

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

Venue : MGM Resorts, Muttukadu, Chennai (Tamil Nadu)
Date : 30th January, 2009

The meeting was chaired by Dr. Pramod Deo, Chairperson, CERC/FOR. The list of participants is at **Annexure-I**.

The Chairperson welcomed Shri J. Barkakati, Chairperson, AERC, Shri V.P. Raja, Chairperson, MERC, Shri Rajesh Awasthi, Chairperson, UPERC and Shri M.R. Karmakar, Chairperson, TERC who were attending the FOR meeting for the first time. During the meeting, two minutes silence was also observed to pay homage to the Father of the Nation.

Item No.1 : Confirmation of the Minutes of the last FOR meeting and Action Taken Report.:

The minutes of the 9th Meeting of the Forum held on 14-15th November, 2008 at Bhubaneswar (Orissa) were confirmed. The Action Taken Report was considered and the following was decided:

- i) SERCs would expedite nomination of their nodal officer for coordinating the various information to be sent to the Secretariat. So far the Secretariat has received the nomination only from RERC.
- ii) SERCs would also expedite the information for RIMS and for the illustrative cases regarding applicability of various open access charges.
- iii) SERCs would also expedite updating the information regarding status of implementation of National Electricity Policy and Tariff Policy.
- iv) SERCs may send a copy of the legal opinion on the issue of consumer courts intervening in cases under section 126 of the Electricity Act, to the distribution licensees, consumer grievance redressal forums and ombudsmen.
- v) The Secretariat was directed to keep track of future developments in the matter of imposition of service tax on transmission charges and apprise the Forum in its next meeting.
- vi) The format for compiling the data regarding ATC losses of distribution utilities was considered and approved with the following modifications/directions:
 - a. The amount collected as arrears during a year should not be excluded.
 - b. SERC concerned may lay down the norms for determining the energy billed to un-metered consumers. This should be only for two categories i.e. agricultural consumers and the households below poverty line. The norms could be on the

basis of sample metering in case of the agricultural consumers which could be further refined on the basis of the results of the consultancy study on cost of supply to agricultural consumers.

- c. The exercise of compilation of data on ATC losses is in the context of implementation of restructured APDRP programme. The treatment of ATC losses in the process of tariff setting is to the discretion of SERC concerned.
 - d. The consultant carrying out the study on cost of supply to agricultural consumers may be directed to have interaction with Chairperson, HERC and Chairperson, PSERC.
- vii) SERCs assured to send nominations for the scheduled training programmes on protection of consumer interests and on DSM. The Secretariat clarified that the members of CGRFs and Ombudsmen could also be nominated for the training programme on protection of consumer interests. Similarly, the officers of the distribution licensees may also be nominated for the training programme on DSM.

Item No.2: Consideration and approval of the Working Group report on “MYT Framework and Distribution Margin”.

2. The report of the Working Group was considered. After discussions, the Forum approved the report with the following modifications:

- i) The proposed norm of 85% for composite index of supply and network availability for rural areas appear to be on higher side and therefore SERC concerned may have flexibility for deciding it appropriately.
- ii) The capital expenditure plan for network upgradation should clearly bring out the cost benefit analysis and the targeted reduction in technical losses.

It was also suggested that the some SERCs may be invited for making presentation (in the future meetings of the Forum) on MYT, wherever it has been implemented. FOR also desired that the consultant carrying out the study on distribution margin should be asked to have interaction with CSERC.

Item No.3 : Consideration and approval of the Working Group report on “Policies on Renewables”.

3. The report of the Working Group was considered. After discussions, the Forum approved the report with the following modifications:

- i) Imposition of renewable purchase obligation on captive consumers and open access consumers needed to be further studied in view of the likely difficulties in implementation and monitoring. Legal issues also need to be examined in depth.
- ii) The eligibility of fossil fuel based co-generation for the purpose of fulfillment of obligations under section 86(1)(e) needs to be further studied as the definition of co-

generation as given in the Electricity Act, 2003 is much wider than being followed by MNRE.

- iii) It may be clearly brought out that a suitable mechanism like Renewable Energy Certificate is necessary to promote renewable energy sources on the scale envisaged in the National Action Plan on Climate Change.

