

# **MINUTES OF THE THIRTIETH MEETING**

## **OF**

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

**Venue** : "JACARANDA-II" HALL (FIRST FLOOR)  
CONVENTION CENTRE  
INDIA HABITAT CENTRE  
LODHI ROAD  
NEW DELHI.

**Date** : 06<sup>TH</sup> JUNE, 2012

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

Shri Rajiv Bansal, Secretary, CERC/FOR extended a warm welcome to all members of the Forum.

The FOR thereafter took agenda items for consideration.

**Agenda Item No. 1:** Confirmation of the Minutes of the 29<sup>th</sup> Meeting of "FOR" held during 19<sup>th</sup> – 20<sup>th</sup> April, 2012 at "Mayfair Spa Resort", Gangtok (Sikkim).

The Forum noted and endorsed the minutes of the 29<sup>th</sup> Meeting of FOR held at Gangtok (Sikkim) during 19<sup>th</sup> – 20<sup>th</sup> April, 2012 as circulated. The Forum also noted the Action Taken Report as contained in Appendix-II of the Agenda Note. As desired, a copy of the Order constituting the Working Group on “Review of the Performance of the Regulators” is **enclosed** at **Annexure – II**, for information.

**Agenda Item No. 2: To Consider and Approve the Balance Sheet and the Audited Accounts of “FOR” for the year 2011-12.**

Shri Rajiv Bansal, Secretary, CERC/FOR explained the salient features as reflected in the Balance Sheet and Income & Expenditure Statement for the year 2011-12 (contained in Annexure-I of the said Agenda Note). The Balance Sheet and the Audited Accounts were considered and approved.

**Agenda Item No. 3: Consideration of the Draft Development, Management & Operation of Off-Grid Distributed Renewable Energy Generation and Supply Regulations.**

A presentation was made M/s. ABPS highlighting the salient features of the Model Regulations on ‘Development, Management & Operation of Off-grid Distributed Renewable Energy Generation and Supply Regulations’ (copy **enclosed** at **Annexure – III**).

**Discussion –**

Chairperson, MPERC opined that it might be beyond the jurisdiction of the Regulatory Commission to frame regulations in this context in view of the provision of eighth proviso to section 14 of the Act. It was explained that while the said provision (eighth proviso to section 14) stipulates that a person can engage

in generation and distribution of electricity in a notified rural area without the requirement of licence, it does not absolve the distribution licensee to its obligation to supply electricity in such area. The framework evolved through the model regulations seeks to provide an alternative and enabling framework for the distribution licensee to meet its universal service obligations through engagement of a rural franchisee.

After discussion, the following was agreed:-

- ❖ The need for a regulation for this purpose may be examined in the light of the eighth proviso to section 14 of the Act. It might be advisable to frame guidelines instead of regulations in this context.
- ❖ It should be ensured that the framework does not encumber the rural system operator with all the losses at the distribution level. This might make the idea of rural franchisee unworkable and unviable.
- ❖ The model regulations/guidelines should be modified to align with the provision of the Act in regard to metering which is exclusively the jurisdiction of CEA.

**Agenda Item No. 4 : Consideration of the Draft Accreditation, Registration and Issuance of Renewable Energy Certificates for Community Level Off-Grid Distributed RE Generation Projects Regulations.**

A presentation was made M/s. ABPS highlighting the salient features of the Model Regulations on ‘Accreditation, Registration and Issuance of Renewable Energy Certificates for Community Level Off-Grid Distributed RE Generation Projects Regulations’ (copy **enclosed** at **Annexure – IV**).

After discussion, the model regulations were endorsed with the following observations:-

- ❖ CERC may be requested to make suitable provisions in their REC Regulations to operationalise this framework.
- ❖ In the REC framework for off-grid, the Rural System Operator (RSO) should sell 'electricity' component to the consumers either at the tariff determined by the State Commission for such categories of consumers or at mutually agreed tariff.
- ❖ There should be a clear provision to the effect that a project developer can switch over to preferential tariff route at any time it wishes to do so.

A vote of thanks was extended by Shri Rajiv Bansal, Secretary, CERC/FOR. He conveyed his sincere thanks to all the dignitaries present in the meeting. He also thanked the staff of "FOR" Secretariat for their arduous efforts at organizing the meeting.

