

2008-09



# Status Report on Issues Pertaining to National Electricity Policy

## **FORUM OF REGULATORS (FOR)**

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Commission (CERC)

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## *Introduction*

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

*One of the functions of Forum of Regulators (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 State Electricity Regulatory Commissions (SERCs) in NEP such as notification of Grid Code, technology upgradation, Open Access Transmission Charges & Distribution networks Charges, Time-Bound Program on Aggregate Technical & Commercial Losses, Metering Plans, Implementation of HVDS, SCADA & Data-Base Management, Norms for Standard of Performance etc. and compiled implementation status of these major issues on yearly basis.*

*The status compiled in this report is based on the inputs received from SERCs. The updated status for year 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 & West Bengal. However, previous year’s status has been considered in case of remaining States i.e. Delhi, J&K, Orissa and Tripura.*

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## 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.

<b>S. No.</b>	<b>SERC</b>	<b>Date of Notification</b>	<b>Status</b>
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 25 <sup>th</sup> 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 20 <sup>th</sup> , 2005	Notified date of notification August 20 <sup>th</sup> , 2005
14.	MERC	April 1 <sup>st</sup> , 2006	Notified
15.	MsERC	N/A	Not notified.
16.	OERC	June 14, 2006	Notified
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 Regulations 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.*

<b>S. No.</b>	<b>SERC</b>	<b>Status</b>
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	<ol style="list-style-type: none"> <li>1. Billing by all the three discoms completely computerized</li> <li>2. Electronic meters installed in about 90% cases.</li> <li>3. HVDS / LT Aerial bunched (AB) Conductors installation being vigorously pursued for AT&amp;C loss reduction.</li> <li>4. Installation of Gas Insulated Switchgear(GIS) being pursued by Delhi Transco Limited and Discoms to overcome space constraint.</li> <li>5. Automatic Meter Reading (AMR) for high end consumers.</li> <li>6. GIS mapping and indexing of consumers in progress.</li> <li>7. DT metering completed.</li> <li>8. SCADA system installation completed.</li> <li>9. SLDC fully functional and properly interfaced with RLDC as well as Discoms' control centres.</li> </ol>
6.	GERC	<ol style="list-style-type: none"> <li>1. Upgrades almost complete with aid of 'Powergrid' as consultant.</li> <li>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.</li> <li>3. UGVCL has implemented IT technologies like ERP Oracle 11i which contains modules on LT&amp; 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.</li> </ol>
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

<u>S. No.</u>	<u>SERC</u>	<u>Status</u>
		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
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/132 kv	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			
			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
			WBSEDC L	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		
<b>WHEELING CHARGES(Rs/MW/Month)</b>							
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			
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	<i>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</i>			
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	<i>As per the MYT order issued on 20.12.2007 for DTL</i>		
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	<i>As per CERC Regulations</i>	
9.	JSERC	2006-07	11.00 Paise/Unit	11.00 Paise/Unit	
10.	J&KSERC	2007-08	<i>As per ST rate of NR</i>		
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	<i>To be taken up separately</i>	
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 APEPDCL APNPDCL APSPDCL	➤ Long term trajectory for reduction of AT&C losses yet to be laid down by APERC.					
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%	-
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%

S. No.	SERC	Utility	Loss Reduction					
			2005-06		2006-07		2007-08	
			Target	Achieve	Target	Achieve	Target	Achieve
		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% 1 9.50%	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					
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 (Gol 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.
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	<i>Discoms have installed meters for all the installations except IP sets</i>