Item No. 4 : Presentation on Renewable Energy Certificate (REC) by the Consultant appointed by MNRE.

4. A copy of the presentation made by M/s. ABPS, the consultant appointed by MNRE, on REC is at Annexure-II. The presentation brought out the relevant features of the National Action Plan for Climate Change, the objectives and main features of the proposed REC mechanism and the proposal for developing a national level REC framework under the aegis of FOR.

After discussions, consensus emerged on the necessity of implementing a national level REC mechanism with the main objective of promoting the renewable energy sources. During the discussions, the following main points emerged:

- i) RE generators already having PPAs with distribution licensees for contracted quantum would not have option to participate in REC mechanism till the validity of respective PPAs.
- ii) New RE generators would have two options i.e. selling both the electricity component and REC component together at preferential tariffs determined by the respective SERC or selling only the electricity component to distribution utilities and selling the REC component through market mechanism.
- iii) Sale of RECs has to be mandatorily through a transparent market based trading mechanism.
- iv) Further work is required in the area of pricing the electricity component by the SERCs.
- v) The issue of regulatory jurisdiction on purchase of electricity beyond renewable purchase obligation also needed to be further examined.

The Forum decided to constitute a Task Force for further examination of above issues and detailing the proposed national level REC framework. The Chairperson, FOR was authorized to nominate the members of the Task Force and determine its Terms of Reference.

Item No.5 : Consideration and approval of the Working Group report on “Open Access – Theory and Practice etc.”

5. The report of the Working Group was considered. After discussions, the Forum approved the report with the following modifications:

- i) It may be clarified that the term 'open access' need not be restricted to short-term and should be applicable for utilizing the available surplus capacity.
- ii) The exclusion of regular maintenance and forced outages from the maximum period of six weeks for standby support may be omitted.

Item No.6: Approval of proposal regarding constitution of Forum of Load Despatchers (FOLD).

6. The draft charter of FOLD was considered and approved.

Item No.7: Training Programme / Consultancy Assignment (Proposed) -

Training Programmes :

- **Orientation Programme for Chairpersons/Members of the ERCs**
- **Seminar on Electricity Tariff in Regulatory Regime in association with NPTI (February, 2009).**
- **Training Programme on Regulation, Competition and Consumer issues in the Electricity Sector by CUTS (May, 2009)**
- **Training Programme for Officers of SERCs by IIT, Kanpur**

Study through outsourcing :

Analysis of Tariff Orders & Other Orders of Electricity Regulatory Commissions (ERCs)

7. The proposed training programmes and the study through outsourcing (details at **Annexure-III**) were approved with the modification that the study on analysis of tariff orders should cover the orders of all the SERCs.

Item No.8 : CERC's Order on Planning of Short Term Supply - Discussion

8. The matter was discussed and the SERCs agreed that distribution licensees should be made accountable for advance planning for procurement of electricity in short-term to meet the estimated demand.

Item No.9: Discussion on the issues raised by CSERC on -

- (i) Gaming by Generators seeking Open Access.**

Chairperson, CSERC made a presentation of which a copy is at Annexure-IV. After discussions, it was felt that CERC could consider including the following in inter-state open access regulations:

- i) The notice period for revision of schedule may be reduced.
- ii) There should be limits on deviating from schedule both for the generators and the licensees.
- iii) If the load dispatch centre reports gaming by a constituent, there could be penalties including suspension of scheduling for a specified period.

(ii) Potential of Electricity Generation from Waste Heat from Sponge Iron Industry.

A presentation was made by Chairperson, CSERC of which a copy is at Annexure-V. The Forum noted the fact that CSERC has resolved this issue through imposition of cross-subsidy surcharge on the electricity consumed by Sponge Iron plant. A view also emerged that the SERCs could consider making the cross-subsidy surcharge zero for co-generation plant in view of the provisions of section 86(1)(e) of the Act.

Item No.10: Any other item

10.1 The letter dated 20th January, 2009 from the Appellate Tribunal for Electricity suggesting holding seminars periodically on energy matters to bring consistency and uniformity in approach was welcomed and it was decided that first such seminar could be hosted by Karnataka ERC at Bangalore.