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

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**LIST OF PARTICIPANTS ATTENDED THE THIRTIETH MEETING**

**OF**

**FORUM OF REGULATORS ( FOR )**

**HELD ON 06<sup>TH</sup> JUNE, 2012**

**AT "JACARANDA-II" HALL, CONVENTION CENTRE,  
INDIA HABITAT CENTRE, LODHI ROAD, NEW DELHI.**

S. No.	NAME	ERC
01.	Dr. Pramod Deo Chairperson	CERC – in Chair.
02.	Shri A. Raghotham Rao Chairperson	APEREC
03.	Shri Digvijai Nath Chairperson	APSERC
04.	Shri P.D. Sudhakar Chairperson	DERC
05.	Dr. P.K. Mishra Chairperson	GERC
06.	Shri Subhash Chander Negi Chairperson	HPERC
07.	Dr. V.K. Garg Chairperson	JERC for Goa & All UTs except Delhi
08.	Shri Himam Bihar Singh Chairperson	JERC for Manipur & Mizoram
09.	Shri Mukhtiar Singh Chairperson	JSERC
10.	Shri Rakesh Sahni Chairperson	MPERC
11.	Shri Anand Kumar Chairperson	MSERC
12.	Shri S.P. Nanda Chairperson	OERC
13.	Shri Manoranjan Karmarkar Chairperson	TERC

14.	Shri Rajesh Awasthi Chairperson	UPERC
15.	Shri Jag Mohan Lal Chairperson	UERC
16.	Shri Prasad Ranjan Ray Chairperson	WBERC
17.	Shri K.P. Singh Member	BERC
18.	Shri V.K. Shrivastava Member	CSERC
19.	Shri Rohtash Dahiya Member	HERC
20.	Shri Vishwanath Hiremath Member	KERC
21.	Shri Gurinder Jit Singh Member	PSERC
22.	Shri K. Venugopal Member	TNERC
23.	Shri Rajiv Bansal Secretary	CERC/FOR
24.	Shri Sushanta K. Chatterjee Deputy Chief (RA)	CERC

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

**Secretariat : C/o. Central Electricity Regulatory Commission (CERC )**  
3<sup>rd</sup> & 4<sup>th</sup> Floor, Chanderlok Building, 36, Janpath, New Delhi-110001  
Tele-fax: 91-11-23753920, 23752958

No.:5/5/2012-WG(RPR)/FOR/CERC

Dated : 16.05.2012

### **SUB : CONSTITUTION OF THE WORKING GROUP ON “REVIEW OF THE PERFORMANCE OF REGULATORS”.**

**Sir,**

The Forum of Regulators (FOR) decided in its meeting held during 19<sup>th</sup> – 20<sup>th</sup> April, 2012 at Gangtok, (Sikkim) to constitute a Working Group inter-alia on "Review of the Performance of Regulators". The Chairperson of the Forum was authorized to nominate various SERCs on the Working Group.

2. The Chairperson, FOR, has constituted the Working Group as indicated below:-

(i)	Chairperson, CERC	...	Chairman of the Working Group
(ii)	Chairperson, BERC	...	Member
(iii)	Chairperson, DERC	...	Member
(iv)	Chairperson, GERC	...	Member
(v)	Chairperson, HERC	...	Member
(vi)	Chairperson, KERC	...	Member
(vii)	Chairperson, RERC	...	Member
(viii)	Chairperson, SSERC	...	Member
(ix)	Secretary, CERC	...	Member
(x)	Deputy Chief (RA), CERC	...	Coordinator.

3. The Working Group would examine the existing provisions of the Electricity Act, 2003 in the context of mechanisms provided for accountability of the Electricity Regulatory Commissions in terms of performance of their statutory functions, analyse the need for more detailed framework including review of performance of regulators and make suitable recommendations in this regard.

4. The Secretariat of the Forum would provide secretariat to the Working Group.

Sd/-

( Sushanta K. Chatterjee )  
Deputy Chief (Regulatory Affairs)

To :

(i)	Chairperson, BERC	...	Member
(ii)	Chairperson, DERC	...	Member
(iii)	Chairperson, GERC	...	Member
(iv)	Chairperson, HERC	...	Member
(v)	Chairperson, KERC	...	Member
(vi)	Chairperson, RERC	...	Member
(vii)	Chairperson, SSERC	...	Member
(viii)	Secretary, CERC	...	Member

Copy for information to -

Chairperson, CERC/FOR.





