

KEY NOTE ADDRESS

METERING WORKSHOP ON 27.12.2007

It gives me great pleasure to extend a hearty welcome to all the guests and participants in this workshop, which is a maiden effort of the Commission to bring the providers and users of meters on a common platform. The Commission feels encouraged to see that meter manufacturers and seal manufacturers have shown their keen interest in attending this workshop.

It is well known to all of us that the accurate yardstick or instrument for measurement of any commodity in the supply market is required by both the buyer and the seller. If the commodity is not properly quantified, then the rate of the commodity has hardly any relevance. Similar situation obtains in the electricity sector where a correct and appropriate metering plays a vital role to raise the mutual confidence level of both the licensee and the consumer.

As we all know the mind-boggling aggregate technical and commercial (AT&C) losses are becoming a problem of increasing concern to the commercial viability of any Distribution licensee. A meter is and continues to be the important bridge between recording and billing of the electricity consumed by any consumer.

As is well known, with the coming into force of the Electricity Act'2003 and Vidyut Sudhar Adhiniyam'2001, winds of change in the power sector have started blowing. Despite all odds, the process of reforms in power sector is under way. Realization is growing that the implementation of successful power reforms is extremely necessary to move forward to attain sustainable economic growth of the country. Deploying accurate and reliable metering systems with an eye to resort to suitable innovations constitutes one of the pillars of reforms for achieving greater efficiency.

The metering process has been placed under legal framework by the Section 55 of the Electricity Act' 2003, which reads as,

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

Provided that the licensee may require the consumer to give him security for the price of a meter and enter into an agreement for the hire thereof, unless the consumer elects to purchase a meter:

Provided further that the State Commission may, by notification extend the said period of two years for a class or classes of persons or for such area as may be specified in that notification.

Following the stipulations of the Electricity Act'2003, the National Electricity Policy is also very clear about supplying electricity through “correct” meters. The NEP regulates that all consumers should be metered in a time bound manner, and emphasizes on new technologies such as prepaid metering and time-of-day (ToD) metering. Some important sections of NEP regarding metering may be read as below:

“5.4.8 The Act mandates supply of electricity through a correct meter within a stipulated period. The Authority should develop regulations as required under Section 55 of the Act within three months.

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.”

The National Tariff Policy has also touched the metering part under clause (5) and (8) as given below:

“5. Metering of supply to agricultural / rural consumers can be achieved in a consumer friendly way and in effective manner by management of local distribution in rural areas through commercial arrangement with franchisees with involvement of panchayat institutions, user associations, cooperative societies etc. Use of self closing load limitors may be encouraged as a cost effective option for metering in cases of “limited use consumers” who are eligible for subsidized electricity.

(8) Metering compatible with the requirements of the proposed transmission tariff framework should be established on priority basis. The metering should be compatible with ABT requirements, which would also facilitate implementation of Time of Day (ToD) tariffs.”

Following the same guidelines of the NEP and the stipulations under section 55 of the Electricity Act ‘2003, the CEA has notified its regulation on “ Installation and operation of meters” on 17th March’2006 for defining the Accuracy class , location and specifications for consumer meters, interface meters and meters to be used for energy accounting and audit. These regulations also cover the sealing part of the meters along with up keeping of seal records. Use of Static meters, generally known as electronic meter, has been made compulsory. However, the existing electromechanical meters are to be replaced with electronic meters by the licensee in a phased manner. The lead seals are also to be replaced in a phased manner. The licensees are also expected to get their meter testing laboratories accredited by National accreditation Board for testing and calibration (NABL) immediately. MPERC under second proviso of section 55 of the Electricity Act 2003 vide notification dated 18.10.2005 had issued directives to all three Distribution licensees to complete the work of meterisation on all remaining unmetered connections within time limit as given below:

Name of Company	Total unmetered consumers reported by the licensee as on June 2005		Time extension given by the Commission to complete 100% meterisation work	
	Domestic	Agricultural	Domestic	Agricultural
East Discom	3,66,406	1,78,357	March 2006	September 2007
Central Discom	2,10,088	2,14,453	March 2006	December 2007
West Discom	96,719	3,03,374	December 2005	December 2007

The Distribution licensees in the State had approached the Commission for further extension of above time period, mentioning several reasons for not achieving cent

percent meterisation by the above time period. The status of unmetered consumers as on March'2007 and the time extension sought by the Distribution licensees is given as below:

Name of Company	Total no. of unmetered connections as on March'07		Percentage unmetered as on March'07		Time period extension sought by the Distribution licensees	
	Domestic	Agriculture	Dom .	Agri.	Domestic	Agricultural consumers through DTR metering
East Discom	3,22,580	1,39,733	18.36%	51.50%	31 st March 2010	31 st March 2010
West Discom	49,934	4,12,117	3.05%	83.8%	31 st December 2008	31 st March 2011
Central Discom	55,205	1,58,393	4.28%	57.06%	31 st December 2008	31 st March 2011

The Commission has taken a quarterly meterisation plan for domestic unmetered consumers from the Discoms and monitoring the meterisation progress on a quarterly basis. The Commission has also conveyed to the licensees that the shortfall in achieving the quarterly targets from September'07 onwards shall be seriously taken by the Commission. The status of meterisation as on 30th June '07 in respect of domestic category is given as below:

Discom	Total No.of domestic consumers		Total No.of un-metered connections as on March'07		Balance un-metered connections at the end of June'2007		% unmetered as on June'07	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
EAST DISCOM	761463	1030728	17981	304599	16669	310536	2.2%	29.9%
WEST	842470	781045	1323	52421	2823	51453	0.3%	6.5%
CENTRAL DISCOM	751536	524641	28138	27067	26951	26218	3.6%	5.0%
TOTAL STATE	23,55469	2336414	47442	384087	46443	388207	1.9%	16.61%

The Commission is laying emphasis on DTR metering for agricultural sector. The MPERC shall notify the revised plan in the gazette very soon.

