Commission. TOD meters installed in all HT consumers. With regard to DT metering, out of total 180763 Nos. of DTs 89738 Nos. have been metered as on 30.06.2008. The metering of balance DTs is under progress. Provision of independent third party meter testing arrangements is yet to be established by TNEB.
20.	TERC	Completion of energy metering of consumer premises in progress. Significant computerized billing achieved in the urban sector and in most of the rural areas.
21.	UERC	Directions issued for 100% metering. Penalty imposed for non compliance. TOD implemented on a large scale. % of DT's metered as on 31.03.2008 : 40.61%, % of consumer metering as on 31.03.2008: 98.35%
22.	UPERC	All 11 KV Feeders have been metered, TOD meters for Large and Heavy Power Consumers (HV-2) have been installed. Directions have been issued for 100% metering; Discoms are in the process of installing electronic meters on all consumers.
23.	WBERC	Completed.

6. Implementation of HVDS, SCADA & Data-Base Management

Provision in NEP:
5.4.11 High Voltage Distribution System is an effective method for reduction of technical losses, prevention of theft, improved voltage profile and better consumer service. It should be promoted to reduce LT/HT ratio keeping in view the techno economic considerations.
5.4.12 SCADA and data management systems are useful for efficient working of Distribution Systems. A time bound programme for implementation of SCADA and data management system should be obtained from Distribution Licensees and approved by the SERCs keeping in view the techno economic considerations. Efforts should be made to install substation automation equipment in a phased manner.

S. No	SERC	HVDS	SCADA & Data Base Management
1.	APERC	Only one distribution utility, APCPDCL has SCADA system working on experimental basis. APEPDCL and APSPDCL are planning to implement SCADA system	
2.	AERC	HT tariff rates are separately notified & kept lower to encourage the consumers to opt for supply at a higher voltage with effect from 2005-06.	SCADA implemented in phases.
3.	BERC	HVDS is being provided under rural electrification.	SCADA & Database Management work is under progress in BSEB.
4.	CSERC	Board has started converting LT system to HVDS. Scheme prepared for two areas for availing REC funds.	SCADA implemented. In first phase 220kV and 132 kV substations automation is in process.
5.	DERC	HVDS-Implemented in the past but not favoured now. Low Tension Aerial Bunched Cables (LT ABC) introduced in a big way due to cost effectiveness.	SCADA -Implemented in the three Discoms.
6.	GERC	Not available	Implementation of SCADA work and Data Base Management system has been done by GETCO and SLDC.
7.	HERC	HVDS is being implemented by the Discoms.	SCADA & Database Management Operational at SLDC for all intra- state generating stations and limited no. of 220KV/132KV Grid sub-stations operational. For sub-transmission system it is envisaged as part of ALDC established by the Discoms for which necessary instructions have been issued by the Commission.

S. No	SERC	HVDS	SCADA & Data Base Management
8.	HPERC	Plan for implementing HVDS has been approved and shall be implemented in next 3 years, SCADA is limited to data acquisition as done by SLDC. DBM to take place in MYT which has been initiated in 2007. (i) As a first step, the HPSEB has completed the study on SCADA on the unnamed substation at Nagwain (Kullu) and submitted the report to the Commission. The report being examined by the Commission. (ii) The IT pilot project in Shimla operation Circle was expected to be completed by November, 2008. The same would be replicated to majority of the other operation circles in a phased manner.	
9.	JSERC	Not yet decided	Not yet decided
10.	J&KSERC	To be taken care in the 1st Tariff Order.	Commission has already directed licensees to furnish details upon the matter. Results awaited
11.	KERC	KERC has been monitoring LT/HT ratio.	KPTCL has taken up the upgradation of SCADA under integrated SCADA scheme. For data base management, ESCOM's have taken up computerization for implementation of MIS and the Commission is monitoring the status.
12.	KSERC	Being implemented	SCADA implemented in one city. Data acquisition from sub stations implemented in areas covered by APDRP
13.		MPERC	HVDS : As per the directives given by MPERC in respect of reducing LT/ HT ratio and loss level through HVDS, all the three distribution companies have included several HVDS schemes in their investment plan filed with the Commission and now approved by the Commission. Some pilot projects of HVDS in each Discoms have been completed and encouraging results have been observed after execution of the scheme. The Commission has also seen a few of them during the Commission's visit to the areas of all three distribution licensees. Subsequently, as informed by M.P. Poorv Kshetra Vidyut Vitaran Co.Ltd. a comprehensive HVDS scheme for agricultural consumers has been initiated. Accordingly, a total of around 65675

S. No	SERC	HVDS	SCADA & Data Base Management
			permanent agricultural pump connections are covered under this HVDS project which would likely to be completed by August 2010. The total cost of this scheme is around 540 Crores.
14.	MERC	MSEDCL has proposed the HVDS/ Infrastructure scheme for 100 divisions in Maharashtra, which have been in principally approved by the Commission.	In respect of distribution, REL has implemented SCADA under distribution management schemes, which covers 50 receiving stations. In MSEDCL licensee area SCADA was implemented in 10 cities in phase-I and it will be implemented in 14 cities in phase-II The Pilot project related to Distribution Management system was successfully implemented in one zone of REL-D Licence area and for remaining zones, the Commission has in -principally approved the Distribution Management System. In REL distribution area, 20% of the total substations were proposed for remote operation in order to have optimal cost benefits. SCADA system has been recommended for the all the Distribution Utility.
15.	MSERC	Being implemented	Being implemented
16.	OERC	The Commission has directed in the ARR & RST order for 2008-09 that "In case the electrification (rural) is done by extending the grid supply then the extension should be on HVDS by extending the HT lines up to the load centre of the village."	Commission in its order dated 13.03.2008 observed that all agencies connected to or planning to connect to STS shall provide Remote Terminal Units (RTUs) and other communication equipments for sending real time data. They shall make available output of their respective operational meters to SCADA interface equipment installed by the STU/Transmission Licensee.
17.	PSERC	REC has sanctioned DPRs worth Rs. 1000 crores (out of Rs.2387 crires) for HVDS for AP connections in the month of sept.,2006	Real time SCADA system along with Communication system already in operation in the utility is the state of art system and support all the functional features as available in SCADA system of North Regional Control Centre at New Delhi. SCADA system meets with requirements of

S. No	SERC	HVDS	SCADA & Data Base Management
			NEP guidelines. Implementation of SCADA for distribution with Ludhiana city as a pilot project is being taken up/completed by the utility during 2008-09 and 2009-10.
18.	RERC	The investment regulations approved by the Commission permit incurring of expenditure on scheme like load dispatch and metering, consumer servicing and institutional strengthening. The distribution companies are already in the process of HVDS through Feeder Renovation Programme in a big way and adoption of SCADA and data management for consumer indexing establishing call centers, on line credit bill payments, dues display, fault control monitoring etc. at different stages. The Commission has also directed RVPN to spend at least 0.5% of the outlay on IT & IT enabled services	
19.	TNERC	TNEB have proposed to introduce HVDS as pilot scheme in selected HT feeders. Out of 1182 Sub-Stations, 95 Sub-Stations have been connected through SCADA. Work is under progress to connect 17 Sub-Stations through SCADA. Work for the balance Sub-Stations is yet to be taken up by TNEB.	
20.	TERC	Schemes under preparation by the licensee and yet to be furnished. This would take some time for this State due to limitation of size and consumers spread uneven.	
21.	UERC	The commission has directed all loads above 75kW on HT.	Centralised commercial Database MIS has been implemented at corporate office of the distribution licensee and integration to divisional MIS is under progress. The DISCOM has taken up the project for AMR and data logging for high value consumers in accordance with the directions of the Commission. Consumer indexing and GIS mapping has been completed in few circles and is under progress in other circles.
22.	UPERC	HT tariff rates are fixed so as to encourage the consumers to opt for supply at a higher voltage. Licensees have informed about adoption of HVDS for rural network.	SCADA and Database Management are available at 400 KV and 220 KV Transmission System.
23.	WBERC	In new extension of network HVDS concept is being in practice. For old network upgradation to HVDS is taking place as where it is felt necessary.	Action not yet started

7.Norms for Standard of Performance

Provision in NEP:
5.13.1 Appropriate Commission should regulate utilities based on pre-determined indices on quality of power supply. Parameters should include, amongst others, frequency and duration of interruption, voltage parameters, harmonics, transformer failure rates, waiting time for restoration of supply, percentage defective meters and waiting list of new connections. The Appropriate Commissions would specify expected standards of performance.