Presentation to  
Forum of Regulators

“Development, Management and Operations of Off-Grid  
Distributed Renewable Energy Generation and Supply”  
Regulations

Supported By



June 6, 2012



# Background

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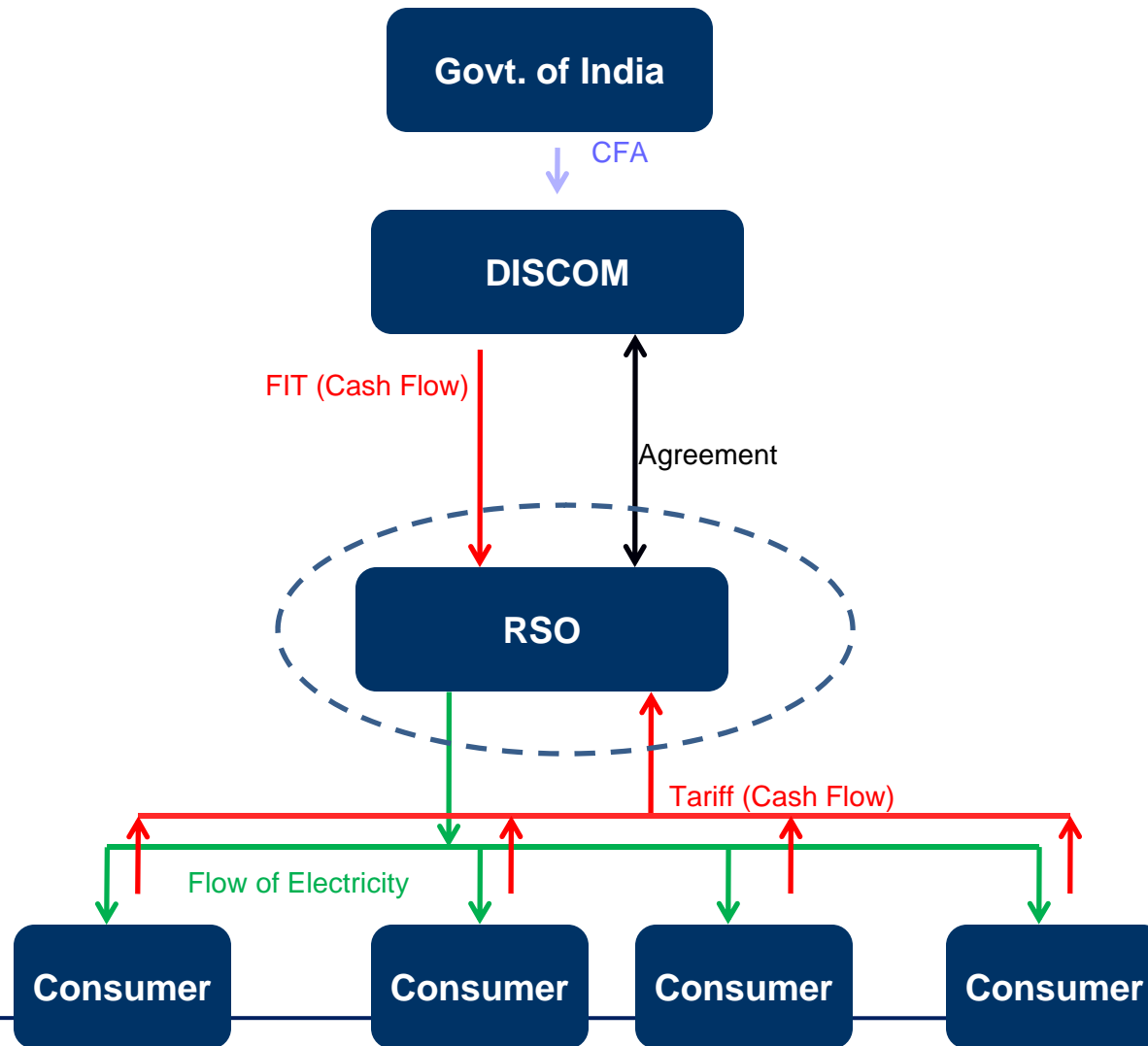
- Mission to bring electricity services to ALL by 2012 continues.
- Out of 6 lakh villages, around 14,000 are yet to be electrified.
- However, 55% of rural & 12% of urban households are yet to be electrified
- Several of these households are in un electrified villages, *padas, bastis*.
- Typically, these habitations have less than 100 households.
- Even electrified villages are witnessing shortages in supply
- At the same time, local renewable resources are not being tapped
- Costs of renewable technologies is reducing with time.
- It has become imperative to develop decentralized RE generation options
- ABPS Infra has been engaged by Shakti Sustainable Energy Foundation / ClimateWorks Foundation to support FOR in this initiative.