S. No	SERC	Metering Plan																					
		<p>and BJ/KJ. Specific metering plan is yet to be furnished by Discoms. Status of % of metering of BJ/KJ installations &amp; IP sets as on 31.3.2008 is as under:</p> <table border="1"> <thead> <tr> <th></th> <th><u>BJ/KJ</u></th> <th><u>IP Sets</u></th> </tr> </thead> <tbody> <tr> <td>BESCOM</td> <td>56.76%</td> <td>8.40%</td> </tr> <tr> <td>MESCOM</td> <td>76.35%</td> <td>91.71%</td> </tr> <tr> <td>CESC</td> <td>98.21%</td> <td>20.91%</td> </tr> <tr> <td>HESCOM</td> <td>73.71%</td> <td>29.89%</td> </tr> <tr> <td>GESCOM</td> <td>58.65%</td> <td>13.21%</td> </tr> <tr> <td>Hukeri RECS</td> <td>-</td> <td>32.09%</td> </tr> </tbody> </table>		<u>BJ/KJ</u>	<u>IP Sets</u>	BESCOM	56.76%	8.40%	MESCOM	76.35%	91.71%	CESC	98.21%	20.91%	HESCOM	73.71%	29.89%	GESCOM	58.65%	13.21%	Hukeri RECS	-	32.09%
	<u>BJ/KJ</u>	<u>IP Sets</u>																					
BESCOM	56.76%	8.40%																					
MESCOM	76.35%	91.71%																					
CESC	98.21%	20.91%																					
HESCOM	73.71%	29.89%																					
GESCOM	58.65%	13.21%																					
Hukeri RECS	-	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.																					
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																					

S. No	SERC	Metering Plan
		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

S. No	SERC	HVDS	SCADA & Data Base Management
			necessary instructions have been issued by the Commission.
8.	HPERC	<p>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.</p> <p>(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.</p> <p>(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.</p>	
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		<p><b>HVDS</b> : 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.</p> <p>Subsequently, as informed by M.P.</p>

S. No	SERC	HVDS	SCADA & Data Base Management
			Poorv Kshetra Vidyut Vitaran Co.Ltd. a comprehensive HVDS scheme for agricultural consumers has been initiated. Accordingly, a total of around 65675 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.	<p>In respect of distribution, REL has implemented SCADA under distribution management schemes, which covers 50 receiving stations.</p> <p>In MSEDCL licensee area SCADA was implemented in 10 cities in phase-I and it will be implemented in 14 cities in phase-II</p> <p>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.</p> <p>SCADA system has been recommended for the all the Distribution Utility.</p>
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	Real time SCADA system along with

S. No	SERC	HVDS	SCADA & Data Base Management
		Rs. 1000 crores ( out of Rs.2387 crises) for HVDS for AP connections in the month of sept.,2006	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 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	SCADA and Database Management are available at 400 KV and 220 KV Transmission System.

S. No	SERC	HVDS	SCADA & Data Base Management
		network.	
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.

<b>S. No.</b>	<b>SERC</b>	<b>SoP – Date of Notification</b>	<b>Summary</b>
1.	APERC	2004	Notified and amended in 2005
2.	AERC	Feb 4, 2005	Regulation notified and is effective
3.	BERC	Jan 22 <sup>nd</sup> ,2007	Standards of Performance for Distribution Licensee Regulations notified on 22 <sup>nd</sup> 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 3 <sup>rd</sup> ,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 30 <sup>th</sup> April 2008
13.	MPERC	July 13, 2004 and revised on Sep. 26 <sup>th</sup> , 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.

<b><u>S. No.</u></b>	<b><u>SERC</u></b>	<b><u>SoP – Date of Notification</u></b>	<b><u>Summary</u></b>
14.	MERC	Jan 20, 2005	Notified
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.	PSERC	June 29 <sup>th</sup> ,2007	Already specified as per enclosure*
18.	RERC		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 18 <sup>th</sup> ,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.

<u>S. No.</u>	<u>SERC</u>	<u>CGR Regulation</u>	<u>Summary</u>
1.	APERC	2004	Notified
2.	AERC	Dec 22 <sup>nd</sup> , 2003	CGR forum in 3 Discoms, process for appointment of Ombudsman is on. Selection Committee has been formed.
3.	BERC	May 20 <sup>th</sup> , 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	Feb 15, 2005 and revised on 22.12.07	CGR 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 5 <sup>th</sup> 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 Ombudsman.
8.	HPERC	Oct 23 <sup>rd</sup> , 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

<b><u>S. No.</u></b>	<b><u>SERC</u></b>	<b><u>CGR Regulation</u></b>	<b><u>Summary</u></b>
			appointed Ombudsman
12.	KSERC	October 6 <sup>th</sup> ,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 22 <sup>nd</sup> , 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 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.*

<b>S. No.</b>	<b>SERC</b>	<b>Summary</b>
1.	AERC	11 Consumer 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.

<b>S. No.</b>	<b>SERC</b>	<b>Summary</b>
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.
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

S. No.	SERC	Summary
		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 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.