S. No.	SERC	SoP - Date of Notification	Summary
1.	APERC	2004	Notified and amended in 2005
2.	AERC	Feb 4, 2005	Regulation notified and is effective
3.	BERC	Jan 22nd,2007	Standards of Performance for Distribution Licensee Regulations notified on 22nd January, 2007 which became effective from 21.04.2008.
4.	CSERC	July 14, 2006	SoP has already been notified along with the Supply Code. Penalties for delay in consumer services have also been notified.
5.	DERC	April, 2007	Notified
6.	GERC	Notified with notification no.10 of 2005 dated March 31, 2005	There are provisions for compensation in case of under performance by Licensees, information to be submitted with respect to level of performance and review of performance standards annually.
7.	HERC		Notified with a provision of compensation to be payable to the consumers by the distribution licensee for his failure to comply with the Guaranteed Standard of Performance.
8.	HPERC	Nov 3rd,2005	Notified
9.	JSERC	Aug 12th, 2005	Notified
10.	J&KSERC	June 19, 2006	Notified
11.	KERC	June 10, 2004	Regulations issued.
12.	KSERC	May 9, 2006	Notified. Date of implementation extended up to 30th April 2008
13.	MPERC	July 13, 2004 and revised on Sep. 26th, 2005	Payment of compensation for delay in consumer services also notified in the regulation. Quarterly report is being submitted by Discoms on Sop. MPERC also spreading awareness in consumers about SoP through Distribution pamphlets describing the standard of performance and payment of compensation and also through publication in newspapers.
14.	MERC	Jan 20, 2005	Notified

S. No.	SERC	SoP - Date of Notification	Summary
15.	MsERC	December, 2006	Notified and Payment of compensation for delay in consumer services also notified in the regulation.
16.	OERC	May 28th ,2004	The commission has approved a Business plan with incentive for improved AT&C loss.
17. 18.	PSERC RERC	June 29th,2007	Already specified as per enclosure* The Commission has already specified the Standard of Performance for transmission and distribution licensee in the State. However, the Standards of Performance for distribution licensees are proposed to be revised as and when the guidelines for the same are agreed in FOR and then to include compensations payable in deserving cases also.
19.	TNERC	Sept 01,2004	Order for the payment of compensation incase the Distribution Licensee fails to meet the stipulated standards has already been issued.
20.	TERC	Notified	Regulation issued and performance being monitored. Response from State Government and utility yet to come at desired level.
21.	UERC	April 17, 2007	Payment of compensation and penalties for delay in consumer services also notified in the regulation. Quarterly report is being submitted by the distribution licensee on SoP. SERC also spreading awareness in consumers about SoP.
22.	UPERC	Feb 18, 2005	SoP have been included in the Electricity Supply Code and notified. Compensation to consumers for non-adherence to some of the standards has been made effective from the date of notification of the Code. For the remaining Standards, penalties shall be made effective in phases.
23.	WBERC	Oct 18th ,2005	SoP shall soon be amended for further upgradation. Draft publication is already done and comments and suggestions already received.

8. Setting up of CGR Forum & Ombudsman

Provision in NEP:
5.13.3 It is advised that all State Commissions should formulate the guidelines regarding setting up of grievance redressal forum by the licensees as also the regulations regarding the Ombudsman and also appoint/designate the Ombudsman within six months.

S. No.	SERC	CGR Regulation	Summary
1.	APERC	2004	Notified
2.	AERC	Dec 22nd ,2003	CGR forum in 3 Discoms, process for appointment of Ombudsman is on. Selection Committee has been formed.
3.	BERC	May20th,2006	Regulation for Consumer Grievance Redressal Forum and Electricity Ombudsman notified on 20.05.2006. At present one CGR Forum is functioning for entire licensed area of BSEB since August, 2006. Ombudsman not yet appointed as the post is yet to be sanctioned by the State Govt.
4.	CSERC	Feb15, 2005 and revised on 22.12.07	CGR established in three regional headquarters. Ombudsman appointed, and both are functional. and revised on 22.12.07CGR established in three regional headquarters. Ombudsman appointed, and both are functional.
5.	DERC	Nov, 2003	In terms of the Regulations, the distribution company-wise CGRFs were set up in August, 2004. The Appellate Institution of the Electricity Ombudsman was also set up in August, 2004. The Institutions of CGRFs and the Electricity Ombudsman have completed more than 3½ years of existence.
6.	GERC		CGRFs are in 8 centers. Ahmedabad and Surat License areas have two CGRFs respectively. UGVCL, DGVCL and MGVCL have each one CGRF in their license area and PGVCL has three CGRFs due to large license area. GERC has appointed Secretary as Ombudsman is made with effect from 5th August 2005 vide notification no. GERC/OMBD/T-II/1268/2005 till appointment of Ombudsman
7.	HERC		Both the Discoms (UHBVNL and DHBVNL) have set up CGR Forum and they are functional. Commission has designated

S. No.	SERC	CGR Regulation	Summary
			Ombudsman.
8.	HPERC	Oct 23rd,2003	HPSEB, the only licensee has constituted CGR forum during June, 2005. CGR Forum and Ombudsman office are functional.
9.	JSERC	Notified	Already Completed
10.	J&KSERC	No provision	No provision in J&K Act-2000
11.	KERC	June 10, 2004	CGR constituted in all five discoms. Commission has appointed Ombudsman
12.	KSERC	October 6th,2005	CGRF and Ombudsman in place and actively issuing orders on consumer grievances.
13.	MPERC		One Forum each for three Discoms is functional. Ombudsman is also functional. In accordance with the notification of Ministry of Power issued on 26.10.2006, an amendment to the Regulation for "Establishment of Forum and Ombudsman for redressal of grievances of the consumers" has been notified. A system to review online the status of pending cases with the forums and Ombudsman has also been developed by MPERC, which is being displayed in MPERC website.
14.	MERC	Notified in 2006	One CGRF each for TPC, REL, BEST and MPECS has been constituted. In case of MSEDCL, for Eleven zones of MSEDCL, a total of 11 CGRF's have been constituted. One Ombudsman has been appointed for the State.
15.	MsERC	February 22nd, 2007	The Procedure for appointment, tenure and functions of Ombudsman have also been spelt out in these Regulations and Ombudsman has assumed office in May, 2007.
16.	OERC	Notified 17.05.2004	Commission has established two Ombudsmen & 12 grievance redressal forums for the state.
17.	PSERC	Notified	CGRF and Ombudsman are functional
18.	RERC	Notified	The Commission has notified the revised regulations for redressal of consumer grievances. Ombudsman for each of the distribution companies has been appointed.
19.	TNERC	Notified	CGR & Ombudsman regulations specified and functioning
20.	TERC	Notified	CGR formed and Secretary of the Commission appointed as

S. No.	SERC	CGR Regulation	Summary
			Ombudsman.
21.	UERC	Notified	Two CGR and one Ombudsman functional.
22.	UPERC	December 9, 2003	Offices of Fora are functional. Ombudsman has been appointed and is functional. State Govt. has been requested to expedite sanction of staff for the office of Ombudsman. On the basis of feedback from consumers and stakeholders the Commission has modified these regulations have also been notified. Action to operationalize the Forum as per new regulations is in hand.
23.	WBERC	Notified	CGR Forum and Ombudsman established. Commission provides in its guidelines at least one Grievance Redressal Officer at each sub-district, district, region , Zone, head quarter in each organisation of the licensee

9. Capacity Building for Consumer Groups

Provision in NEP:
5.13.4 The Central Government, the State Governments and Electricity Regulatory Commissions should facilitate capacity building of consumer groups and their effective representation before the Regulatory Commissions. This will enhance the efficacy of regulatory process.