# Acceptance by FOR

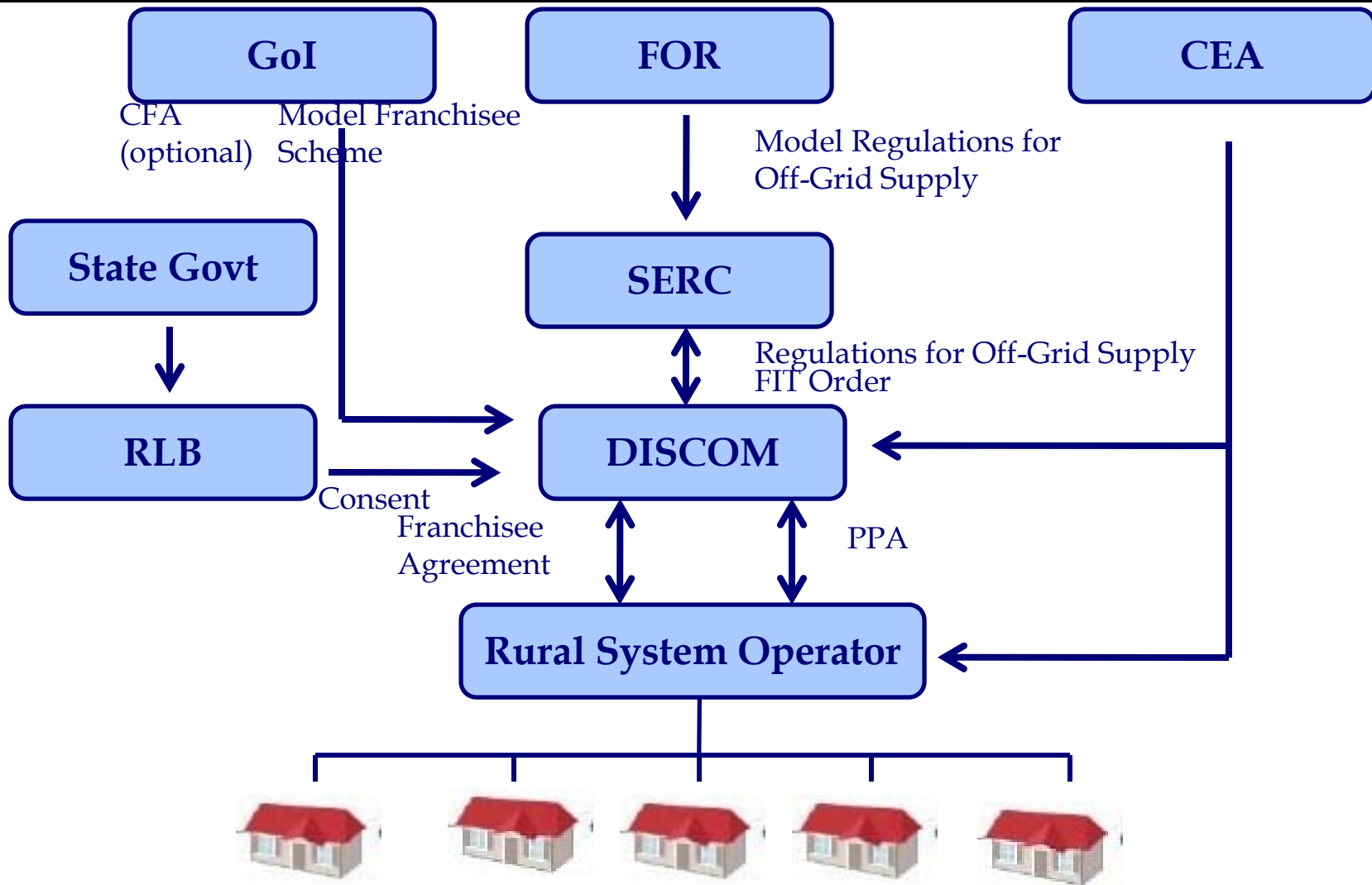
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- Following two business models were proposed for consideration of FOR
  - Off-Grid Distributed Generation based Distribution Franchisee Model (ODGBDF)
  - Off Grid REC based Model
- In the Twenty Sixth Meeting of Forum of Regulators (FOR) held at Solan, Himachal Pradesh on 9<sup>th</sup> and 10<sup>th</sup> October 2011, FOR accepted both the models
- Further, FOR recommended to develop Model Regulations for Implementation of the off-grid business models

