

MINUTES OF THE FIFTEENTH MEETING
OF
FORUM OF REGULATORS (FOR)

VENUE: Conference Hall, ISTA Hotel, G.T. Road, Amritsar (Punjab)

DATE: 19th November, 2009

The list of participants is at **Annexure-I**.

Dr. Pramod Deo, Chairperson, CERC was in chair.

Chairperson, CERC welcomed Mr. K.J. Mathew, Chairperson, KSERC as he was attending the meeting of the Forum for the first time.

AGENDA ITEM NO.1: CONFIRMATION OF THE MINUTES OF THE 14TH MEETING OF 'FOR' HELD ON 04TH SEPTEMBER, 2009 AT NEW DELHI.

1.1 The Forum confirmed the minutes with the following two modifications:

(i) In Para 3.3(iii) of the minutes, the following would be added:

‘Successful implementation of REC would require addressing the issues relating to equitable sharing of financially burden incidental on the host State in the process of absorbing large quantum of infirm power, and also the issues relating to sharing of capital investment required for creating transmission infrastructure for evacuation of electricity from those RE generators who are exporting most of their production’.

(ii) The following would be added in para 8 of the minutes:

‘Chairperson, MERC briefed the Forum about the directions issued by the Government of Maharashtra on the tariff orders of MERC dated 17th August, 2009 in respect of Maharashtra State Electricity Distribution Company Limited. The directions had two parts. The first part wanted MERC to specify the road map for progressive reduction of cross-subsidy under Section 61(g) of the Electricity Act. The second part of directions wanted MERC to stay the tariff order dated 17th August, 2009 till above exercise is applied. Chairperson MERC pointed out that he had sought the opinion of Solicitor General of India (Mr. Gopal Subramaniam) in the matter.’

1.2 The Forum noted the action taken report on the decisions of the 14th meeting.

(a) A discussion took place on the matter relating to implementation of Renewable Energy Certificate (REC) framework. RERC has sent a note to FOR Secretariat on the issues relating to equitable sharing of financial burden incidental on the host State in the process of absorbing large quantum of infirm power, and also the issues relating to sharing of capital investment required for creating transmission infrastructure for evacuation of electricity from those RE generators who are exporting most of their production. Chairperson, RERC emphasized that these issues were required to be resolved at the earliest at an appropriate form. Chairperson, MERC wanted to know about the Committee constituted by the Central Government in the matters relating to implementation of REC mechanism. He also said that the efficacy of REC mechanism for mobilizing new investment in renewable sector was yet to be tested. Chairpersons, KERC, MPERC, HPERC and RERC expressed the view that REC would be a facilitator in development of renewable potential because it provides a commercial mechanism for sale of renewable energy generated beyond the Renewable Purchase Obligation (RPO)

level in a State set by the SERCs. Chairperson, GERC said that REC would encourage new investment in renewable sector.

Chairpersons, RERC and HERC added that determination of RPO level would be a critical factor for success of REC mechanism. Chairperson, RERC also said that price of REC should be fixed in a manner that addresses the concerns of the investors regarding uncertainty of revenue streams. Chairperson, PSERC said SERCs would be able to finalise REC regulations after CERC has finalized its REC regulations. Chairperson, GERC suggested that the provision relating to REC mechanism could be appropriately incorporated in the existing regulations, if any, of SERC under section 86(1)(e) of the Electricity Act, 2009.

Secretary, Forum apprised that Government of India had constituted a Committee for facilitating implementing of REC mechanism. The Committee is chaired by Additional Secretary, Ministry of Power and has representatives from MNRE and the FOR Secretariat.

Summarizing the discussion, Chairperson, CERC said that REC mechanism needed to be seen in the context of the national RPO target set by the National Action Plan on Climate Change. To achieve that level of RPOs in all the States, there is an urgent need to mobilize new investment in renewable energy sector across the country. However, given uneven distribution of RE resources we plan to take advantage of resource rich States like Tamilnadu and Karnataka. These States have already crossed RPO level of 10%. But they would be in a position to absorb more electricity whether it comes from RE or conventional sources due to power shortages faced by them. Hence RE generators in such States will be able to supply RECs to deficit States to achieve their RPO target. In short, the proposed REC mechanism would promote new investments in renewables and would also help

deficit States to attain RPO levels in line with the target prescribed in the National Action Plan on Climate Change. He emphasized that this strategy may need to be reviewed at an appropriate time. The solar mission has firm targets and financial commitments for first three years. He said that in future renewable market is likely to be more differentiated. A separate class of Solar RPO and Solar REC has already been provided to take care of significantly higher prices of solar energy as compared to all other established sources of renewable energy. Similar dispensation may be necessary for other RE sources in later years. He also said that setting RPO at reasonable level and its enforcement would be the key to success of REC mechanism. The need to devise an appropriate mechanism for sharing of additional financial burden of distribution utilities as RPO levels go up is undisputed.

(b) The Forum also desired that the note for seeking the opinion of the Solicitor General on the issue of deemed license status to State Government owned trading companies be circulated to all the SERCs. It was also desired that the Terms of Reference for the study relating to RPOs be circulated to all the SERCs.

AGENDA ITEM NO.2: DISCUSSION ON APTEL ORDER IN APPEAL NO. 181 of 2008 AS PER WHICH SECRETARY TO THE FOR HAS BEEN DIRECTED TO EVALUATE THLE STANDARDS OF PERFORMANCE AND THE SUPPLY CODE NOTIFIED BY THE APPROPRIATE COMMISSIONS TO EVALUATE VARIATIONS AND ANY SPECIFIC GAPS THAT NEED TO BE RECTIFIED.

2.1 After pursuing the agenda note, the Forum was of the view that while the directions issued by APTEL were useful in focusing the attention on consumer grievance related aspects of the regulatory process, the SERCs frame the relevant

account the achievement of the licensee with respect to target of overall standards.

- (ii) SERCs may also resort to penal action under Section 142 of the Act against the officials of the licensee's responsible for non-fulfillment of the Standards of performance, in cases where licensee is able to identify such officers.
- (iii) Model Standards of Performance should clarify the event from which the time lines for shifting of lines/distribution transformer would be counted.
- (iv) The licensee should be asked to submit a quarterly report (not monthly) on the achievement of Standards of Performance.
- (v) Licensee should not be held responsible for supply interruptions if the feeder/transformer failure is on account of the Central Public Sector Undertakings.
- (vi) It should be ensured that Model Standards of Performance are in conformity with IEEE Standards.