10.2 The orders issued by the Karnataka State Government under section 11 of the Electricity Act directing all the generators and co-generators in the state to maximize generation and putting the electricity grid in the state grid came up for discussions. There was a consensus that this may prompt other states also to react and put restrictions on export of electricity, which would be against the spirit of the Electricity Act to promote electricity market in the country and would also seriously hinder the efforts being made for operationalisation of open access. The stance of the Karnataka Government is also contrary to the resolution passed by the Chief Ministers conference on power in May'07. Though the matter was subjudice and the legality of the orders would be decided in due course, the Forum resolved that this matter be taken up with the Ministry of Power. The Chairperson, FOR was authorized to send an appropriate communication to the Ministry of Power in this regard suggesting that the Ministry may discuss this with the states for reiterating their commitment to proactively support the efforts for expeditious implementation of open access.

10.3 The proposal for holding the next meeting of the Forum on 2nd March, 2009 at Delhi was approved.

11. The Members of the Forum appreciated the arrangements made by TNERC for the meeting.

12. Shri S. Kabilan, Chairperson, TNERC conveyed his gratitude and deep appreciation to the staff of FOR Secretariat for their arduous efforts at organizing the meeting.

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

LIST OF PARTICIPANTS ATTENDED THE TENTH MEETING

OF

FORUM OF REGULATORS (FOR)

HELD ON 30TH JANUARY, 2009

AT “MGM RESORTS”, MUTTUKADU, CHENNAI (TAMIL NADU)

S. No.	NAME	ERC
01.	Dr. Pramod Deo Chairperson	CERC – in Chair.
02.	Shri A. Raghotham Rao Chairperson	APERC
03.	Shri Jayanta Barkakati Chairperson	AERC
04.	Shri B.K. Halder Chairperson	BERC
05.	Shri S.K. Misra Chairperson	CSERC
06.	Dr. P.K. Mishra Chairperson	GERC
07.	Shri Bhaskar Chatterjee Chairperson	HERC
08.	Shri Yogesh Khanna Chairpersn	HPERC
09.	Shri K.B. Pillai Chairperson	J&KSERC
10.	Shri Mukhtiar Singh Chairperson	JSERC
11.	Shri K.P. Pandey Chairperson	KERC
12.	Shri C. Balakrishnan Chairperson	KSERC
13.	Dr. J.L. Bose Chairperson	MPERC

14.	Shri V.P. Raja Chairperson	MERC
15.	Shri B.K. Das Chairperson	OERC
16.	Shri Jai Singh Gill Chairperson	PSERC
17.	Shri S. Kabilan Chairperson	TNERC
18.	Shri M.R. Karmakar Chairperson	TERC
19.	Shri Rajesh Awasthi Chairperson	UPERC
20.	Shri V.J. Talwar Chairperson	UERC
21.	Shri Prasad Ranjan Ray Chairperson	WBERC
22.	Dr. V.K. Garg Chairperson	JERC for Goa & all UTs except Delhi
23.	Shri Hemam Bihari Singh Chairperson	JERC for Manipur & Mizoram
24.	Shri K.L. Vyas Member	RERC
25.	Shri Alok Kumar Secretary	CERC
26.	Shri Sushanta K. Chatterjee Deputy Chief (Regulatory Affairs)	CERC

*Presentation to
Forum Of Regulators*

on

Renewable Energy Certificate

Mechanism for India



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Agenda

- Drivers for REC Mechanism
- Introduction to REC Mechanism
- Proposed Operational scheme for REC Mechanism





Drivers for REC Mechanism



National Action Plan for Climate Change (June 2008) (1/3)

- At National level for FY 2010, target for RE Purchase may be set at 5% of total grid purchase, to be increased by 1% each year for 10 years.
- SERCs may set higher target than this minimum at any point in time.
- At State level, several agencies would need to enlarge and redefine their goals and areas of operation.
- If required, new legislation at the Central & State levels may be defined to arrive at appropriate delegation of responsibility and authority for meeting defined goals.