S. No.	SERC	Summary
1.	AERC	11Consumer groups are presently empanelled under Consumer Advocacy Cell. An information bulletin "The Electricity Consumer Grid" published for information regarding various aspects of the power sector. Ten volumes of this Consumer Grid have been published so far. Of these, the ninth volume was published as a guide containing information regarding consumer complaint handling procedure and other consumer related issues for guidance to consumers and distributed among empanelled consumers groups and other consumers.
2.	BERC	Comments/suggestions of consumers/ stake holders and general public are invited on matter relating to tariff determination and finalization of regulations.
3.	CSERC	Consumer Advocacy Cell has been set-up in the Commission. A two day seminar organized for NGO's on regulatory regime. A training programme to train members of NGO's has been conducted in 2007-08 and is being conducted during 08-09.
4.	DERC	Each year with the admission of the Annual Revenue Requirements (ARR) petitions of the Discoms, the Commission gives wide publicity among stakeholders and nominates some of the officers of the Commission for interaction with the stakeholders for enabling them to comprehend the content/import of the ARR petitions. This helps in the stakeholders contributing meaningfully while offering their comments against the ARR petitions and also during the subsequent public hearings. On the initiative of the Commission, the Govt. of NCT of Delhi have recently notified the Electricity Consumers Advocacy Committee(ECAC), rendering a platform to the consumers for protecting their interests before DERC, the Appellate Tribunal for Electricity and other Courts of the land
5.	GERC	Representatives of various consumer groups are made member of State Advisory Committee as well as Supply code Review panel.
6.	HERC	HERC, as provided in section 94(3) of the Act may consider to authorize a person to represent the interest of the consumers in the proceedings before it.
7.	HPERC	Consumer representative appointed under the Act to protect consumer interest.
8.	JSERC	This is an on going process and the commission is carrying out required activities.
9.	J&KSERC	The Commission has taken note of this issue.

S. No.	SERC	Summary
10.	KERC	Capacity building for consumer groups is being done through Office of Consumer Advocacy by conducting workshops, training, Seminars and issue of quarterly magazines/leaflets.
11.	KSERC	Classes for capacity building conducted on subjects like Safety, Supply Code and ARR & ERC. Being done
12.	MPERC	About 125 NGOs have been registered to participate in the reform process and they are also involved in the process of determination of ARR. These NGOs are further requested to spread awareness about rights and responsibilities amongst the consumers. The MPERC has organized two Workshops one on "Consumers Awareness" in August, 2007 and other on "Consumers Empowerment" in August 2008 wherein the NGOs were invited and educated about the consumers rights and responsibilities. The Commission has also established a Consumers Advocacy Cell.
13.	MERC	1.The SERC has appointed four consumer representative groups as authorized consumer representatives under section 94(3) of the Electricity Act, 2003. 2.Consumer Advocacy Cell is established in MERC office and started functioning from Feb'08
14.	MSERC	This is an ongoing exercise. Two consumer awareness programmes have been organized.
15.	OERC	Commission has decided to float some consumer advocacy papers. OERC has played a predominant role by making GRFs and Ombudsmen operational and by creating consumers awareness through publication of Frequently Asked Questions (FAQs)/ What should you do? Both in Oriya and English etc. OERC also publishing "What should you do?" in leading dailies on alternative Sundays for the benefits of the Consumers.
16.	PSERC	Consumer advocacy cell set up. Guide containing information regarding consumer complaint handling procedure and other consumer related issues for guidance of consumers prepared and distribution among consumers/consumers groups. Some representatives of consumer groups taken as members of the State Advisory committee of the Commission.
17.	RERC	The distribution companies have taken up adequate campaign to bring awareness amongst the consumers on various matters concerning their interest.
18.	TNERC	The Commission has appointed a consumer advocacy officer. This officer is coordinating with the consumer group. Consumer centric periodical, Newsletters, etc. are sent free of cost to consumer organisation, groups and association. "Consumer query platform" software has been hosted by the Commission's website facilitating consumer's queries.
19.	TERC	Awareness campaign - open public discussion being held.
20.	UERC	The Commission has chosen members of Advisory Committee, which meets at

S. No.	SERC	Summary
		least once in quarter, from different fields representing interest of various consumer groups such as domestic, commercial, industrial, agriculture, academic etc. From time to time Commission has been publishing notices in newspapers highlighting the important orders, Regulations issued/to be issued by it seeking comments from all the stakeholders. Further, Commission has been holding various meetings/Jan-Gosthis across the States wherein consumers are told of their rights and duties under the Act and the Regulations.
21.	UPERC	Commission has initiated creation of a Cell for Consumer Education and Advocacy (CCEA) on public-private partnership basis. The CCEA is functioning as per the MoU signed with VOICE, New Delhi. It was formally launched on 14th November, 2007.
22.	WBERC	Already consumer awareness building is undertaken through different communication to enhance capacity of consumers.

ANNEXURE-III

Status Report on Issues pertaining to Tariff Policy

1. Return on Equity

Provision in Tariff Policy :
5.3 (a) Return on Investment

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The Central Commission would notify, from time to time, the rate of return on equity for generation and transmission projects keeping in view the assessment of overall risk and the prevalent cost of capital which shall be followed by the SERCs also. The rate of return notified by CERC for transmission may be adopted by the State Electricity Regulatory Commissions (SERCs) for distribution with appropriate modification taking into view the higher risks involved. For uniform approach in this matter, it would be desirable to arrive at a consensus through the Forum of Regulators.

S. No.	SERC	RoE %	Summary
1.	APERC	14	Most of the issues have been taken care of by APERC except issues like (A) Tariff for 'Below Power Line Category' of consumers (B) reduction of surcharge and cross-subsidies under third provision to Section: 42 (2) of the EA,2003
2.	BERC	14	The Commission has provided ROE @ 14% for Transmission and Distribution Licensee in the relevant regulations.
3.	CSERC	14	Notified in T&C of Tariff on 01-03-06 and MYT Regulations also notified on 25-06-2008. (RoE as per CERC)
4.	GERC	14	RoE allowed as per Tariff Regulations is 14%. In the Tariff Order for 2007-08 dated 31/03/07 the Commission allowed RoE @ 7% for Distribution Companies, @ 10% for Transmission Company and @ 13% for generation Company. For Torrent Power Ltd. this was allowed @ 14%.
5.	HERC	N/A	(a) Discoms: The Commission is continuing Return on Capital Base as the Capital base of Discoms (UHBVNL and DHBVNL) is negative, no return on negative capital base has been allowed. (b) HPGCL: 14% for FY 2008-09. © HVPNL: 8% both for transmission and SLDC business for FY 2008-09
6.	HPERC	16	The Commission has approved RoE to the generation, Transmission and Distribution businesses at the rate of 14%,14% and 16% respectively, in accordance with its Multi Year Tariff Regulations, published in October, 2007.
7.	JSERC	14	The commission has decided on ROE @ 14%

S. No.	SERC	RoE %	Summary
8.	KERC	14	The Commission has specified in its MYT Regulations a RoE of 16% for all the Licensees in the State.
9.	KSERC	14	Commission has decided on RoE 14% and order issued.
10.	MPERC		14% for Transmission, Generation and Retail supply Tariff.
11.	MERC	16	Distribution Licensee is allowed a post-tax return at the rate of 16 per cent per annum, in Indian Rupee terms, on the amount of approved equity capital Transmission Licensee is allowed a post-tax return at the rate of 14 per cent per annum, in Indian Rupee terms, on the amount of approved equity capital Generation Company is allowed a post-tax return at the rate of 14 per cent per annum, in Indian Rupee terms, on the amount of approved equity capital.
12.	PSERC	14	RoE is allowed by the Commission as per CERC norms.
13.	RERC		The Commission has prescribed return on equity in the tariff regulations, at par with the rate prescribed by the CERC
14.	TNERC	14% post tax	RoE notified in the (Terms and Conditions for Determination of Tariff) Regulations 2005.
15.	UERC	14	RoE notified on 14.05.2004 for generating companies, 15.06.2004 for distribution licensee and 25.08.2004 for transmission licensee with a Debt:Equity ratio of 70:30. In certain cases where equity is less than 30% the said actual equity is considered for tariff determination.
16.	WBERC	14	For Distribution Licensee ROE is 15%. For other area of electricity segment, it is 14% except for hydro where there is a scope of additional ROE upto 4% more than what has been provided for in the behalf by the CERC depending on certain criteria.

2. Depreciation Rates

Provision in Tariff Policy :
5.3 (c) Depreciation
The Central Commission may notify the rates of depreciation in respect of generation and transmission assets. The depreciation rates so notified would also be applicable for distribution with appropriate modification as may be evolved by the Forum of Regulators.