AGENDA ITEM NO. 4: CONSIDERATION OF THE STUDY ON 'DISTRIBUTION MARGIN'

4.1 A presentation (copy **enclosed at Annexure – IV**) was made by M/s ABPS on the findings and recommendations to the study on "Distribution Margin". After discussions, the Forum agreed with the conceptual framework proposed in the study. However, it was felt that the following three challenges were required to be duly recognised and addressed before the proposed Model of "Distribution margin" could be taken up for implementation:

- (i) Segregation of ARR into supply business and network business would be difficult because licensees maintain combined accounts and there are tax related problems in segregation.
- (ii) In number of States the function of procurement of electricity on long-terms has been formally or informally centralized at State level and the

individual utilities do not have discretion in the matter. In such cases, it would be difficult to hold the licensees responsible for procuring inadequate quantum of electricity. It was generally felt that there was nothing adverse if more than one licensee come together and go for joint procurement but the lead role should be with the licensees. Forming a SPV was also viewed to be useful as procurement through tariff based competitive bidding involved significant expert knowledge of skills which were not available in the organization of every utility.

- (iii) The proposed Model of “Distribution Margin” should also provide for contingencies when the supply is adversely affected due to extreme weather variation leading to abnormally high demand or monsoon failure resulting in loss of hydro generation.

4.2 The study may be completed after addressing the above aspects.

AGENDA ITEM NO. 5: DISCUSSION ON ‘REPORT BY FORUM OF LOAD DESPATCHERS (FOLD) TO FOR

5.0 The Forum noted the report of FOLD.

ADDITIONAL AGENDA ITEM: PROCUREMENT OF POWER THROUGH COMPETITIVE BIDDING BY STATE DISTRIBUTION UTILITIES.

6.0 The Forum noted the agenda note and also the letter dated 28th October, 2009 from the Ministry of Power requesting SERCs to impress upon state distribution utilities to hold Case - 1on bidding for procurement of power for meeting their current deficit as well as future requirements. The Forum appreciated the need of impressing the utilities to expedite procurement. However, it was felt that the distribution utilities do not have much discretion in the single buyer model being adopted in a number of States. It was felt that the current

approach at the Ministry level asking the States for nominating a nodal agency at the State level for planning in power sector would further perpetuate the single buyer model. The Forum decided to take up the agenda for further discussion in the next meeting. FOR Secretariat was asked to meanwhile compile data regarding extent of short-term procurement by the utilities and the hours of load shedding with the objective of bringing out the need of long-term procurement of power.

7.0 Chairperson, UPERC offered to host the next meeting of Forum at Lucknow in the first week of February, 2010. The offer was accepted.

8.0 The Forum appreciated the efforts of PSERC for the arrangements made for the meeting.

9.0 The meeting ended with vote of thanks to the Chair.

LIST OF PARTICIPANTS ATTENDED THE FIFTEENTH MEETING

OF

FORUM OF REGULATORS (FOR)

HELD ON 19TH NOVEMBER, 2009

AT ISTA HOTEL, AMRITSAR (PUNJAB)

S. No.	NAME	ERC
01.	Dr. Pramod Deo Chairperson	CERC – in Chair.
02.	Shri B.K. Halder Chairperson	BERC
03.	Shri Manoj Dey Chairperson	CSERC
04.	Dr. P.K. Mishra Chairperson	GERC
05.	Shri Yogesh Khanna Chairperson	HPERC
06.	Shri Mukhtiar Singh Chairperson	JSERC
07.	Dr. V.K. Garg Chairperson	Joint ERC for Goa & all UTs except Delhi
08.	Shri K.P. Pandey Chairperson	KERC
09.	Shri K.J. Mathew Chairperson	KSERC
10.	Dr. J.L. Bose Chairperson	MPERC
11.	Shri V.P. Raja Chairperson	MERC
12.	Shri P.J. Bazeley Chairperson	MSERC
13.	Shri B.K. Das Chairperson	OERC
14.	Shri Jai Singh Gill Chairperson	PSERC

15.	Shri D.C. Samant Chairperson	RERC
16.	Shri Manoranjan Karmakar Chairperson	TERC
17.	Shri V.J. Talwar Chairperson	UERC
18.	Shri Rajesh Awasthi Chairperson	UPERC
19.	Shri Himdari Dutta Member	AERC
20.	Shri R. Rajupandi Member	TNERC
21.	Shri Alok Kumar Secretary	CERC
22.	Shri Sushanta K. Chatterjee Deputy Chief (Regulatory Affairs)	CERC

FOR Review of Supply Code* November 2009



*connectedthinking



Contents

Background

Our approach

Our analysis

Way forward

Background

- Honorable Appellate Tribunal of Electricity (ATE), in the order against appeal no 181 of 2008, having its concern over the grievance of the consumers has issued directions to all the State Commissions/Joint Commissions to ensure effective implementation of Sections 42(5) to 42(7), 50, 57 and 59 of the Electricity Act, 2003.
- ATE, has directed Forum of Regulators to do the compilation of Supply code and Standard of Performance Regulations of all the state regulatory commissions and identify the gaps and variation if any in the present regulations/codes.

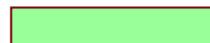
Provision in the Electricity Act 2003

- Electricity Act 2003 provides that the State Commission shall make Electric Supply code regulations under Section 50 of the Act to provide for :
 - Recovery of Electricity Charges
 - Intervals of billing of electricity charges
 - Disconnection of electricity for non-payment of charges
 - Restoration of supply of electricity
 - Tampering, distress or damage to electric plants, electric lines and meters
 - Entry of licensee or any other authorized person for disconnection of power supply and removal of meter and entry for replacing, altering, maintaining electric lines or plants and meters

Objective of the study

- In line with the ATE order, this assignment “Review of Supply code in 10 different States”
- Progress in the assignment till date is shown in the table

Sr. No.	State	Region	Progress status
1	Andhra Pradesh	South	
2	Tamil Nadu	South	
3	West Bengal	East	
4	Jharkhand	East	
5	Uttar Pradesh	North	
6	Punjab	North	
7	Delhi	North	
8	Assam	North East	
9	Maharashtra	West	
10	Madhya Pradesh	West	



Analysis complete

Our Approach

Our emphasis is on following areas

- Process
- Timelines
- Amount (fees etc.)
- Responsibility

Notification of supply codes in various states

Sr No	State	Year of Notification	Relevant clause
1	Tamil Nadu	July 2004	Section 181 read with Section 50 of the Electricity Act 2003
2	UP	Feb 2005	Section 181 & Section 50 read with sections 43-48, 50, 55-59 of the Electricity Act 2003
3	Jharkhand	July 2005	Section 181 read with Section 50 of the Electricity Act 2003
4	Andhra Pradesh	2004	Section 181 read with Section 50 of the Electricity Act 2003
5	Delhi	April 2007	Section 50 read with sections 57, 86 and 181 of the Act
6	Assam	August 2004	Section 181 read with Sections 43(1),47(1),47(4) and 50 of the Act
7	MP	March 2004	Section 181 read with section 47, 48, 50, 56 & section 9 (j) of Madhya Pradesh Vidyut Sudhar Adhiniyam 2000