# Off Grid Distributed Generation Based Distribution Franchisee



# Institutional and Contractual Structure



# Model Off-Grid Rural Supply Regulations

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- SERC (Development, Management and Operation of Off-Grid Distributed Renewable Energy Generation and Supply) Regulations, 2012
  - Definitions
  - Scope and Extent of Application
  - Consent of Rural Local Body for Off-Grid Renewable Energy System (ORES)
  - Rural System Operator (RSO) and its functions
  - Distribution Licensee and its functions
  - Consumers in Project Area and their functions
  - Framework for development of Feed-in Tariff for ORES
  - Framework for Fees for Franchisee Operation by RSO
  - Contractual Framework
  - Monitoring & Verification
  - Grid connectivity and integrated operation of ORES



## Statutory Provisions



# Electricity Act, 2003 : Enabling Provisions

- Section 3: National Electricity Policy and Plan for development of power system including renewable sources of energy.
- Section 4 - Central Govt. shall, after consultation with State Govts, prepare and notify a national policy, permitting stand alone systems for rural areas.
- Section 5 - for rural electrification and for bulk purchase of power and management of local distribution in rural areas
- Section 6: Concerned State and Central Government shall endeavour to provide access to electricity to all areas including villages and hamlets



# Electricity Act, 2003 : Enabling Provisions

- Eighth provision under Section 14 of EA 2003 provides the framework for generation and distribution of electricity in Rural Areas:
  - “Provided also that where a person intends to generate and distribute electricity in a rural area to be notified by the State Government, such person shall not require any license for such generation and distribution of electricity”
  - Para 8.1 of Rural Electrification Policy clarifies that rural areas mean all areas identified pursuant to 73rd Amendment to Constitution
- Section 61(h): Tariff Regulations by Regulatory Commission to be guided by promotion of generation of electricity from renewable energy sources
- Section 86(1)(e): Regulatory Commission to Specify Renewable Purchase Obligations for Obligated Entities



## Salient Features of Regulations



# Definitions

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- **Off-grid Renewable Energy System (ORES)** means stand alone systems comprising power plant generating electricity from RE sources where grid is not connected & distribution network including associated appliances used for distributing electricity produced by said plant to end users in Project Area
- **Project Area** means un-electrified habitation in which electricity is proposed to be supplied from ORES
- **Rural System Operator (RSO)** means the company or a person or a group of persons that develops and operates Off-grid Renewable Energy System;

# Applicability of Regulations

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- Regulations shall apply for all New and Existing Off-Grid Renewable Energy Systems for supply to rural consumers in Project Area.
  - For existing projects, RSO has to make a choice of operating under these regulations within a period of 2 years of notification of these regulations, post which, no existing projects will be allowed to operate under these regulations;
- Project shall cover un-electrified census village or cluster of villages, or padas / bastis / hamlets of electrified census villages or cluster of padas/bastis/hamlets;

# Eligibility Criteria

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- **Village/ hamlet** – wherein no provision of supply of electricity exists. For existing projects, RSO & its system shall be the sole source of electricity supply;
- **RSO** – net worth of Rs 5 lakh ;
- **Selection of Technology & Sizing of Plant** – RSO shall follow guidelines, if any, issued by the Appropriate Commission for selection of technology & sizing of plant.
- In case, Appropriate Commission has not issued such guidelines, selection of technology & sizing of plant be done **in consultation with RLB.**