National Action Plan for Climate Change (June 2008) (2/3)

- SERCs to ensure greater use of RE and increased access to energy in areas where distributed and decentralized forms of energy are economically superior to conventional forms.
- In doing so, State government may employ fiscal instruments to promote appropriate options and measures.
- Without regard to scheduling, renewable power may be enabled to compete with conventional generation on equal basis (whether bid tariffs or cost-plus tariffs)
- All else being equal, in such cases, the renewable power should be preferred to the competing conventional power



National Action Plan for Climate Change (June 2008) (3/3)

- Central & State Govts may set up a verification mechanism to ensure that renewable power is actually procured.
- Appropriate authorities may issue certificates that procure renewable power in excess of the national standard. Such certificates may be tradable, to enable utilities falling short to meet their RPS.
- Penalties as may be allowed under EA 2003 may be levied, if utilities are still falling short in RPS.



MNRE initiative to develop REC Mechanism

- In view of NAPCC mandate, MNRE has engaged ABPS Infra to propose suitable approach for development of conceptual framework for REC mechanism that can facilitate Inter-state sale of electricity from RE sources so as to fulfill the obligation of Renewables based Power Purchase.
- In this Presentation, ABPS is presenting proposed REC Framework.





Introduction to REC Mechanism



Possible Objectives for REC Mechanism

- Effective implementation of RPS
- Increased flexibility for participants
- Overcome geographical constraints
- Reduce transaction costs for RE transactions
- Enforcement of penalty mechanism
- Create competition among different RE technologies
- Development of all encompassing incentive mechanism
- Reduce risks for local distribution company by limiting its liability to only energy purchase

In the view of hurdles faced by RE Development, it appears that these objectives should take precedence over others.

Renewable Energy Certificates – General Features

- 1 “certificate” \simeq 1 MWh of renewable energy generated
- Mechanism is used in many countries such RPS (US & Japan), ROCs (UK), RECs (Australia).
- Usually certificates are traded to meet the mandatory targets for RE purchases by utilities/DISCOMs
 - However, tradability is not mandatory
- Targets establish demand
 - Market for RECs sets price
 - At times regulators fixes the ceiling price ~ in form of penalty to bring in certainty
- Purchase of REC would be “deemed” as purchase of renewable energy under Section 86(1)(e).
- Entity under S 86(1)(e) obligation can purchase RECs to satisfy its obligation.



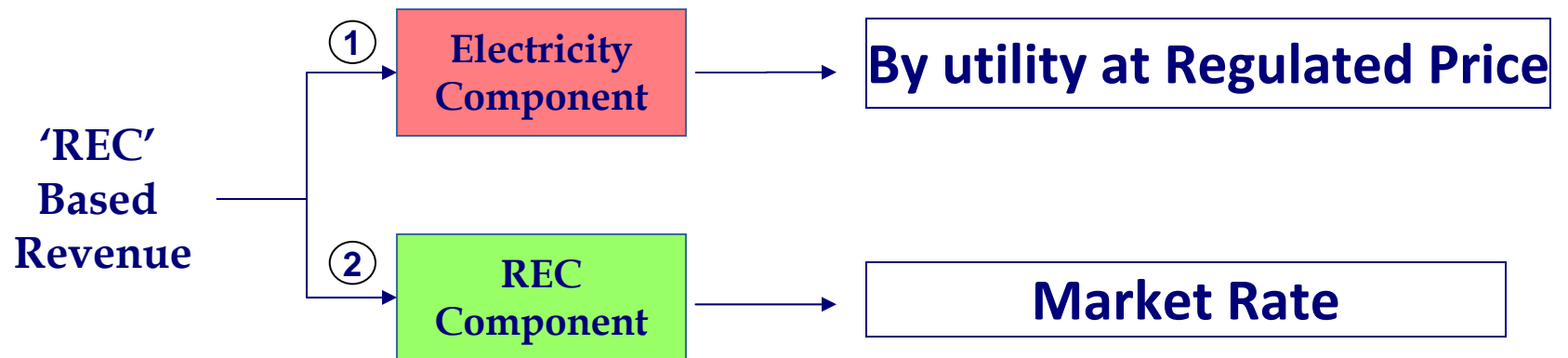
REC Mechanism for implementation in India

- Renewable Energy Certificate (REC) is a proof that certain environmental attributes have been produced by way of generation of renewable energy
- RE generators will be selling two products:
 - Electricity generated by RE source
 - Environmental attributes in the form of REC
- Electricity will be procured by any person using conventional power procurement process.
- Purchase would be at the prices determined by the SERC which may be average power purchase price for that utility.
- It will reduce the burden on the local distribution licensee
- RECs could be procured by all entities subjected to RPS.
- For serving RPS, purchase of RECs should serve the purpose



REC - Pricing of electricity and REC

- RE Generator will be able to sell electricity separately from the REC.
- REC may be sold to the purchaser of electricity or to any other person.
- Electricity from renewable sources will be purchased like purchase from other conventional source.