Regarding periodic testing of meters, the Commission is monitoring the quarterly progress of Discoms and MPERC placed CPRI (Central Power Research Institute, Bhopal) as third party meter testing arrangement in May'2005 and recently, in August'2007 authorized ERDA, Vadodara also for a third party meter testing arrangement. This Commission is in regular touch with these two laboratories.

Out of total 67.54 lakh connections in the State, about 12 lakh connections including agricultural one are yet to be metered. About 14 lakh electromechanical

meters are required to be replaced with electronic meters. About 2300 meters are still to be installed on HT feeders for energy audit and accounting.

The DTR metering is also the main focus of the Commission. The progress of DTR metering requires to be expedited. As against about 1.8 lacs DTRs, meters have been provided on about 16,000 DTRs so far. In order to localize the high loss pockets for a well directed action to reduce the theft of electricity, energy audit at DTR level is a pre-requisite.

The prevailing tariff for agricultural pumps provides energy rates per units of consumption for metered agricultural consumers. The tariff also provides assessment units per horse power of sanctioned load for un-metered agricultural consumers. The rate of assessment units per horse power of sanctioned load for un-metered agricultural consumers is uniform across the State as there has been no scientific basis to evaluate differential rate of assessment units for different areas. There are about seven Lacs un-metered agricultural connections. Individual metering to such large number of agricultural connections is a time consuming exercise. It will however not be appropriate to continue with method of billing on flat rate assessment per HP indefinitely. An alternative interim and quite fair solution to this problem could be to provide meter on the Distribution Transformer for the group of agriculture consumers served by the DTR. The consumption recorded by the DTR meter could be divided amongst the connections on per HP pro-rata basis. The Commission has drafted a discussion paper on this concept to invite comments/suggestions from State Advisory Committee members, Discoms and public through a paper publication and also uploading the concept paper on Commission's web-site.

Obviously, action on both fronts, i.e. 100% consumer metering and providing energy audit meters, is required to be accelerated. Nation-wide consciousness is emerging on these issues and some of the States have already been making good efforts. We also need to act in a proactive manner without wasting any further time.

I would again emphasize that the meter to a utility is not merely means of recording consumption, but is a cash register. Therefore, it has to be accurate and has to be provided to all users of electricity.

With the advent of new technologies, the meters, that are now made available, are not only an instrument for registering the consumption, but they are data loggers. The meter of present technology is a multi-featured instrument which can help in gathering a lot of information for the purpose of analysis and further action to help the utilities to protect their commercial interest as also to help in reducing metering complaints by accurate recording. Technology is now available which can reduce or even remove the human element from the process of gathering the meter data, thus making it very effective and accurate. It is however necessary that hardware and software used for metering are error free and reliable. While the Discoms of the State are going in for remote metering for high value consumers particularly HT consumers, the issues related to low end LT consumers need to be taken up in right earnest.

The Commission has been pro-active to ensure implementation of the spirit of the Electricity Act, 2003 and the concerned policies. It has been given to understand that appropriate interface metering between the power companies is in place. It is mainly the distribution companies which are required to gear up for installation and maintenance of accurate energy audit meters and 100% consumer meters.

Appreciating that this is a voluminous and time consuming task, the Commission has sought plans/programme for metering by the Discoms. These plans have been received and we are looking into these. The utilities have shown a positive inclination for attaining the improvement. There are, however, certain difficulties with regard to the metering related issues. Some of these are:

1. Availability of adequate quantity of standard meters in the market to meet the demand.
2. Up-gradation of existing electronic meters to make it compatible with the present requirements
3. Providing common metering protocol or inter-operability for different makes of meters
4. The quality of the meters supplied by L-1 bidder has also been one of the main concerns.
5. The meters should have flexibility so that it can be up-graded to adapt to the new technologies like AMRs (Automatic Meter Readings) or pre-paid metering.
6. Providing Tamper Proof Meters is also one of the challenges/ concerns. A number of cases have been reported where different modus-oprendi were used for tampering of the electronic meters. Continuous up-gradation of meters by instilling tamper proof features is required to prevent pilferage of electricity.
7. Issue of anti-tamper seals is also of significant importance when the issue of tampering of meters is going to be discussed. There are apprehensions about the use of seals, as to which type of seals are most suitable

I expect that all the stakeholders and the Discoms would debate these issues during their presentation as also during the course of further deliberations. I also expect that the meter and seals manufacturers would respond positively to the needs of the Discoms with a view to improving the power scenario ultimately benefiting the end consumers. The aim of this workshop is to bring the power companies of the State and the manufacturers on a common platform to have result oriented deliberations so as to resolve the difficulties and to develop understanding to come make efforts together to make the power sector more efficient. The Commission's role is that of a facilitator. We would continue to encourage such activities in future.

In the end, I would like to say that I am particularly delighted to note that the CMDs of the companies have shown a keen interest on the subject as they are present in the workshop. I wish the profound success of this workshop and hope that it would prove to be a modest beginning in the direction of ensuring availability and implementation of efficient metering systems in the State. I call upon you to participate frankly in the discussions during the interactive sessions after each presentation and to provide your valuable input in elaborating the critical issues and suggesting possible solutions there to get the issues clarified. I am quite sure that today's deliberations shall be very useful.

In the end, as the New Year is approaching fast, I wish all of you a very happy new year in advance and declare this workshop open.

Thank you