# Consent of RLB for ORES

- RSO to seek consent of RLB for setting up ORES and Application for Consent to include
  - Un-electrified status of village/habitation/pada;
  - Number of households in such habitation;
  - Name and description of the Rural System Operator;
  - Brief Description of the System;
  - Minimum Standard of Supply;
- RLB while granting consent, shall be guided by following key considerations:
  - Description of the proposed Off-grid Renewable Energy System
  - Definition of Project Area
  - Plan for harnessing of local renewable resources
  - Local employment generation opportunity
  - Support for productive load development/enhancement
  - Long term sustainable and cost effective solution for energy need of RLB
- If more than one request from RSOs, RLB to select scheme offering maximum benefits
- Existing projects to follow process specified in these Regulations while seeking consent from RLB

# Rural System Operator – Role & Functions

- RSO to identify rural area, concerned RLB & develop Project Scheme for ORES
- RSO to design project of appropriate size & adopt technology based on locally available renewable resources
- RSO to confirm State Govt. notification of rural area from RLB
- RSO to submit DPR alongwith consent of RLB to DISCOM
- RSO enter into FA & PPA with DISCOM
- RSO to achieve financial closure within time period not exceeding period of 4 months from date of PPA or such other timeframe as may be mutually agreed with concerned RLB
- RSO to generate & to distribute electricity to consumers after setting up generation plant, distribution infrastructure, metering arrangement etc.

# Rural System Operator – Role & Functions

- RSO to develop Project within period as specified in PPA with concerned DISCOM or other period as may be mutually agreed with concerned DISCOM
- RSO to develop distribution infrastructure (deemed to be on behalf of DISCOM) within period as specified in FA with concerned DISCOM or such other period as may be mutually agreed with concerned DISCOM.
- RSO to raise bills for electricity supplied to consumers in Project Area at end of every month based on meter readings at Tariff Rates not exceeding rates applicable for other consumers of DISCOM
- RSO to raise invoice for electricity generated within 7 days of end of month for generation during month & be entitled to receive payment from DISCOM within 7 working days after submission of invoice
- RSO to submit monthly reports to DISCOM in 3<sup>rd</sup> week of next month which shall cover mutually agreed components



# DISCOM – Role & Functions

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- DISCOM to establish mechanism for timely processing of ORES applications
- Within 1 month of receipt of application from RSO, DISCOM to process application and confirm acceptance/ rejection of application
- Rejection of application only on grounds of violation of norms of design of system, or plan to extend electricity network within two years
- Within 1 month of acceptance of application, DISCOM to enter into PPA & FA
- DISCOM make payments to RSO within 7 days of receipt of invoice from RSO
- Provide assistance to RSO to submit application to GOI / State Govt. for availing CFA / revenue subsidy/ capital subsidy (optional)
- DISCOM to take into consideration off-grid schemes under operation or under advance stage of development while planning its network expansion in rural areas;
- DISCOM to furnish information about applications/ operational systems to Commission in format as may be prescribed from time to time

# Role of Consumers in the Project Area

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- Consumers in Project Area to regularly pay the electricity charges within 15 working days of receipt of bills to the RSO
- In case of delay in payment beyond due date of payment, delayed payment charges at rate of 1.25% per month or part thereof shall be applicable

# Framework for FIT

- Commission shall determine FIT for purchase of electricity from ORES by DISCOM from time to time, either through **Generic Tariff Order** on suo-motu basis or based on **application filed by interested RSO**
- Under tariff application, RSO to clearly provide **separate details** of its capital cost, operating cost & performance details for off-grid generation scheme & cost associated with network development activities separately.
- Commission shall determine FIT corresponding to off-grid generation part of the Project Scheme separately for **each kind of off-grid renewable source**.
- While determining the tariff, the Commission may, to the extent possible, consider to permit an allowance based on technology, fuel, market risk, environmental benefits and social contribution etc., of each type of off-grid renewable source
- The Commission shall adopt best practices & normative parameters for financing cost, O&M & other expenses

# Framework for FIT

- **Guiding Principles for determination of FIT for Off-Grid RE Applications**
  - FIT be based on cost plus assured returns for off-grid generation scheme;
  - Need to rationalise FIT on basis of actual cost of generation, upon taking into consideration capital subsidy, revenue subsidy, finance assistance from Central or State Govt, if any;
  - Specifying Control Period, Tariff Period, Tariff Structure (levellised, back-ended or front ended) and Tariff Design (Single part or Two part) to ensure long term regulatory clarity and regulatory certainty
- The principles for PPA shall be in accordance with **Model PPA as stipulated alongwith the Regulations.**