S. No.	SERC	CERC Rates	Suggestions for separate Depreciation Rates
1.	APERC		Most of the issues have been taken care of by APERC except issues like (A) Tariff for 'Below Power Line Category' of consumers (B) reduction of surcharge and cross-subsidies under third provision to Section: 42 (2) of the EA,2003
2.	BERC	Adopted	Depreciation rates as specified by CERC have been adopted in tariff orders for retail sale of electricity for 2006-07 and 2008-09 issued by the Commission.
3.	CSERC	Adopted	CERC rates adopted.
4.	GERC	Adopted	CERC depreciation rates are adopted. The commission has nothing to comment on the evolving of separate rates for distribution by FOR.
5.	HERC	Adopted	Depreciation as per CERC rates is being allowed to the Generation Company and the Transmission licensee.
6.	HPERC	Not Adopted	CompletelyIn the MYT Regulations, the Commission has followed the CERC norms for calculations of depreciation. HPSEB, being bundled utility presently does not have assets-wise details but efforts are being made by the utility to complete asset register through GIS mapping. Presently, the Commission is allowing depreciation linked to Gross Fixed Assets (GFA). With the availability of the asset-wise details, the Commission will be following the CERC norms.
7.	JSERC	Adopted	CERC depreciation rates adopted.
8.	KERC	Adopted	The Commission has adopted the depreciation rates as per CERC.
9.	KSERC	Adopted	Depreciation rates approved by CERC adopted for Generation, Transmission & Distribution.
10.	MPERC		The Commission has followed the CERC specified depreciation rates in respect of Generation and Transmission. The CERC specified depreciation rates are also being followed for Distribution Tariff.
11.	MERC	Adopted	Depreciation of fixed assets used in the Generation, Transmission, and Distribution Business is computed in the

S. No.	SERC	CERC Rates	Suggestions for separate Depreciation Rates
			following manner: (a) The approved original cost of such project/ fixed assets shall be the value base for calculation of depreciation; (b) Depreciation shall be computed annually based on the straight line method with regard to the useful life of the asset at the rates specified in the Annexure to these Regulations: Provided that the residual value of the asset shall be considered at 10 per cent of the allowable capital cost and depreciation shall be allowed up to a maximum of 90 per cent of the allowable capital cost of the asset: Provided further that depreciation shall not be permitted on land and the value of land shall be excluded from the allowable capital cost for the purpose of calculation of depreciation.
12.	PSERC	Not adopted	PSEB is integrated Utility. Depreciation is allowed based on straight line method up to 90% of the cost of asset. The rates of depreciation allowed are as notified by Govt. of India in 1994.
13.	RERC	Adopted	The Commission has adopted the depreciation rates specified by CERC in its tariff regulations.
14.	UERC	Adopted	CERC specified rates are adopted by the UERC.
15.	WBERC	Adopted	CERC rates of 2004 Tariff Regulations adopted.

3. Implementation of Intra-state ABT

Provision in Tariff Policy :
6.2 Tariff structuring and associated issues
According to National Electricity Policy, the Availability Based Tariff (ABT) is to be introduced at State level by April 2006. This framework would be extended to generating stations (including grid connected captive plants of capacities as determined by the SERC).

S. No.	SERC	Intra-state ABT	Summary
1.	APERC		Most of the issues have been taken care of by APERC except issues like (A) Tariff for 'Below Power Line Category' of consumers (B) reduction of surcharge and cross-subsidies under third provision to Section: 42 (2) of the EA,2003
2.	BERC		BSEB still continues to be vertically integrated utility handling generation, transmission and distribution of electricity.
3.	CSERC	Not Notified	Orders not issued, reason being Board not restructured.
4.	GERC	Order Issued on 11-08-06	Trial Mock run exercise carried out. Tech up-gradation is almost complete through consultancy assignment to POWERGRID.
5.	HERC		The STU has been directed to submit a road map for introduction of Intra-State ABT in Haryana.
6.	HPERC	Not notified	The SEB is still not unbundled. However the matter is being examined and a draft concept paper has been circulated to the utility for initiating the process.
7.	JSERC	Not Notified	A draft has been circulated calling for comments.
8.	KERC	Notified	Order for implementation of ABT issued on 26.12.2006. Proxy implementation of ABT started in January 2007.
9.	KSERC	Not Notified	As of now the State Electricity Board has not been unbundled.
10.	MPERC		The Commission has finalized draft Balancing and Settlement Code (BSC) and circulated it to all stakeholders for commencing the mock trial. The mock trial has started on 1st August, 2008. The status on various activities for implementation of Intra State ABT is given below: (i) Providing Connectivity to Genco and Discoms- The Discoms Control Centres and Generation Control Centre have been established and the basic infrastructure is provided.

S. No.	SERC	Intra-state ABT	Summary
			(ii) Training - The SLDC has structured the training programme. The Discoms and Genco Officers have been given the training w.r.t. preparation of schedule and maintaining data of energy drawal in accordance with draft Balancing and Settlement Code (BSC). (iii) Procurement - Procurement of ABT complaint meter is complete. (iv) Installation of ABT complaint 611 No. meters is complete (v) Procurement of ABT based Energy Accounting Software : Completed. (vi) Customization of software is taken up as per draft BSC.
11.	MERC	Order issued on May 17, 2007 in Case No.42 of 2006	The intra-State ABT mechanism was expected to be in operation from April 1, 2008, however, due to the delay in installation of the intra-State ABT compatible meters and related software by the STU (MSETCL), the implementation of the same would have to be deferred. The installation of the intra-State ABT compatible meters and related software will be completed by March 2009 and after that the trial run will be started. Imbalance Pool settlement The Interim Imbalance pool settlement system for settling the monthly Imbalance pool charges for Increments and decrements done to the State Power pool by the Utilities in the State is in place. The pool volume is based on monthly meter readings taken at the critical interface points and the pool value is arrived at on the basis of weighted average Marginal costs paid by the respective pool incrementors.
12.	PSERC	Not Notified	PSEB is an integrated utility. Intra State ABT would be considered after unbundling of the utility.
13.	RERC		The Commission has already issued regulations on intrastate ABT which has come into force w.e.f. 1.4.2008.
14.	UERC	Order Issued; on 04-01-05	Direction was issued on 04.01.2005 for completing the requirement for intra-state ABT by 01.11.2005

S. No.	SERC	Intra-state ABT	Summary
15.	UPERC	Orders issued on 24/25th September, 2007 and 28th May, 2008	First phase commenced w.e.f. 01.12.07 as per para 7(a) of the Order dated 28.05.08 which includes generating stations of UPRVUNL & UPJVNL (with no UI implications), UPPCL (as consolidated entity of all Govt. Discoms), NPCL, OACs, Captive plants and Cogen plants. Second phase is schedules to commence w.e.f. 28.11.08 as per para 7(b) of the order dated 28.05.08 with all generating stations, Govt. Discoms, NPCL, OACs. In this phase all generating stations (excluding that of Co-generating plants and other non-conventional sources of energy) and distribution companies shall be subject to all provisions of ABT including UI charges.
16.	WBERC	Notified	Already implemented with effect from 01.01.2008.

4. TOD Tariff

Provision in Tariff policy:
6.2 Tariff structuring and associated issues

……The Appropriate Commission may also introduce differential rates of fixed charges for peak and off peak hours for better management of load.