Our Analysis

Formats provided for consumers...(1/2)

Parameters compared		MP	UP	TN	Delhi	AP	Jharkh and	Assam
(i)	Application form for new connection	Yes	Yes	No	Yes	No	Yes	Yes
(ii)	Application for temporary connection	Yes	Yes	No	Yes	No	No	Yes
(iii)	Format for inspection report of premises for new connection	Yes	No	No	Yes	No	No	Yes
(iv)	Application for Change of Consumer's name due to change in Ownership/occupancy of the property	Yes	Yes	Yes	Yes	No	No	Yes
(v)	Application for Change of Category	Yes	No	Yes	Yes	No	No	Yes
(vi)	Application for disconnection on consumer's request/ permanent disconnection	No	Yes	Yes	Yes	No	No	No
(vii)	Format for intimation to consumer after temporary disconnection	No	Yes	No	No	No	No	Yes

Our Analysis

Formats provided for consumers...(2/2)

Parameters compared		MP	UP	TN	Delhi	AP	Jharkh and	Assam
(viii)	Format for transfer of connection/mutation of name	No	Yes	Yes	Yes	No	No	Yes
(ix)	Meter related complaints or Testing of Meter	No	Yes	No	Yes	No	No	No
(x)	Format for application of self assessed bill	No	No	No	Yes	No	No	No
(xi)	Format for application of advance payment	No	Yes	No	Yes	No	No	No
(xii)	Format for inspection report for mis-use/ unauthorized use/ theft	No	Yes	No	Yes	No	No	No
(xiii)	Application for load enhancement/reduction	Yes	Yes	No	Yes	No	No	Yes
(xiv)	Format for agreement between consumer and licensee	No	No	Yes	Yes	No	No	Yes

Our Analysis

List of supporting documents identified along-with application

Parameters compared		MP	UP	TN	Delhi	AP	Jharkhand	Assam
(i)	For release of new connections	Yes	Yes	No	Yes	No	Yes	Yes
(ii)	For change of ownership	Yes	Yes	No	Yes	No	Yes	Yes
(iii)	For disconnection	No	Yes	No	Yes	No	No	No

Our Analysis

Recovery of electricity charges...(1/3)

Parameters compared		MP	UP	TN	Delhi	AP	Jharkhand	Assam
(a)	New Connections							
(i)	Process defined for obtaining new connection	Yes	Yes	Yes	Yes	No	Yes	Yes
(ii)	Type of applicable charges specified	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(iii)	Amount of applicable charges specified	No	No	No	Yes	No	No	No
(iv)	Timelines for providing new connection specified	Yes	Yes	No	Yes	No	Yes	Yes
(v)	Is security deposit for new connection specified	Yes*	Yes	No	Yes	Yes*	Yes	Yes
(vi)	Process for dealing with augmentation issues	Yes	Yes	No	Yes	No	Yes	No
(vii)	Charges applicable for augmentation issues	No	No	Yes	Yes	No	No	No

* Specified in separate regulations

Our Analysis

Recovery of electricity charges...(2/3)

Parameters compared		MP	UP	TN	Delhi	AP	Jhar- khand	Assam
(b)	Existing connections							
(i)	Type of charges applicable to the consumer specified	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(ii)	Amount of applicable charges specified	No	Yes	No	Yes	Yes	Yes	No
(iii)	Time period for recovery of charges specified	Yes	Yes	No	Yes	Yes	Yes	Yes
(iv)	Point of supply for applicability of charges specified	Yes	Yes	No	Yes	Yes	Yes	No
(v)	Process for dealing with load enhancement/ reduction issues	Yes	Yes	No	Yes	No	Yes	Yes

Our Analysis

Recovery of electricity charges...(3/3)

Parameters compared		MP	UP	TN	Delhi	AP	Jhar- khand	Assam
(vi)	Charges applicable for load enhancement/ reduction issues	No	Yes	No	Yes	No	No	No
(vii)	Process for treatment of previous dues	No	Yes	Yes	Yes	No	Yes	No
(viii)	Process for change in consumer category/ voltage level	Yes	Yes	No	Yes	No	No	No
(ix)	Process for conversion of system (single phase to 3 phase & vice versa)	No	No	No	Yes	No	No	No

Our Analysis

Billing of electricity charges...(1/4)

Parameters compared		MP	UP	TN	Delhi	AP	Jhar- khand	Assam
(a)	Billing information							
(i)	Prior intimation to the consumer on billing process (periodicity of billing service, date of meter reading, bill date and due date for payment in calendar month etc)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(ii)	List of information to be included in the bill clearly specified	Yes	Yes	No	Yes	Yes	Yes	Yes
(iii)	Intervals for billing of electricity charges specified separately for consumer categories (HT, LT, Agriculture etc)	Yes	Yes	Yes	No	No	No	Yes
(iv)	Meter status captured in bill or not	No	No	No	Yes	Yes	Yes	No

Our Analysis

Billing of electricity charges...(2/4)

Parameters compared		MP	UP	TN	Delhi	AP	Jhar- khand	Assam
(b)	Metering & reading							
(i)	Mode of meter reading - Manual/Automated	Yes	Yes	No	No	No	No	Yes
(ii)	Mode of meter reading - Third party allowed	Yes	Yes	No	Yes	Yes	Yes	Yes
(iii)	Provision of meter card/meter card passbook	No	Yes	Yes	No	No	No	Yes
(iv)	Mode of dispatch of the bills to the consumer (eg by hand/ by post)	Yes	Yes	Yes	No	Yes	Yes	Yes
(v)	Process in case of non-receipt of bills by consumer clearly specified	Yes	Yes	No	Yes	Yes	Yes	Yes
(vi)	Process for billing - No meter	No	No	Yes	No	No	No	No
(vii)	Process for billing - in case of faulty or defective (burnt/ stuck) meters	No	No	Yes	Yes	No	Yes	Yes
(viii)	Provision for provisional bill	Yes	Yes	Yes	Yes	No	No	Yes

Our Analysis

Billing of electricity charges...(3/4)