# Framework for Fees for Franchisee Operation by RSO

1/2

- DISCOM & RSO be free to adopt or negotiate terms & conditions of FA based on **Model FA**.
- DISCOM & RSO to take into consideration following factors, while determining Fees for Franchisee Operation
  - Fees to cover cost of franchisee operation plus adequate returns to RSO over period of FA;
  - Fees to be based on due consideration to distribution network rollout requirement, investment for expansion/augmentation of network, upkeep and operation of distribution network facilities, adherence to standard of performance, consumer profile, consumption/demand/load pattern & growth thereof & such other factors associated with franchisee operation.
  - Fees to be derived upon taking into consideration revenue recovery from consumers & capital subsidy, revenue subsidy, financial assistance from Central State Govt. if any, available towards franchisee operation by RSO.

# Framework for Fees for Franchisee Operation 2/2

## by RSO

- Need to provide transparently the appropriate incentives, in a non-discriminatory manner, for a continuous enhancement in efficiency of distribution & supply and up-gradation in the levels of service;
- Specifying Control Period for Franchisee Operation, Fee Structure (levellised, back-ended or front ended) and Fee Design (fixed monthly fee or Variable Monthly fee linked to quantum of distribution/supply) to ensure long term regulatory clarity and regulatory certainty for principles of determination of Fees for Franchisee Operation of Off-grid project scheme;
- Need to specify **transfer value reflective of book value** upon termination of FA;

# Grid Connectivity & Integrated Operations

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- Distribution network of DISCOM reaches Project Area, FA between RSO & DISCOM may be terminated;
- DISCOM to take over assets of distribution infrastructure & compensate RSO at prevalent book value;
- PPA shall continue, and RSO shall receive the FIT from DISCOM for the electricity being fed to grid from generation scheme;

# Governing Regulations for metering & connectivity

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- CEA to notify regulations governing generation aspects, grid connectivity aspects for small scale renewable energy plants and the metering regulations in respect of such systems
- Till such time, CEA formulates the above mentioned regulations, the regulations notified by the Appropriate Commissions from time to time in respect of grid connectivity shall be considered



# Metering

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- Metering shall be provided both at generation end and consumer end;
- Installation and operation of meters shall be in conformity with relevant regulations notified by Authority from time to time.
- At generation end, Main Meter & Check Meters to be provided as per terms of PPA.

# Monitoring & Verification

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- M&V be based on joint meter reading by DISCOM & RSO on monthly basis;
- Protocol for M&V be agreed in advance & shall form part of PPA for Generation part of Project Scheme and shall form part of FA for the distribution/supply part of the Project Scheme.

# Contractual Framework

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- PPA shall be for life of project, as determined by SERC in FIT order issued for particular technologies;
- FA to be co-terminus with PPA with provision for prior termination as and when distribution network of concerned DISCOM reaches the area of operation of RSO.
- RSO to sell electricity to consumers within Project Area at Tariff Rates equal to the Tariff applicable for other consumers of DISCOM belonging to similar consumer category;

# Revocations of Contract & Arbitration

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- If DISCOM after making an enquiry based on monthly reports submitted by RSO, is satisfied that public interests so require, the termination of FA & PPA be done based on:-
  - RSO, in the opinion of DISCOM, makes wilful and prolonged default in doing anything required of him by or under these regulations;
  - RSO breaks any terms and conditions for distribution of electricity at the tariff of the local DISCOM to rural consumers;
- In case of termination of contract, DISCOM & RSO shall follow the process specified in the respective Agreements.

# Next Steps

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- Formulation of guidelines for determination of Feed-in Tariff for different Off-grid RE applications.
- Adoption of Model Off-Grid Rural Supply Regulations at various States upon due regulatory process
- Identify capacity building requirements at DISCOM level.



*Thank You*

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Presentation to  
Forum of Regulators

“Accreditation, Registration and Issuance of RECs for  
Community Level Off-Grid Distributed RE Generation Projects”  
Regulations

Supported By



June 6, 2012



# Background

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- Mission to bring electricity services to ALL by 2012 continues
- Out of 6 lakh villages, only 14,000 are un-electrified.
- However, 55% of rural & 12% of urban households are yet to be electrified
- Several of these households are in un electrified villages, padas, bastis.
- Typically these habitations have less than 100 households
- Even electrified villages are witnessing shortages in supply
- At the same time, local renewable resources are not being tapped
- Costs of renewable technologies is reducing with time
- It has become imperative to develop decentralized RE generation options
- ABPS Infra has been engaged by Shakti Sustainable Energy Foundation / ClimateWorks Foundation to support CERC & FOR in this initiative.