S. No.	SERC	TOD introduced	Consumer Category	Peak Tariff	Off-Peak Tariff
1.	APERC	Most of the issues have been taken care of by APERC except issues like (A) Tariff for 'Below Power Line Category' of consumers (B) reduction of surcharge and cross-subsidies under third provision to Section: 42 (2) of the EA,2003.			
2.	BERC	TOD tariff has been introduced for HT consumers in tariff order dated 26.08.2008 issued by the Commission			
3.	CSERC	Yes	Compulsory for all H.T. industries	130% of normal rate of energy charge	85% of normal rate of energy charge.
4.	GERC	Yes	All HT consumers having contract demand or actual demand 500 KVA and above	For energy consumption during the two peak periods viz: 0700 hrs to 1100 hrs and 1800 hrs to 2200 hrs - the Time of Use charges are 75 paise per unit	HT Consumer, with contract for 100KVA & above, using electricity exclusively during night hours from 10.00 PM to 6.00 AM next day.
5.	HERC	TOD tariff has not been introduced in Haryana			
6.	HPERC	Yes	Differential peak tariff for individual and water pumping supply	Peak tariff double the normal tariff	
7.	JSERC	Yes			
8.	KERC	Yes	LT Industries,	normal tariff + 80 paise	Normal Tariff - 80 paise
			HT Water Supply	normal tariff + 60 paise	Normal Tariff - 60 paise
			HT Industries	normal tariff + 80 paise	Normal Tariff - 80 paise

<table>
<tr><th>S. No.</th><th>SERC</th><th>TOD introduced</th><th>Consumer Category</th><th>Peak Tariff</th><th>Off-Peak Tariff</th></tr>
<tr><td>9.</td><td>MPERC</td><td>Yes</td><td>Coal mines (HV-2)</td><td>Period:-
Evening peak load period (6PM-10 PM)
Tariff:
15% of Normal Rate of energy charge as Surcharge
Fixed charges shall always be billed at normal rates i.e. ToD Surcharge shall not be applied on Fixed Charge</td><td>Period:
Off peak load period (10 PM-6AM next day)
Tariff:
7.5% of Normal Rate of energy charge as Rebate

Fixed charges shall always be billed at normal rates i.e. ToD Rebate shall not be applied on Fixed Charge</td></tr>
<tr><td>10.</td><td></td><td></td><td>Industrial Non-Industrial Shopping mall (HV-3)</td><td>Applicable same as above</td><td>Applicable same as above</td></tr>
<tr><td>11.</td><td></td><td></td><td>Seasonal Industries (HV-4)</td><td>Applicable same as above</td><td>Applicable same as above</td></tr>
<tr><td>12.</td><td></td><td></td><td>Irrigation Public water works and other than agriculture (HV-5)</td><td>Applicable same as above</td><td>Applicable same as above</td></tr>
<tr><td>13.</td><td></td><td></td><td>Bulk supply to exemptees(HV-7)</td><td>Applicable same as above</td><td>Applicable same as above</td></tr>
<tr><td>14.</td><td>MERC</td><td>Yes</td><td colspan="3"><table>
<tr><th>Distribution Licensees</th><th>Consumer Category</th><th>Peak Tariff</th><th>Off-Peak Tariff</th></tr>
<tr><td>MSEDCL</td><td>LT-Domestic, LT-Public Water Works, LT-Industrial, HT-Industry, HT-Commerce, HT-Public Water Works</td><td>110</td><td>-85</td></tr>
<tr><td>REL-D</td><td>LT-Commercial, LT-Industrial upto 20 KW Load, LT-Industrial above 20 KW Load, HT-Industry, HT-Commercial</td><td>110</td><td>-75</td></tr>
<tr><td>TPC-D</td><td>LT-Commercial, LT-Industrial upto 20 KW Load, LT-Industrial above</td><td>110</td><td>-75</td></tr>
</table></td></tr>
</table>

S. No.	SERC	TOD introduced	Consumer Category	Peak Tariff	Off-Peak Tariff	
				20 KW Load, HT-Industrial and CPP, HT-Commercial, HT-Public and Government		
			BEST	LT-Commercial, LT-Industrial upto 20 KW Load, LT-Industrial above 20 KW Load, HT-Industry, HT-Commercial	110	-75
15.	PSERC	No	Not Introduced			
16.	RERC	The Commission has directed the distribution companies to include the concept of TOD tariff in the next tariff petition for the consumers having contract demand of 1500 KVA or more to begin with.				
17.	TNERC	Yes	HT Industrial	20% extra on the energy charges for the energy recorded during the peak hours (6.00 A.M to 9.00 A.M and 6.00 P.M to 9.00 OM	reduction of 5% on the energy charges for the consumption during 22.00 to 05.00 as an incentive for night consumption.	
18.	UERC	Yes	LT Industries about 25 kW & all HT Industries	25% surcharge on energy charge is payable	5% rebate on energy charges is admissible	
19.	UPERC	Yes	For Large and Heavy Power Category (HV-2)*	17 hrs - 22 hrs	22 hrs. - 06 hrs.	
20.	WBERC	Yes	Applicable to those who are under two part tariff i.e. Industrial, Public Utility, Commercial and Agricultural. For some consumers, TOD is optional. Details of Tariff may be seen from Tariff Orders in website www.wberc.net			

*** UPERC: For Large and Heavy Power Category (HV-2)**

Sl. No.	UPERC	For Large and Heavy Power category (HV-2)		
	Base Rate	For supply at 11kV	For supply at 33 & 66 kV	For supply at 132 kV and above
	Demand Charges	Rs.210/kVA	Rs.200/kVA	Rs.180/kVA
	Energy Charges	Rs.4.00/kVAh	Rs.3.35/IVAh	Rs.3.25/kVAh
	(% of Base Rate)	(-) 7.5%	(+) 15%	

5. Renewable Source of Energy

Provision in Tariff policy:
6.4 Non-conventional sources of energy generation including Co-generation:
(1) Pursuant to provisions of section 86(1)(e) of the Act, the Appropriate Commission shall fix a minimum percentage for purchase of energy from such sources taking into account availability of such resources in the region and its impact on retail tariffs. Such percentage for purchase of energy should be made applicable for the tariffs to be determined by the SERCs latest by April 1, 2006.

S. No.	SERC	Tariff	Power Procured From Renewables (%)
1.	APERC	Most of the issues have been taken care of by APERC except issues like (A) Tariff for 'Below Power Line Category' of consumers (B) reduction of surcharge and cross-subsidies under third provision to Section: 42 (2) of the EA,2003.	
2.	BERC	No	Tariff for purchase of power by distribution license from biomass and bagasse based cogeneration plants in Bihar has been determined in Suo Motu Proceeding No.2/2008 and Order issued on 21st May, 2009 by the Commission. Minimum percentage of total energy consumption to be purchased by a distribution licensee from renewable and cogeneration plants has also been fixed in compliance of section 86(1)(e) of Electricity Act, 2003 in the aforesaid order.
3.	CSERC	1. Biomass plants Rs. 2.98 to 3.24 per unit (provisions for review after 5 years) as per order dated 15.01.08. 2. As per Commission's order dated 28.02.2007, the tariff of small hydro generating station shall be project specific. 3.Tariff for solar power plants is :- (i) Solar PV - Rs.15.84 per unit (ii) Solar Thermal - Rs.13.26 per unit This tariff is applicable upto 31.08.18 as per order dated 08.09.08 4.CSERC (Terms and conditions for determination of generation tariff and related matters for electricity generated by plants based on non-conventional sources of energy) Regulations, 2008 notified on 22.05.2008.	5% from biomass, 3% from small hydro plants, 2% from solar energy, wind, bagasse based cogeneration etc. is being fixed by minimum procurement of power from renewable sources of energy by distribution licensees Regulations, 2008 notified on 14.07.2008.

S. No.	SERC	Tariff			Power Procured From Renewables (%)
4.	GERC	Wind - Rs.3.37/kWh (fixed for 20 yrs) Bagasse based Cogen plants - Rs. 3.00/kWh Biomass gasification based plants - Rs. 3.08/kWh Mini Hydro plants - Rs3.29/kWh The process of rate determination for solar projects are under consideration.			For FY 06-07 = 1% For FY 07-08 = 1% For FY 08 - 09 = 2%
5.	HERC		Tariff (Rs/KWh) (For base year FY 2007-08	Annual escalation from 2008-09	Minimum percentage for 2008-09 is 5% and for 2009-10 and thereafter 10%
		Wind	4.08	1.50%	
		Mini Hydel (Upto 2MW)	3.67	1.50%	
		Biomass	4.00	2.00%	
		Bagasse (Co-generation	3.74	2.00%	
		Solar	For plants commissioned up to 31.12.09 Rs.15.96/ kWh and for plants commissioned after 31.12.09 but by 31.03.10 Rs.15.16 / kWh, Tariff shall remain constant for 5 years. Tariff payable by the Discoms shall be the difference of the above mentioned tariff and the incentive under MNRE policy.		
6.	HPERC	Small Hydro : Rs. 2.87/KWh (Levelised) for the 40 years of commercial operation			20% from SHPP.
7.	JSERC	Not determined			Not yet fixed. For use of solar water heater by commercial consumers a rebate has been provided in Tariff Order 2006-07 for JSEB.