Parameters compared		MP	UP	TN	Delhi	AP	Jhar- khand	Assam
(c)	Mode of payment & bill collection							
(i)	Bill collection facilities specified (drop box, collection centers etc)	Yes	Yes	No	No	Yes	Yes	No
(ii)	Mode of payment of electricity bills (cash, DD, cheque (local/outstation), credit card, internet payment)	Yes	Yes	Yes	No	Yes	Yes	No
(iii)	Mode of acknowledgment of payment of bills clearly specified	Yes	Yes	No	No	Yes	Yes	No
(iv)	Process for advance payment of anticipated bills specified	No	Yes	Yes	Yes	Yes	Yes	Yes
(v)	Time period for payment of bills by consumer clearly specified	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(vi)	Process applicable for late payments specified	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Our Analysis

Billing of electricity charges...(4/4)

Parameters compared		MP	UP	TN	Delhi	AP	Jhar- khand	Assam
(c)	Mode of payment & bill collection							
(vii)	Charges applicable for late payments specified	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(viii)	Specifying the priorities for adjustment of amount paid by the consumer	Yes	Yes	No	No	Yes	Yes	No
(ix)	Process for payment of arrears bills through installment	No	No	Yes	Yes	Yes	Yes	No
(x)	Process for treatment of erroneous/ disputed bills	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(xi)	Payment on self assessment of bills by consumer specified	No	Yes	No	Yes	Yes	Yes	No
(xii)	Process for treatment of cheques issued by consumers which are not honored	Yes	Yes	Yes	No	Yes	Yes	No
(xiii)	Process applicable for raising bills in case of theft of electricity	No	No	Yes	Yes	No	No	Yes

Our Analysis

Disconnection of service

Parameters compared		MP	UP	TN	Delhi	AP	Jhar- khand	Assam
(i)	Conditions for temporary disconnection	Yes	Yes	No	Yes	No	No	No
(ii)	conditions for permanent disconnection	Yes	Yes	No	Yes	No	No	No
(iii)	Timelines for disconnection (Notice period etc.)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(iv)	Provision of lock-in period in case of disconnection on consumer request	No	Yes	No	Yes	No	No	No

Our Analysis

Restoration of supply of electricity

Parameters compared		MP	UP	TN	Delhi	AP	Jhar-khand	Assam
(i)	Conditions to be met by consumer clearly specified	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(ii)	Time period for restoration of supply after production of the proof of payment of charges by consumer	No	Yes	Yes	Yes	Yes	Yes	Yes
(iii)	Process for restoration of supply including documentation	No	Yes	Yes	Yes	Yes	No	No

Our Analysis

Tampering, distress or damage to electric plants, electric lines and meters

Parameters compared		MP	UP	TN	Delhi	AP	Jhar- khand	Assam
(i)	Treatment for damaged electrical plants, lines and meters within consumer premises	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(ii)	Treatment for damaged electrical plants, lines and meters outside consumer premises	No	Yes	Yes	Yes	No	No	No
(iii)	Process applicable in case of unauthorized use of electricity	Yes	Yes	Yes	Yes	Yes*	Yes	Yes
(iv)	Process applicable in case of theft of electricity	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(v)	Process for voluntary disclosure of tampered meters	No	Yes	No	Yes	No	No	Yes

* Specified in separate regulations

Our Analysis

Right of licensee to enter consumer premises and to remove fittings or other apparatus of licensee

Parameters compared		MP	UP	TN	Delhi	AP	Jhar-khand	Assam
(i)	Purpose governing the entry of authorized personnel clearly specified	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(ii)	Special provisions by which the authorized personnel can enter the premises	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(iii)	Specifying the authorized person who can enter the premises of a consumer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(iv)	Specifying the the time when authorized can enter the premises of a consumer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(v)	Specifying time period and the consequences of the failure to allow entry of authorized personnel	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Our Analysis Meter...(1/2)

Parameters compared		MP	UP	TN	Delhi	AP	Jhar- khand	Assam
(i)	Option to consumer for procurement of meter	No	Yes	Yes	Yes	No	Yes	No
(ii)	Terms for selection of meters purchased by consumers clearly specified	No	No	No	Yes	No	Yes	No
(iii)	Provision of Third party testing of meters installed by consumers	No	Yes	Yes	Yes	No	Yes	No
(iv)	Applicable charges for meters procured by consumers (Testing fees etc.)	No	Yes	No	Yes	No	Yes	No
(v)	Applicable charges for meter installed by Licensee specified or not (meter security, monthly rent etc)	No	Yes	No	No	No	Yes	No
(vi)	Treatment of cost of new meter installed by licensee against lost, burnt or defective & inoperative meter specified	No	Yes	Yes	Yes	No	Yes	Yes

Our Analysis Meter...(2/2)

Parameters compared		MP	UP	TN	Delhi	AP	Jhar- khand	Assam
(vii)	Process for replacement of lost meter clearly specified	No	Yes	No	No	No	Yes	No
(ix)	Process for testing and maintenance of meters clearly specified	Yes	Yes	Yes	Yes	No	Yes	Yes
(x)	Process for testing, replacement & charges in case of defective meters	Yes	Yes	Yes	Yes	No	Yes	Yes
(xi)	Option for placement of meter (consumer premises/ pole)	Yes	No	No	Yes	No	No	No
(xii)	Provision of requirement for meter particulars sheet for new meters	No	No	No	Yes	No	No	No
(vii)	Process for replacement of lost meter clearly specified	No	Yes	No	No	No	Yes	No

Our Analysis

Wiring of consumer premises

Parameters compared		MP	UP	TN	Delhi	AP	Jhar-khand	Assam
(i)	Applicable standards for consumer premises specified	Yes	Yes	No	Yes	No	Yes	Yes

Way forward

- Identification of key issues and gaps in various supply codes
- Phase II: Model Supply Code?

www.pwc.com

We are PricewaterhouseCoopers

We use our network, experience, industry knowledge and business understanding to build trust & create value for clients – we call this *connectedthinking



FOR

Salient features of Model SOP*

November 2009



*connectedthinking



Contents

- Section 1 Objective and approach followed
- Section 2 Establishment of call centres
- Section 3 Creating awareness
- Section 4 Compensation mechanism
- Section 5 Reporting and auditing mechanism

Objective

Objective

- To develop a model regulation of Standards of performance, which could serve as a template for consideration of State Electricity Regulatory Commission (SERCs) in discharge of their responsibilities under section 57 of the Act; and
- Reflect the existing, is implementable and practical

Approach

- Review of SOP regulations issued by the various SERCs in India (10 identified states) and some of the countries (5 identified countries)
- Consultation with stakeholders in various states by undertaking primary survey field visits, face to face discussions and seeking response through the questionnaire
- Preparation of draft Model SOP Regulation and consultation paper based on the analysis of questionnaire and discussions
- Clarification sought from Advocate General on automatic compensation issue
- Distinction across Class I cities, urban and rural areas

Distinctive features

- Automatic payment of compensation has been done away with as per legal opinion
- SOP parameters classified as under:
 - Guaranteed Standards (GS) - minimum standards of service that a distribution Licensee shall achieve; failure to achieve GS entail payment of compensation to the consumer; and
 - Overall Standards (OS): desirable level of performance in the discharge of its obligations
- **Compensation amount paid to consumers for deficiency on GS parameters will be allowed to be recovered in ARR if it meets OS**

Distinctive features

Enforcement and reporting mechanism has been strengthened

- Step 1: Establishment of call centers;
- Step 2: Spreading awareness;
- Step 3: Detailing compensation mechanism; and
- Step 4: Reporting and auditing procedure



Parameters included in Guaranteed Standards

Guaranteed Standards are minimum standards of service that a licensee shall achieve with respect to each consumer.