Though electricity buyer need to pay less cost towards electricity procurement, REC scheme is **NOT** an incentive based scheme

Important Features of REC

- REC scheme is NOT an incentive mechanism. Rather it enables sale of purchase of renewable component across the State boundaries.
- REC mechanism could be implemented with any 'Generation Based Incentive' scheme as both mechanisms are based on the certification of generation.
- RE Certificate does not represent any fiscal attribute such as 'Accelerated Depreciation', hence it is different that Production Tax Credits.
- Though REC represent environmental attribute, it is not related to carbon credits as two mechanisms are independent of each other.
- However, it is desirable that only one of the mechanism should have 'trading' as its feature.

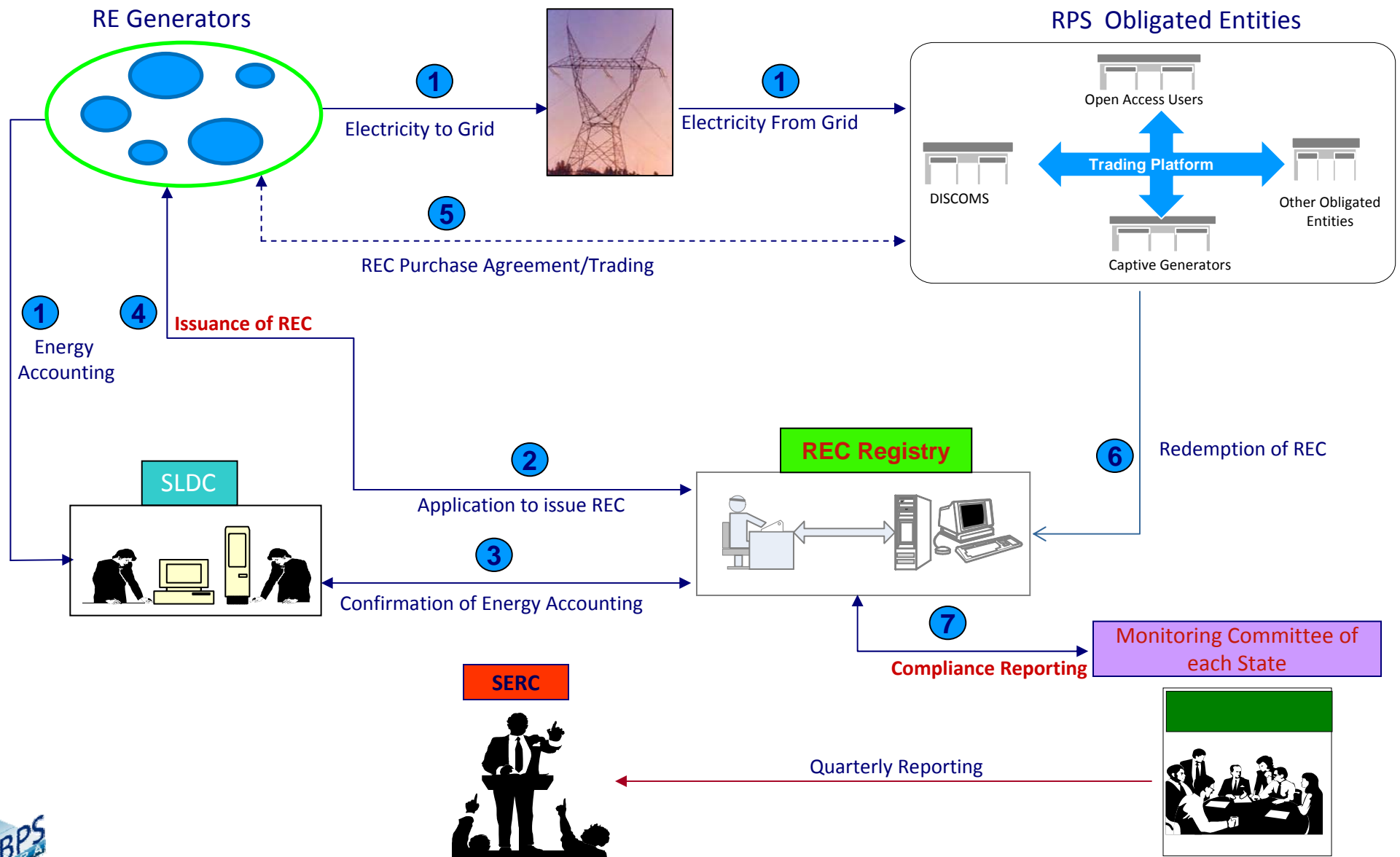




Proposed Approach for REC Framework



Operation of REC Mechanism



FOR - REC Framework to address....

- FOR to develop National level REC framework which will:
 - Devise Principles for REC Mechanism
 - Develop Methodology for REC pricing
 - Identify operational requirements such as Registry & Trading Platform
 - Define Roles and Responsibilities of various stakeholders.
 - Identify need to modify existing SERC/ CERC regulation, if any.
 - Develop Enforcement Principles
- Further, FOR may ask suitable agency to develop and monitor national level operational platforms such as REC registry, Trading Platform, ect.



Legal & Regulatory Compatibility of REC

- Proposed approach of REC framework is NOT in conflict with any provision of the Electricity Act such as Section 86 (1)(b), Section 86 (1)(e), Section 61 (h) and Section 66
- SERCs to continue to determine tariffs under Sections 61-64 and set targets under Section 86.
- Proposed approach is also not in conflict with any of the existing incentive based schemes.



Operationalising Framework to also include ...

- Pricing of REC
- Denomination of REC
- Physical form of RE Certificate
- Creation of REC
- Eligible RE Technologies
- Eligible RE Generators
- Obligated Entities
- REC Registry
- Banking & Trading
- Penalty for Noncompliance
- Shelf life of RE Certificate
- Sunset date for REC Mechanism
- Compatibility with other schemes





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January, 2009

PROPOSED TRAINING PROGRAMMES & STUDY THROUGH OUTSOURCING