S. No.	SERC	Tariff	Power Procured From Renewables (%)
8.	KERC	(1) Mini hydel - Rs.2.80/unit, without escalations (2) Wind - Rs.3.40/unit, without escalations (3) Biomass - Rs.2.85/unit, with 2% simple annual escalations. (4) Co-gen - Rs.2.80/unit, with 2% simple annual escalations.	As per the amended Regulation the maximum limit has been removed and ESCOM wise minimum percent fixed as indicated below: BESCOM,ESCOM & CESC... 10% HESCOM, & GESCOM and Hkeri Society 7.00%.
9.	KSERC	Wind : Rs. 3.14 (Levelised) Small Hydro : Rs. 2.44 (Levelised)	Up to 5%
10.	MPERC	i) Wind: The Tariff order dated 11.06.2004 for a period of three year had already been issued. Tariff order for the control period from 21-11-2007 to 31.03.2012 was issued on 21.11.2007 ii) Bio Mass - Tariff order for the control period from 07.08.2007 to 31.03.2012 was issued on 07.08.2007 iii) Bagasse based Cogeneration: Tariff order for the control period from 03.09.2008 to 31.02.2013 was issued on 03.09.2008. iv) Small Hydro based generation: Tariff order for the control period from 30.06.2008 to 31.03.2013 was issued on 30.06.2008	The Commission has fixed a target for each Distribution licensee at the rate of 10% of his annual consumption in his area of supply, subject to availability as the minimum purchase requirement from all non conventional sources of energy.
11.	MERC	NCE Source / Variable charges (Rs./kWh) / Escalation Bagasse based Cogeneration: Rs. 3.05 (Rs./kWh); 2 % per annum for 13 years Wind Energy: Rs.3.50 (Rs./kWh); Rs.0.15/unit per annum Small Hydel: Rs.2.84 (Rs./kWh); Rs.0.03 per annum for 13 years Biomass: Rs. 3.04 (Rs./kWh); 2% per annum for 13 years	Target percentage for RE procurement under RPS regime for FY 2007-08 has been specified at 4% of energy input by distribution licensee, as stipulated in the Commission's Order on Renewable Purchase Specification (RPS) dated August 16, 2006 in Case 6 of 2006

S. No.	SERC	Tariff	Power Procured From Renewables (%)
12.	PSERC	a) Mini/Micro Hydel, Baggasse / Biomass : 370 P/Unit b) Biomass, Urban / Municipal / Industrial Liquid solid waste to energy and wind power project : 384 P/unit c) Solar Energy: 772 P/unit	1% of the total energy consumption in the State to be procured from nenewable energy sources
13.	RERC	The status remains the same regarding tariff for wind & biomass power as well as renewable energy purchase obligations.	
14.	TNERC	(1) Wind mills (commissioned and agreement executed prior to 15-05-06 but renegotiated after 15.5.2006) - Rs.2.75/unit. (2) Wind mills (commissioned and agreement executed after 15-05-06) - Rs.2.90/unit. (3) Biomass Plants - Rs.3.15/ unit (4) Bagasse based Cogen - Rs.3.15/unit	10% as the minimum percentage of power each distribution licensee shall purchase from NCES sources out of his total consumption in his area of supply.
15.	UERC	(a) Projects commissioned before 01.04.2007 (i) SHP (upto 25 MW) & Solar Projects Upto 5 MW Rs. 2.55/unit 5 to 10 MW Rs. 2.55/unit 10 to 15 MW Rs. 2.50/unit 15 to 20 MW Rs. 2.45/unit 20 to 25 MW Rs. 2.40/unit (ii) Bagasse based co-generation Projects Fixed Charges of Rs.1.80 per unit. In addition, the normative fuel price is admissible on Rihand II plant in the Northern Region on parameters approved by CERC and in accordance with the formula given in the Regulation, provisionally taken as Rs.1.32/unit. (b) Projects commissioned on or after 01.04.2007 (i) SHP/Solar Projects (upto 25 MW) Upto 5 MW Rs.2.80/unit 5 to 10 MW Rs. 2.80/unit 10 to 15 MW Rs. 2.75/unit 15 to 20 MW Rs. 2.70/unit 20 to 25 MW Rs. 2.65/unit	Target for 2008-09 of 5%, 2009-10 of 8% and thereafter increase of 1% per annum for each subsequent year to reach a level of 10% by 2011-12. Entire 100% power from renewable sources including cogeneration projects are purchased ahead of the merit order.

<table>
<tr><th>S. No.</th><th>SERC</th><th>Tariff</th><th>Power Procured From Renewables (%)</th></tr>
<tr><td></td><td></td><td>(ii) Bagasse based co-generation Projects Fixed Charges of Rs.1.90/unit. In addition, the normative fuel price is admissible based on Rihand II plant in the Northern Region on parameters approved by CERC and in accordance with the formula given in the Regulation, provisionally taken as Rs.1.32/unit.
(iii)Biomass/Biogas Projects Rs.1.35/unit Fixed Charges of Rs. 1.90/unit. In addition, the normative fuel price is admissible based on Rihand II plant in the Northern Region on parameters approved by CERC and in accordance with the formula given in the Regulation, provisionally taken as Rs.1.71/unit.
(iv) Wind Projects Rs.3.90/unit</td><td></td></tr>
<tr><td>16.</td><td>UPERC</td><td>(a)Tariff for Biomass/Bagasse based Co-gen:
(b) Mini/Micro hydel and canal based hydro
<table>
<tr><th></th><th colspan="5">Tariff Year</th></tr>
<tr><th>Year of Commissioning</th><th>2005-06</th><th>2006-07</th><th>2007-08</th><th>2008-09</th><th>2009-10</th></tr>
<tr><td>2005-06</td><td>286</td><td>289</td><td>293</td><td>297</td><td>302</td></tr>
<tr><td>2006-07</td><td></td><td>298</td><td>302</td><td>306</td><td>310</td></tr>
<tr><td>2007-08</td><td></td><td></td><td>311</td><td>315</td><td>320</td></tr>
<tr><td>2008-09</td><td></td><td></td><td></td><td>325</td><td>329</td></tr>
<tr><td>2009-10</td><td></td><td></td><td></td><td></td><td>338</td></tr>
</table>
plants below 25 MW:
<table>
<tr><td>Year of</td><td colspan="5">Year of Commissioning</td></tr>
<tr><td>operation</td><td>2005-06</td><td>2006-07</td><td>2007-08</td><td>2008-09</td><td>2009-10</td></tr>
<tr><td>1st</td><td>339.27</td><td>349.45</td><td>359.63</td><td>369.81</td><td>379.98</td></tr>
<tr><td>2nd</td><td>329.09</td><td>338.96</td><td>348.83</td><td>358.70</td><td>368.58</td></tr>
<tr><td>3rd</td><td>318.97</td><td>328.53</td><td>338.10</td><td>347.67</td><td>357.24</td></tr>
<tr><td>4th</td><td>308.91</td><td>318.18</td><td>327.45</td><td>336.72</td><td>345.98</td></tr>
<tr><td>5th</td><td>298.94</td><td>307.90</td><td>316.87</td><td>325.84</td><td>334.81</td></tr>
<tr><td>6th</td><td>289.03</td><td>297.70</td><td>306.37</td><td>315.04</td><td>323.72</td></tr>
<tr><td>7th</td><td>279.21</td><td>287.58</td><td>295.96</td><td>304.33</td><td>312.71</td></tr>
</table></td><td>Each distribution licensee must purchase 7.5% of their total power purchase from renewable and non-conventional energy sources.</td></tr>
</table>