- operation of call center
- restoration of supply
- quality of supply
- meter complaints
- shifting of meter lines and transformers
- new connection / additional load / temporary connection
- transfer of ownership, change of category
- bill complaints
- disconnection / reconnection of supply

Parameters included in Overall Standards

Overall Standards

- All Guaranteed standards have been included in the Overall Standards
- Reliability standards (SAIFI, SAIDI, MAIFI) have been additionally included in the OS

Differentiation across GS and OS

- Targets specified for OS are more stringent than the GS

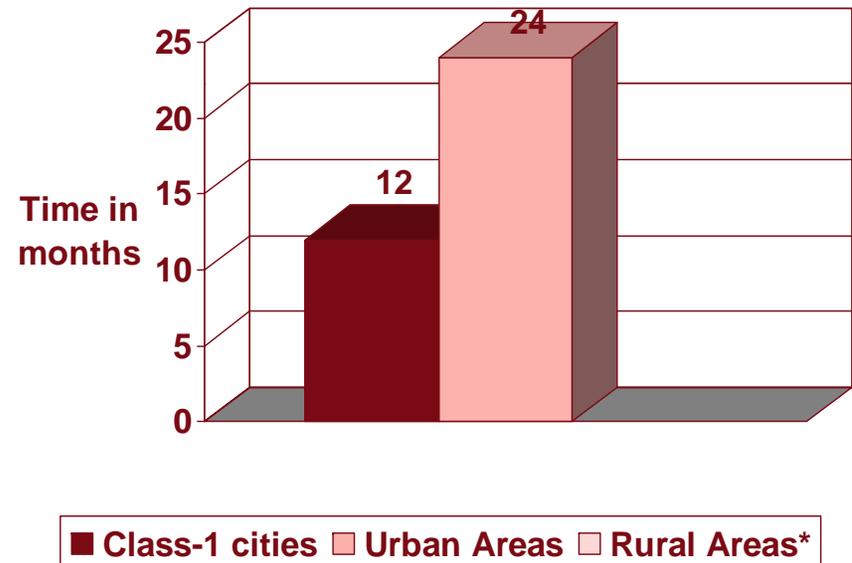
Establishment of Call Centre

Licensee is required to establish a Call Centre within appropriate time lines:

- 24 x 7 Call Centre; Toll free
- Ensure availability of electronic billing data base

Licensee shall use the existing channels for recording complaints till the establishment of call centres

Timelines for setting call centres



* to be specified by SERCs on a case to case basis

Procedure for handling complaints in call centres

- Register and record complaint by allotting a unique identification number to be called the complaint number;
- Communicate, at the time of lodging the complaint, complaint number, date and time of registration of the complaint, to the consumer;
- Intimate to the consumer , through telephone or other electronic means or any other means the status of the complaint; and
- Record feedback of the consumer on the action taken along with the total time taken for resolution of the complaint

Communication

- Licensee should publish the GS along with compensation structure at the back of the bills and should also include necessary information on filing of complaints
- Licensee should display the GS and the compensation structure at all bill collection centres



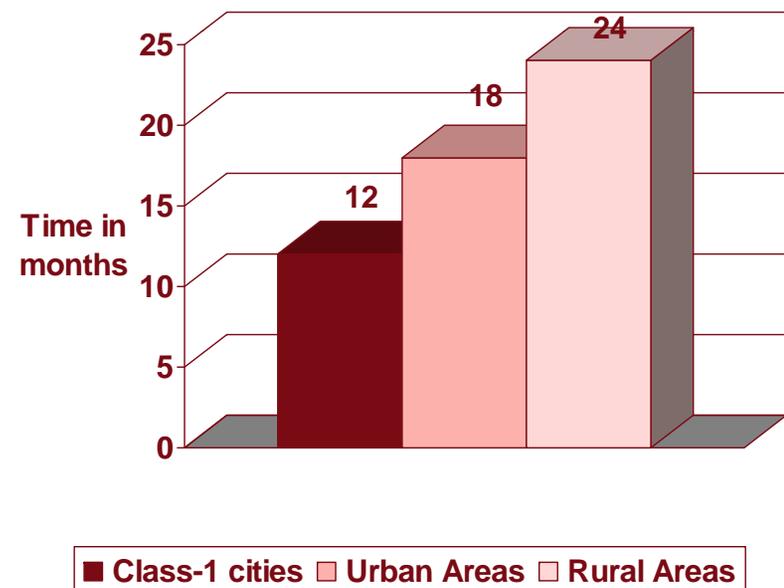
Compensation triggers

- If Licensee fails to meet the Guaranteed Standards of Performance, consumer will be required to make such a claim within 30 days of violation of the Guaranteed Standards;
- Amount of minimum compensation to be paid is defined;
- Actual compensation may be decided by the Commission considering the following factors
 - Hardship/financial loss caused to the consumer; and
 - Average monthly bill of the consumer
- Payment of compensation are to be made by adjustment against current and/or future bills for supply of electricity, within 60 days from the date of establishment of claim by the appropriate authority
 - Can be any agency appointed by SERCs as per Sec 97 of E Act 2003

Compensation incidences and recovery

- Events affecting more than one consumer, the provisions for payment of compensation will be applicable when the data on consumer indexing is available
- For consumers, where level of services defined in the contractual agreement between the Licensee and the consumer is different from the other consumers in the same category, deficiency in service shall invite additional compensation commensurate to the additional tariff charged for providing such services

Time lines for Consumer indexing*



*As specified in metering report of FOR

Reporting requirements

- Monthly report on performance levels achieved for GS;
 - Measures taken to improve SOP;
 - Number of cases in which compensation was paid; and
 - Amount of the compensation payable and paid
- Quarterly report on performance levels achieved for OS
 - Measures taken/planned by the Licensee to improve performance in the areas covered by Overall Standards
- Licensee to submit details of capital expenditure incurred to meet targeted level of performance

Third party auditing

Conduct periodical checks, in order to monitor the compliance by third party auditors:

- Audit scope and methodology for carrying out the audit to be set by the Commission
- Commission shall identify and publish panel of approved audit firms
- Licensee shall nominate an audit firm from the notified panel of auditors.
- Licensee shall not engage an audit firm consecutively for more than two years and they shall also not engage an audit firm which is currently their statutory auditor or internal auditor or has been engaged as a consultant

Audit reports

Reliability testing

Grading of the report submitted by the Licensee will be done in two parts:

- Reliability of information
- Assessing the claims for achievement

Only if the reliability is of Grade A, further analysis will be conducted to measure the claims on achievement

Grade	Reliability of information
A	Based on proper records with adequate procedures
B	Data has significant procedural deviations
C	Unsatisfactory data

Audit reports

Assessing achievement

Based on the assessment of the achievement on Overall standards, certain percentage of compensation paid will be allowed in the ARR

Grade	Deviation from OS achievement claims	Percentage of compensation paid to be allowed in ARR
1	Within 2%	100%
2	Within 5%	90%
3	Within 10%	75%

www.pwc.com

We are PricewaterhouseCoopers

We use our network, experience, industry knowledge and business understanding to build trust & create value for clients – we call this *connectedthinking



© 2009 PricewaterhouseCoopers. All rights reserved. "PricewaterhouseCoopers" refers to the network of member firms of PricewaterhouseCoopers International Limited, each of which is a separate and independent legal entity. *connectedthinking is a trademark of PricewaterhouseCoopers LLP (US).

Guaranteed standards of performance

S. No.	SOP Parameters	Class-I Cities	Urban Areas	Rural Areas
Operation of Call Centre				
1.	First response against a Consumer Call	3 minutes	3 minutes	3 minutes
2.	Registration of Consumer Call and issue of docket number	5 minutes	5 minutes	5 minutes
Restoration of supply				
3.	Normal fuse off	3 hours	4 hours	8 hours
4.	Line breakdowns	4 hours	6 hours	*
5.	Under ground cable break down	12 hours	12 hours	48 hours
6.	Distribution Transformer Failure	16 hours	24 hours	48 hours
7 (a).	Maximum duration of scheduled outage	12 hrs	12 hrs	12 hrs
7 (b)	Number of scheduled outages in a year	4	4	4

* To be specified by the respective SERCs

Guaranteed standards of performance

S. No.	SOP Parameters	Class-I Cities	Urban Areas	Rural Areas
Quality of Supply				
8.	Voltage fluctuations in case no expansion/augmentation of network required	10 days	10 days	10 days
9.	Voltage fluctuations in case expansion/augmentation of network required	120 days	120 days	120 days
10.	Voltage fluctuations in case erection of substation required	On case to case basis as per the approval of Commission	On case to case basis as per the approval of Commission	On case to case basis as per the approval of Commission

* To be specified by the respective SERCs

Guaranteed standards of performance

S. No	SOP Parameter	Class-I Cities	Urban Areas	Rural Areas
Meter complaints				
11.	Meter Reading	Once in two months	Once in two months	*
12.	Meter inspection and replacement	4 days	7 days	12 days
13.	Replacement of burnt meter	3 days	5 days	15 days
Shifting of meters / Service lines				
14.	Shifting of meter/ Service lines	7 days	7 days	7 days

* To be specified by the respective SERCs

Guaranteed standards of performance

S. No	SOP Parameter	Class-I Cities	Urban Areas	Rural Areas
New connection/ additional load/ temporary connection for consumers				
15.	New connection/ additional load where supply can be provided from existing network	30 days	30 days	30 days
16.	New connection/ additional load where supply can be provided after extension/augmentation of network	LT 30 days HT 90 days EHT 180 days	LT 30 days HT 90 days EHT 180 days	LT 30 days HT 90 days EHT 180 days
17.	Erection of substation to extend supply	On case to case basis as per the approval of Commission	On case to case basis as per the approval of Commission	On case to case basis as per the approval of Commission
* To be specified by the respective SERCs				
18.	Issue of temporary connection	3 days	3 days	7 days

Guaranteed standards of performance

S.No	SOP Parameter	Class-I Cities	Urban Areas	Rural Areas
Transfer of ownership, change of category				
19.	Title, transfer of ownership	Within second billing cycle from the date of receipt of application	Within second billing cycle from the date of receipt of application	Within second billing cycle from the date of receipt of application
20.	Change of category	Within second billing cycle from payment of necessary charges	Within second billing cycle from payment of necessary charges	Within second billing cycle from payment of necessary charges
Consumer bill complaint				
21.	Billing complaint resolution	24 hrs if no additional information is required otherwise 7 days	24 hrs if no additional information is required otherwise 7 days	24 hrs if no additional information is required otherwise 7 days

* To be specified by the respective SERCs

Guaranteed standards of performance

S.No	SOP Parameter	Class-I Cities	Urban Areas	Rural Areas
Disconnection of supply				
22.	Disconnection of supply	3 days	7 days	10 days
23.	Refund of security deposit etc.	30 days	30 days	45 days
24.	Issue of no dues certificate	30 days	30 days	45 days
Reconnection of supply following disconnection				
25.	Reconnection of supply after disconnection	4 hrs	4 hrs	12 hrs

* To be specified by the respective SERCs



November 2009
Slide 24

Compensation

S. No.	SOP Parameters	Minimum Compensation payable to individual in case event affects single consumer*	Minimum Compensation payable to individual in case event affects more than one consumer*
Operation of Call centre			
1.	First response against a Consumer Call	Rs 50 in each case of default (cod)	Not applicable
2.	Registration of Consumer Call and issue of docket number	Rs 50 in each cod	Not applicable
Restoration of supply			
3.	Normal fuse off	Rs 50 in each cod	Rs 50 for each consumer
4.	Overhead Line / Cable breakdowns	Rs 100 in each cod	Rs 100 for each cons
5.	Under ground cable break down	Rs 100 in each cod	Rs 100 for each cons
6.	Distribution Transformer Failure	Rs 150 in each cod	Rs 150 for each cons
7(a)	Maximum duration of scheduled outage	Rs 150 in each cod	Rs 150 for each cons
7(b)	Number of scheduled outages in a year	Rs 150 in each cod	Rs 150 for each cons

Compensation

S. No.	SOP Parameters	Minimum Compensation payable to individual in case event affects single consumer*	Minimum Compensation payable to individual in case event affects more than one consumer*
Quality of Supply			
8.	Voltage fluctuations in case no expansion/augmentation of network required	Rs 50 for each day of default	Rs 50 to each consumer for each day of default
9.	Voltage fluctuations in case expansion/augmentation of network required	Rs 100 for each day of default	Rs 100 to each consumer for each day of default