Training Programmes :

- Orientation Programme for Chairpersons/Members of the ERCs

(FOR Secretariat is preparing an orientation course for the Chairpersons/Members of the ERCs in consultation with IIM Ahmedabad. The 10 days long course would primarily contain a capsule on legal and policy framework and regulatory philosophy, and 4 days long international exposure in the areas of independent system operation and the utility interface with the consumers.)
- Seminar on Electricity Tariff in Regulatory Regime in association with NPTI (February, 2009).
- Training Programme on Regulation, Competition and Consumer issues in the Electricity Sector by CUTS (May, 2009)
- Training Programme for Officers of SERCs by IIT, Kanpur

Study through outsourcing:

Analysis of Tariff Orders & Other Orders of Electricity Regulatory Commissions (ERCs) with focus on

- Tariff Rationalization
- MYT – Base Line Data
- Wheeling Charges & Transmission Charges : Separation and Rationalization
- Subsidy Payment and its Treatment in Tariff
- Power Purchase Cost

Orders of all SERCs for the last four years can be taken up for analysis.

GAMING IN OPEN ACCESS: REMEDIES?



1. BRIEF FACTS OF THE CASE

- **Company has 35 MW power plant.**
- **Tied up trading of 30 MW to DISCOM, Rajasthan, through Lanco power trader at Rs. 9 per KWh.**
- **Applied and received SLDC's NOC in May 2008 for OA for 30 MW from Sept. '08 to Feb. '09.**
- **Trader obtained OA from RLDC – Nodal agency.**

2. BRIEF FACTS

- Scheduling monthly.
- New plant. COD only in first week of Sept. Persistent problems in generation.
- Monthly schedule of injection not observed.
- Actual injection from 20th Sept. to 20th Nov:
 - Sept.: -82%
 - Oct : -66.82%
 - Nov.: -100% (Nil generation)

3. BRIEF FACTS

- **SLDC gave repeated notice for revision in schedule to generator – Not heeded .**
- **Plant stopped totally on 26.10.08.**
- **SLDC withdrew concurrence on 20.11.08 after warning notice.**

4. CONSEQUENCES

- As schedule not revised CSEB had to overdraw at State periphery to the extent of under injection by generator.
- CSEB paid UI for overdrawal and received 105% of UI, as per Regulations, from generator.
- Generator continued to receive agreed sale price from DISCOM through trader.
- The sale price was Rs.9 per KWh while the average UI came to Rs. 6.5 per KWh.