S. No.	SERC	Tariff	Power Procured From Renewables (%)
		8th 269.46 277.55 285.63 293.71 301.80 9th 259.80 267.60 275.39 283.18 290.98 10th 250.23 257.74 265.24 272.75 280.26 11th 164.08 169.00 173.92 178.84 183.76 12th 166.54 171.54 176.53 181.53 186.53 13th 169.11 174.18 179.25 184.33 189.40 14th 171.77 176.93 182.08 187.23 192.39 15th 174.55 179.78 185.02 190.26 195.49 16th 177.43 182.76 188.08 193.4 198.73 17th 180.43 185.85 191.26 196.67 202.09 18th 183.55 189.06 194.57 200.07 205.58 19th 186.80 192.40 198.01 203.61 209.22 20th 190.17 195.88 201.59 207.29 213.00	
17.	WBERC	(c) For other Non conventional and renewable sources tariff would be Rs. 2.50/Unit for 2005-06 with an escalation of 4% per annum for subsequent years without compounding. Other non-conventional sources of energy shall include, inter alia, generation from wind, solar, municipal wastes, industrial wastes, including sold, semi-solid, liquid & gaseous wastes and bio-gas. (d) Solar Power Type of Power — Rate of electricity for 20 hrs. Solar Power — Rs.15.00/kwh Solar Thermal — Rs.13.00/kwh 1. Applicable to developers not availing accelerated depreciation benefit. 2. Applicable for plants commissioned upto 31.12.2011 Maximum capping on tariff: (1) Biomass = Rs. 4.00/unit (2) Wind = Rs.4/unit (3) Small Hydel =Rs. 3.6/ unit (4) Co-generation = Rs. 2.55/unit (5) Solar PV = Rs. 11/unit	

S. No.	SERC	Tariff	Power Procured From Renewables (%)				
		(6) Bio-gas = Rs. 5/unit	Year	2008-09	2009-10	2010-11	2011-12
			WBSEB	4.8	6.8	8.3	10
			CESC Ltd.	4.0	6.0	8.0	10
			DPL	2.5	4.0	7.0	10
			DPSC Ltd.	2.0	4.0	7.0	10
			DVC	2.0	4.0	7.0	10

6. Status of Determination of Open Access Surcharge

Provision in Tariff Policy:
8.5 Cross-subsidy surcharge and additional surcharge for open access
8.5.1 National Electricity Policy lays down that the amount of cross-subsidy surcharge and the additional surcharge to be levied from consumers who are permitted open access should not be so onerous that it eliminates competition which is intended to be fostered in generation and supply of power directly to the consumers through open access.
A consumer who is permitted open access will have to make payment to the generator, the transmission licensee whose transmission systems are used, distribution utility for the wheeling charges and, in addition, the cross subsidy surcharge. The computation of cross subsidy surcharge, therefore, needs to be done in a manner that while it compensates the distribution licensee, it does not constrain introduction of competition through open access. A consumer would avail of open access only if the payment of all the charges leads to a benefit to him. While the interest of distribution licensee needs to be protected it would be essential that this provision of the Act, which requires the open access to be introduced in a time-bound manner, is used to bring about competition in the larger interest of consumers.

S.	SERC	Utility	Cross-Subsidy Surcharge (Paise/KWh)						Methodology
No.			2006-07		2007-08		2008-09		Adopted
			HT	LT	HT	LT	HT	LT	
1..	APERC	APCPDCL APEPDCL APNPDCL APSPDCL	Most of the issues have been taken care of by APERC except issues like (A) Tariff for 'Below Power Line Category' of consumers (B) reduction of surcharge and cross-subsidies under third provision to Section: 42 (2) of the EA,2003						
2.	BERC	BSEB	Determined vide order dated 02.11.2007 for the year 2006-07 till it's revised. Subsequently this has been revised in the tariff order dated 26.08.2008 for the year 2007-08 till it's revised.						
3.	CSERC	CSEB	EHT	HT	EHT	HT	EHT	HT	
			68	55	65	38	65	38	Average cost method
4.	GERC	GEB							
		DGVCL	Rs.1.35/ kWh	Rs.1.35/ kWh	Rs. 1.00/ kWh	Rs. 1.00/ kWh	proposed Rs 0.37 per kWh	proposed Rs 0.37 per kWh	
		MGVCL	Rs.1.35/ kWh	Rs.1.35/ kWh	Rs. 1.00/ kWh	Rs. 1.00/ kWh	proposed Rs 0.37 per kWh	proposed Rs 0.37 per kWh	
		PGVCL	Rs.1.35/ kWh	Rs.1.35/ kWh	Rs. 1.00/ kWh	Rs. 1.00/ kWh	proposed Rs 0.37 per kWh	proposed Rs 0.37 per kWh	
		UGVCL	Rs.1.35/ kWh	Rs.1.35/ kWh	Rs. 1.00/ kWh	Rs. 1.00/ kWh	proposed Rs 0.37 per kWh	proposed Rs 0.37 per kWh	
		TPAL	Rs.1.35/ kWh	Rs.1.35/ kWh	Rs. 1.00/ kWh	Rs. 1.00/ kWh	proposed Rs 0.37 per kWh	proposed Rs 0.37 per kWh	

S. No.	SERC	Utility	Cross-Subsidy Surcharge (Paise/KWh)						Methodology Adopted
			2006-07		2007-08		2008-09		
			HT	LT	HT	LT	HT	LT	
5.	HERC	DHBVNL UHBVNL	Waived off by Govt. of Haryana for 2007-08				91 P/unit (Waived off by GOH)	Nil	Current tariff minus average cost of supply.
6.	HPERC	HPSEB			Nil		Nil		NTP Formula
7	JSERC	JSEB							
8.	KERC	BESCOM	115 Ps/unit for 66 Kv	-	113 Ps/unit for 66 Kv 80 Ps /unit for 33 Kv	-	93 Ps/unit for 66 Kv 78 Ps/unit for 33 Kv	-	As per Tariff Policy
9.		GESCOM	115 Ps/unit for 66 Kv	-	113 Ps/unit for 66 Kv 80 Ps/unit for 33 Kv		86 Ps/unit for 66 Kv 67 Ps/unit for 33 Kv		
10.		HESCOM	115 Ps/unit for 66 Kv	-	113 Ps/unit for 66 Kv 80 Ps/unit for 33 Kv		66 Ps/unit for 66 Kv 22 Ps/unit for 33 Kv		
11.		MESCOM	115 Ps/unit for 66 Kv	-	113 Ps/unit for 66 Kv 80 Ps/unit for 33 Kv		62 Ps/unit for 66 Kv 34 Ps/unit for 33 Kv		
12.		CESC	-		113 Ps/unit for 66 Kv 80 Ps/unit for 33 Kv		52 Ps/unit for 66 Kv 20 Ps/unit for 33 Kv		
13.	KSERC	KSEB	Not finalised no petition for open access received						
14.	MPERC	MPSEB >132kV	0.94		0.94		To be determined		As per Tariff Policy Provisions

S. No.	SERC	Utility	Cross-Subsidy Surcharge (Paise/KWh)						Methodology Adopted
			2006-07		2007-08		2008-09		
			HT	LT	HT	LT	HT	LT	
		MPSEB >33kV							
		<132kV MP Madhya Kshetra VVCL	0.63		0.63		To be determined		
		>132 kV Vidyut Vitran Co. Ltc. ?33 kV	0.94		0.94		To be determined		
		<132 kV. M.P. Paschim Kshetra Vidyut Vitaran Co. Ltd.	0.63		0.63		To be determined		
		> 132 kV >33 kV	0.94		0.94		To be determined		
		<132kV M.P. Poorv Kshetra Vidyut Vitaran Co. Ltd.	0.63		0.63		To be determined		
		>132kV >33 kV	0.94		0.94		To be determined		
		<132kV	0.63		0.63		To be determined		
15.	MERC	MSEB							Computation
		MSEDCL	Nil		Nil		Nil		of Cross-
		TPC	Nil		Nil		Nil		subsidy
		REL	Nil		Nil		Nil		surcharge has
		BEST	Nil		Nil		Nil		been done in accordance with the formula specified in Tariff Policy
16.	PSERC	PSEB	50% of realization per unit minus combined average cost of supply of category seeking		Nil	Nil	Nil	Nil	i) For 2006-07 As per PSERC Open Access Regulations

S. No.	SERC	Utility	Cross-Subsidy Surcharge (Paise/KWh)						Methodology Adopted
			2006-07		2007-08		2008-09		
			HT	LT	HT	LT	HT	LT	
			open access						ii) For 2007-08 & 2008-09 As per Tariff Policy
17.	RERC	The Commission has specified the open access surcharge for the financial year 2008-09 for various categories & voltage levels ranging from Rs.0.17 to Rs..1.47 per KWH.							
18.	TNERC	Status of Determination of Open Access Surcharge with effect from 15.05.2006*							
19.	UERC	UPPCL	Nil	Nil	Nil	Nil	Nil	Nil	It is nil for 2008-09. It will be in accordance to the formula given in the Tariff Policy for later years.