Compensation

S. No.	SOP Parameters	Compensation payable to individual in case event affects single consumer*	Compensation payable to individual in case event affects more than one consumer*
Meter complaints			
11.	Meter Reading	Rs 200 in each case of default	Not applicable
12.	Meter inspection and replacement	Rs 50 for each day of default	Not applicable
13.	Replacement of burnt meter	Rs 50 for each day of default	Not applicable
Shifting of meters lines and transformers			
14.	Shifting of meter	Rs 50 for each day of default	Not applicable

Compensation

S. No.	SOP Parameters	Compensation payable to individual in case event affects single consumer*	Compensation payable to individual in case event affects more than one consumer*
New connection/ additional load/ temporary connection for consumers			
17.	New connection/ additional load where supply can be provided from existing network	Rs 100 for each day of default	Not applicable
18.	New connection/ additional load where supply can be provided after extension/augmentation of network	Rs 250 for each day of default	Not applicable
19.	Erection of substation to extend supply	Rs 500 for each day of default	Not applicable
20.	Issue of temporary connection	Rs 100 for each day of default	Not applicable
Transfer of ownership, change of category			
21.	Title, transfer of ownership	Rs 50 for each day of default	Not applicable
22.	Change of category	Rs 50 for each day of default	Not applicable

Compensation

S. No.	SOP Parameters	Compensation payable to individual in case event affects single consumer*	Compensation payable to individual in case event affects more than one consumer*
Consumer bill complaint			
23.	Billing complaint resolution	Rs 50 for each day of default	Not applicable
Disconnection of supply			
24.	Disconnection of supply	Rs 50 for each day of default	Not applicable
25.	Refund of security deposit etc.	Rs 50 for each day of default	Not applicable
26.	Issue of no dues certificate	Rs 50 for each day of default	Not applicable
Reconnection of supply following disconnection			
27.	Reconnection of supply after disconnection	Rs 50 for each day of default	Not applicable



Criteria for specification of SOP parameters

The performance quality standards have been set in the new regulations under the following three categories:

- Class-I cities as defined in the Census of India-2001 (areas with population of more than 1 lakh)
- Urban areas- areas covered by all Municipal Corporations and other Municipalities including the areas falling under the various Urban Development Authorities, Cantonment Authorities and industrial estates or townships, excluding the areas covered under Class-I Cities
- Rural areas- areas covered by Gram Panchayats



Forum of Regulators

Study on evolving an appropriate model for Distribution Margin

November 19, 2009
Amritsar



ABPS Infrastructure Advisory Pvt. Ltd.

Agenda

- **Background**
- **National & International experience of Distribution Margin Approach**
- **Distribution Margin – The Concept & applicability in India**
- **Framework for implementation of DM approach**



Background

- **Tariff Policy notified on January 6, 2006 stipulated as under:**
 - SERCs may consider Distribution Margin (DM) approach for allowing returns in distribution business.
 - The Forum of Regulators should evolve a comprehensive approach on “distribution margin” within one year.
- **FOR Working Group on MYT and Distribution Margin recommended undertaking a study on need and feasibility of DM approach for providing returns to investors.**
- **FOR engaged ABPS Infrastructure Advisory Private Limited (ABPS Infra) for developing an appropriate model for implementation of Distribution Margin.**



National experience similar to DM approach

- ❖ **Bhiwandi Franchisee Experience:** MSEDCL appointed Torrent Power Limited as the Input based Distribution Franchisee for its Bhiwandi Circle through competitive bidding.
 - ❑ Franchisee quoted Input Rates for bulk purchase of power from MSEDCL for the ten-year period, which were higher than the existing realisation from that area
 - ❑ Input Rate payable is indexed every year by Tariff Indexation Ratio, to factor in the revision in tariffs through Tariff Orders
 - ❑ Franchisee stands to benefit through reduction in distribution losses and improvement in collection efficiency, which leads to greater revenue collection, while the payment to MSEDCL is fixed
 - ❑ MSEDCL's revenue collection from the area has increased
 - ❑ Consumers have benefited by improvement in the quality of supply and reduced load shedding due to lower Distribution & Collection losses



International Experience of DM Approach

- Studied Pakistan, South East Europe (Balkan Countries), Ukraine, Great Britain

Pakistan:

- In Pakistan, the distribution pricing methodology is called 'Distribution Margin' for the eight Distribution Companies that were formerly part of the Water and Power Distribution Authority (WAPDA).
- The end consumer tariffs are determined by considering the costs of generating and transmitting electricity to the distribution company and adding a 'Distribution Margin' to cover the costs of the Company plus a return on the Distribution Company's assets.
- Any increases in the costs of electricity purchased by the Distribution Company are passed directly on to consumer tariffs without affecting the margin the Distribution Company makes.
- Above approach is similar to the normative Cost Plus approach followed in India, though it is called Distribution Margin in Pakistan.
- In other countries, either the Cost Plus approach, or Performance Based Regulation approach is being adopted



Distribution Margin - The Concept and applicability in India



Distribution Margin approach...1/4

- Design of the Distribution Margin concept depends on the primary objective that is intended to be achieved.
- If the objective is to facilitate improvement in operational efficiency, then the existing modified Cost Plus approach or Performance Based Regulation (RPI-X) approach can be adopted.
- Traditionally, the recovery of fixed costs and incentives for Generation and Transmission Businesses have been linked to the Availability
- However, Availability factor has not been considered for Distribution Business, either for fixed cost recovery or for giving incentive/disincentive.



Distribution Margin approach...2/4

- The FOR Working Group on MYT and Distribution Margin had also recommended as under:
 - A Composite Index of Supply Availability and Network Availability should be specified.
 - Supply availability should be measured on the basis of power contracted by distribution licensees on a long-term basis for 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.
 - For every 1% under-achievement in composite availability for urban or rural areas, ROE shall be reduced by 0.1% of equity.
- Hence, it is proposed to achieve the objective of improving the Availability of the Network and Supply Business by the DM approach.



Distribution Margin approach...3/4

- Distribution Margin will provide the opportunity to the Utility to earn additional ARR, subject to a ceiling of $\pm 2\%$ of additional RoE.
- Supply Business:
 - Distribution Margin as a % of the ARR of the Supply Business, after excluding the power purchase cost, so that there is no perverse incentive for contracting costlier power
 - This also reflects the true costs incurred by the Supply Business by ensuring that the requisite supply is contracted for and the desired customer service is delivered.
- Wires Business:
 - Distribution Margin as a % of ARR of Wires Business
- Will require scientific allocation of costs between Wires & Supply Business



Distribution Margin approach...4/4

- Under the proposed model, there will be two levels of incentives/disincentives for the wires and supply business:
 - In case if the O&M expenses of the concerned Utility is lower/higher than the normative levels, then the Utility will get an incentive/dis-incentive, since only the normative expenses will be allowed to be recovered through the tariff.
 - In case the Network Availability/Supply Availability is higher/lower than the normative level, then the Utility will get an incentive/dis-incentive in terms of addition/reduction in percentage of ARR that the Utility will be able to recover.