5. CONSEQUENCES

- The difference between the sale price and the UI i.e. Rs.2.50 per KWh accrued to generator.
- CSEB received less power from the Central quota.
- Generator received unearned pecuniary benefit even during nil generation/injection.


6. GENERATOR'S CASE

- Change in schedule requires prior notice of 5 days.
- Engineers assured that plant would be repaired in 2-3 days time.
- Reason to believe, schedule not changed intentionally when implications sank in.

7. PGCIL'S VIEWS

- **No provision for withdrawal of concurrence due to even nil injection as deviations from schedule settled through UI mechanism.**
- **Concurrence can be reviewed by SLDC only on grounds of transmission constraint on real time basis.**
- **Commercial implications on deviations from schedule taken care of by UI.**
- **Additional 5% UI adequate compensation**

8. CONCLUSION

- **Clear case of gaming – Can happen any time.**
 - **PGCL's views are as per Regulations, but UI mechanism does not address such eventualities.**
 - **Have to seek solutions outside UI mechanism – perhaps in scheduling.**
- 

9. SUGGESTIONS

- Reduce notice period for revision of schedule from present 5 days to 2 days.
- Under injection (limit may be fixed) for 3 days – Notice by SLDC for revision of schedule.
- If under injection continues for 3 more days, no schedule for 3 days by way of penalty.

10. SUGGESTIONS

- If generation closes down for one day, schedule may stand suspended, on request of SLDC.
- Present tolerance limit for deviation from schedule i.e. 5% per block 1% per day, for UI, should be raised for small size units (below 50MW capacity).
- There should be a cap on UI rate for over injection as it is in case of tariff for Central power stations.

Thanks



**POTENTIAL OF
ELECTICITY GENERATION
FROM WASTE HEAT OF
SPONGE IRON
INDUSTRIES**



1. PROCESS AND POTENTIAL

- **Process of manufacturing of sponge iron generates waste gasses at very high temperature.**
- **Production of 100 tonnes of sponge iron per day releases enough waste heat to generate 2.5 MW power through waste heat recovery (WHR) boiler and TG set.**
- **Generation can be augmented by installation of auxiliary boiler to run on coal and dolachar.**
- **Chhattisgarh has generation potential of 300 MW from waste heat of sponge iron plants. Present installed capacity 100 MW.**

2. BENEFITS

- **Generation of power through co-generation (bottoming cycle as defined by MoP).**
- **Prevents pollution – hazardous gasses not going into atmosphere.**
- **Sponge iron plant consumes only about 15% of electricity generated from its own waste gasses, hence not a CPP. But of necessity generating plant has to be co-located with parent industry (sponge iron plant).**
- **Although co-generation MNRE does not support co-generation based on waste heat from fossil fuel.**

3. ISSUES

- Since not CGP under what provision of law should self-consumption without availing open access be permitted.
- Does not require open access because of co-location.
- Clearly a case of co-generation (bottoming cycle) hence should be supported.
- No provision in the Act for self-consumption except for CGP.

4. CEAs ADVICE

On reference to MoP, CEA has advised as under:

- There is no bar to self-consumption of electricity by a generating company.**
- Industry that sets up co-generation plant (e.g. sugar mills) not barred from self-consumption of power produced.**

Prevailing in UP, Tamil Nadu etc.

- Cross-subsidy surcharge only in association with OA. Hence self-consumption cannot be regularized by charging cross-subsidy surcharge.**

5. CONCLUSION

- **Fallacies in CEA's advice are obvious. The scheme of the Act does not permit a generator supplying electricity to any consumer without any restriction.**
- **Self-consumption in case of CGP – requirement of 51%.**
- **Must be supported because of the benefits**
- **Should be regularized on payment of cross-subsidy? Order passed by CSERC in two cases.**

Thanks