20. WBERC

Costs avoided by Distribution Licensees are shown as under:

Licensee	Costs avoided by Licensee	
	2007-08	2008-09
WBSEDCL	239.88 + Wheeling Charge#	143.42 + Wheeling Charges#
CESC Ltd.	192.75 + Wheeling charges#	205.17 + Wheeling Charges#
DPSC Ltd.	307.93 + Wheeling Charges#	282.57 + Wheeling Charges#
DPL	118.42 + Wheeling charges#	133.80 + Wheeling charges

as applicable to the relevant Open Access case.

Cost avoided is worked out following the formula in the Open Access Regulation:

Weighted average of unit cost of pooled power Purchase variable cost* and own generation fuel cost (against sent out energy), if any per unit +Wheeling charges per unit as applicable to the relevant open access case

(100-T&D Loss in percentage as allocable for the relevant open access case) x 0.01

* Where the power purchase cost is in single part the separation of capacity cost and variable cost will be as per the decision of the Commission.

* Status of Determination of Open Access Surcharge with effect from 15.5.2006

Sl. No.	Injection Voltage (in kV)	Drawal Voltage (in kV)	Cross Subsidy surcharges (paise/unit)		
			Industries	Educational Institutions	Commercial
1	22/11	22/11	97.17	91.71	274.87
2	33	22/11	105.47	100.01	283.17
3	110	22/11	108.49	103.03	286.19
4	110	33	116.80	111.34	294.50
5	110	110	119.82	114.36	297.52
6	230	22/11	110.76	105.30	288.46
7	230	33	119.06	113.60	296.76
8	230	110	122.08	116.62	299.78
9	230	230	124.35	118.89	302.05

7. Harnessing of Surplus Captive Generation

Provision in Tariff Policy:

6.3 Harnessing captive generation

Captive generation is an important means to making competitive power available. Appropriate Commission should create an enabling environment that encourages captive power plants to be connected to the grid.

Such captive plants could inject surplus power into the grid subject to the same regulation as applicable to generating companies.

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Wheeling charges and other terms & conditions should be determined in advance by the SERC ensuring that charges are reasonable and fair.

Review of 'FOR' recommendations.

1. There should be no penalty for reduction of contracted demand by consumer having CPP.
2. In view of little justification for levy of parallel operations charges/ Grid Support Charges these charges to be kept at the lowest level.
3. There should be no minimum guarantee charges.
4. Charges for start-up / stand-by power should be reasonable and should not exceed the charges fixed for temporary connection.

S. No.	SERC	Penalty for reduction of contracted demand by consumer having CPP	Prallel operation charges/ Grid Support Charges	Minimum Guarantee Charges	Start-up / Stand by Charges	Wheeling Charges
1.	APERC	Most of the issues have been taken care of by APERC except issues like (A) Tariff for 'Below Power Line Category' of consumers (B) reduction of surcharge and cross-subsidies under third provision to Section: 42 (2) of the EA,2003				
2.	BERC	As per information submitted by BSEB (deemed Licensee) there is n captive power plant connected to the grid in the State.				The Commission has last determined these charges vide order dated 26.08.2008
3.	CSERC	Nil	Rs. 10/KVA per month on the installed capacity of captive generator. The work of technical study on effect of Parallel operation has been entrusted to ERDA, Baroda to arrive at appropriate basis of parallel operation charges. Study completed, report under preparation.	Nil	Separate tariff for star-up power:- (i) Demand charge - Rs. 150 per KVA per month (ii) Energy charge - Rs. 3.20 per unit	33 KV (i) 15 paise per unit Plus (ii) 6% in kind to be deducted from energy input at 33 KV

S. No.	SERC	Penalty for reduction of contracted demand by consumer having CPP	Prallel operation charges/ Grid Support Charges	Minimum Guarantee Charges	Start-up / Stand by Charges	Wheeling Charges
4.	GERC	No Such provisions	No Parallel operation charges	No minimum guarantee charges. However, the Fixed charge as per tariff Schedule is to be paid.	No separate standby charge but for standby power, charge is levied at applicable demand charge for contracted load of the consumer. Under Intrastate ABT, standby energy will be charged at UI rate applicable from time to time.	Wheeling charges determined through ARR exercise & is in line with CERC regulations The wheeling charges for 2007-08 are Rs.67210 / MW / Month
5.	HERC	No charges	No charges	Rs.400/- per KVA of contract demand for are furnaces and steel furnaces/ steel rolling mills and Rs.200/- per KVA of contract demand for all other industries above 70 KW	No charges	Rs.0.19 / kWh
6.	HPERC	Utility has been asked to ascertain the surplus captive generation.				
7.	KERC	KERC has issued orders for harnessing the surplus captive power from CPPs in the State by specifying the rates linked to UI rates. KERC has not prescribed any penalty for reduction of CD, parallel operation charges, minimum guarantee charges etc.,				
8.	KSERC	Not finalised yet				
9.	MPERC	NIL	NIL	NIL	Rs. 20 PER KVA	Not determined
10.	MERC	No penalty for reduction of the contracted Demand	Parallel Operation charges called as standby charges in Maharashtra have been specified as Rs.170/kVA/month and applicable only for the standby component (as compared to normal demand charges of Rs.150/kVA/month)	No. Minimum Guarantee charges	Default supply charge is equal to the tariff applicable to Temporary category	The Commission on determines the wheeling charges every year, in the tariff order of the respective distribution licensee
11.	PSERC	Policy yet to be formulated				
12.	RERC	The Commission has complied with the recommendation of FOR as already reported				

S. No.	SERC	Penalty for reduction of contracted demand by consumer having CPP	Prallel operation charges/ Grid Support Charges	Minimum Guarantee Charges	Start-up / Stand by Charges	Wheeling Charges
13.	TNERC	No reduction of load within one year from the date of availing the supply. Subsequently, one time reduction is permitted without any charges. For second and subsequent reduction in a year, one time charges of twice the demand charges for the demand surrendered is payable. Reduction upto 50% of the then existing contracted demand at the time of applying for reduction in demand is permissible	Details given separately*	----	621.21	14.74
14.	UERC	Nil	Nil, however, the responsibility of synchronization and providing synchronizing equipments conforming to requisite standards and import/export meters shall lie with the captive generators.	Nil	The Commission has included the consumers having stand alone CPP for taking emergency power supply in the event of tripping or for start up power requirements from the licensees under the Temporary Supply which shall be billed at the applicable rates. Other CPP's if they are consumers of the licensee shall be charged only the applicable tariff.	On case to case basis. No case reported Details as per table
15.	UPERC		Zero		Zero	
16.	WBERC	No such penalty. (Provisions of WBERC (Standard of Performance) Regulations, 2007 have to be followed for	No such charge	No such charge (However tariff orders of respective distribution licensees may be referred to	No such charge (As per agreement for contract demand and rates as per tariff orders)	To please see under NEP. For details, tariff orders of distribution licensee determining wheeling charges may be seen from website.

S. No.	SERC	Penalty for reduction of contracted demand by consumer having CPP	Prallel operation charges/ Grid Support Charges	Minimum Guarantee Charges	Start-up / Stand by Charges	Wheeling Charges
		reduction of load/ contractual demand)		for 'Minimum Charge' or 'Demand Charge' irrespective of captive generator consumer or other consumer)		

* Parallel Operation Charges(TNERC):

Sl. No.	Injection Voltage (in kV)	Drawal Voltage (in kV)	Parallel operation charges (% on demand charges)
1	22/11	22/11	37.04
2	33	22/11	38.90
3	110	22/11	39.56
4	110	33	41.28
5	110	110	41.88
6	230	22/11	40.04
7	230	33	41.73
8	230	110	42.32
9	230	230	42.76

**** Wheeling Charges (UPERC)**

	Long Term (Paise/unit)		Short Term (Paise/unit)	
	Above 11kV	11kV	Above 11kV	11kV
PVVNL	28	45	7	11
DVVNL	28	45	7	11
MVVNL	28	45	7	11
PuVVNL	28	45	7	11
KESCO	25	40	6	10
NPCL	32	51	8	13

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