Framework for implementation of DM approach



Existing Licensee vs. Competitive Bidding situation

- DM approach considering revenue collection mechanism has been tried in situations, wherein the distribution business was proposed to be privatised or distribution franchisees have been appointed after a Competitive Bidding process.
- Under the Competitive Bidding scenario, the prospective investor is able to bid for the distribution margin such that his expected costs are met and at the same time, he earns his desired return on investment.
- **However, the proposed Distribution Margin approach linked to Network and Supply Availability, is appropriate for both, existing distribution licensees as well as new licensees.**



Distribution Network Availability

- Not proposed to adopt Composite Availability, in view of need to segregate Supply and Wires Business
- Network Availability is an indicator of how much time the distribution network is available to the supplier for supplying electricity.
- Wires Network Availability = $(1 - (\text{SAIDI} / 8760)) \times 100$
where, SAIDI = $\frac{\text{Sum of all Customer interruption durations}}{\text{Total number of customers served}}$
- Wires Network Availability is proposed to be measured over the course of a month and year and will be expressed in percentage terms.
- While calculating the values of SAIDI, the interruptions due to Load Shedding, Interruptions caused by events outside the control of the Network Business and Interruptions due to natural calamities need to be excluded.



Supply Availability...1/2

- Supply availability may be measured on the basis of power contracted by distribution licensees on a long-term basis and may be represented in two sub-heads as under:
- Base load Supply Availability =
$$\frac{(\text{Actual Contracted Base Load Supply in MW}) \times (\text{No of Off-Peak hours for which power is contracted})}{(\text{Base load in MW}) \times (\text{No of off Peak hours})}$$
- Peak load Supply Availability =
$$\frac{(\text{Actual Contracted Peak Load Supply in MW}) \times (\text{No of Peak hours for which power is contracted})}{(\text{Peak load in MW}) \times (\text{No of Peak hours})}$$



Supply Availability...2/2

- The weightage for Base load Supply Availability and Peak load Supply Availability may be considered as, say, 75% and 25%
- Supply Availability for base load should be 100%
- SERCs may specify Supply Availability trajectory for peak load based on past performance of Supply Business, however, it should not be lower than 90%, and should be progressively increased in a maximum of three years to 95% or 98%.
- In case the actual supply is higher than the normative level, then the Supplier will be entitled to an incentive, and conversely, if the actual supply is lower than the normative level, then the Supplier will be subjected to a dis-incentive.



Implementation of DM approach...1/2

- The Distribution Margin approach is proposed to be adopted for both, the Wires Business, as well as the Supply Business, by factoring in the peculiarities of the respective Businesses.
- The incentive/disincentive proposed to be linked to % of ARR rather than RoE/ROCE,
 - since equity base is historical and not necessarily linked to scale of operations.
 - Power purchase cost is being excluded from the Supply ARR
- The maximum additional return (if ROE method is being adopted) that can be earned/reduced under the Distribution Margin approach, is **±2%**, for the respective business.



Implementation of DM approach...2/2

- Rationale behind specifying the addition/reduction in ARR as $\pm 0.2\%$ of ARR for every percentage point increase/decrease in Availability vis-à-vis the normative levels is as under:
 - If the Availability goes to 100%, then the maximum Distribution Margin, amounting to +2% of additional RoE will be available to the Distribution licensee
 - If the Availability goes to as low as 80%, then the reduction in ARR will be commensurate with a reduction of maximum 2% RoE.



Illustration of Proposed DM Approach...1/3

- **Utilities considered:**

- Reliance Infrastructure Limited (RInfra) - a private licensee, operating in the suburbs of Mumbai city
- Maharashtra State Electricity Distribution Company Limited - the largest electricity distribution licensee in the country, State-owned, and supplying to entire State of Maharashtra, except parts of Mumbai city
- Bangalore Electricity Supply Company (BESCOM) - Government owned distribution licensee in Karnataka, having both urban and rural mix
- Chhattisgarh State Power Distribution Company Limited (CSPDCL) - Government owned distribution licensee in Chhattisgarh, having both urban and rural mix
- Paschim Gujarat Vitaran Company Limited (PGVCL) - Government owned distribution licensee in the State of Gujarat, having both urban and rural mix

- **We have relied on the allocation of ARR between these businesses, as undertaken by the respective SERC, for the purpose of our simulation.**
- **Certain aspects to be noted in this regard and the implications of the same are as under:**



Illustration of Proposed DM Approach...2/3

- In case of RInfra, MSEDCL and BESCOM, most of the asset related expenses have been allocated to the Wires Business, while the O&M expenses have been allocated in some proportion between the two Businesses.
- In case of CSPDCL and PGVCL, only the power purchase expenses and transmission charges have been considered under Supply Business, whereas, all other expenses have been allocated to the Wires Business
- In case of CSPDCL and PGVCL, under the proposed approach, the Distribution Margin for the Supply Business is effectively being computed only on the transmission charges, since the power purchase expenses have not been considered.
- However, all expenses related to metering, billing, collection and customer services, including processing new connections, as well as power purchase activity, and obligation to meet the Standards of Performance, etc., would have to be considered under the Supply Business



Illustration of Proposed DM Approach...3/3

- The Distribution Margin available to the above distribution licensees, i.e., the impact on the ARR, for every 1% increase/decrease in Availability has been shown in the Table below:

(Rs. Crore)

Particulars	Incentive linked to ARR				
	RInfra-D	MSEDCL	BESCOM	CSPDCL	PGVCL
Network Availability	1.24	5.67	1.22	1.34	1.80
Supply Availability	0.79	4.59	1.92	0.63	0.67

- Note: The above has been computed by considering a 0.2% impact on the ARR for every percentage point increase/decrease in the availability for the Network Business and Supply Business, respectively.**



Requirements for DM Model

- Issues like load shedding protocol and hours of guaranteed supply to agricultural sector, etc., will have to be addressed and incorporated into the Availability computations.
- Monitoring of distribution licensee will have to be undertaken by the SERCs, to ensure that the figures reported against Network Availability and Supply Availability are correctly represented.
- Separate accounting for Wires and Supply costs will have to be insisted upon.
- Data on System Reliability Indices – SAIDI, CAIDI, and SAIFI - will have to be maintained and captured by SERCs

Thank You