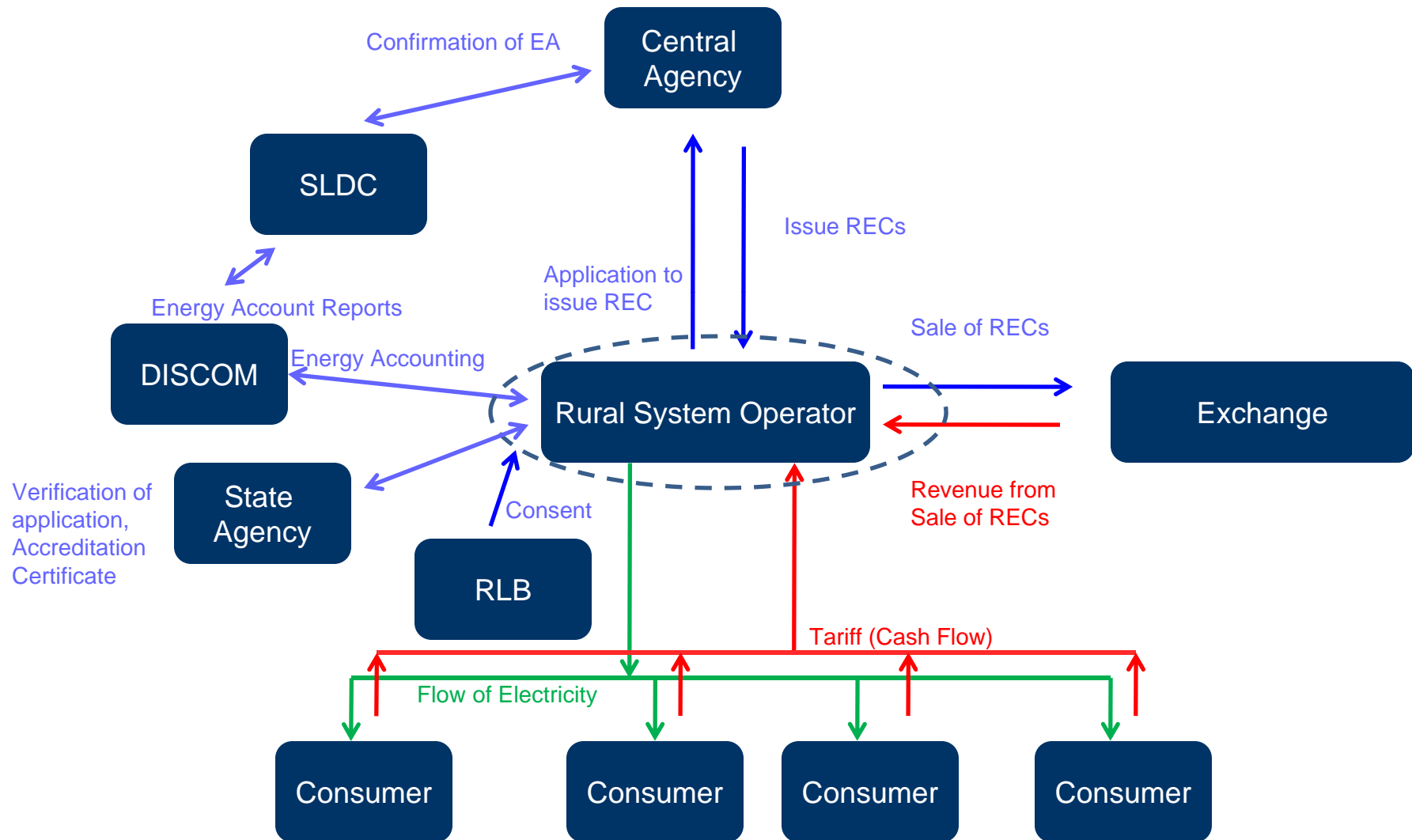


# Acceptance by FOR

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- Following two business models were proposed for consideration of FOR
  - Off-Grid Distributed Generation based Distribution Franchisee Model (ODGBDF)
  - Off Grid REC based Model
- In the Twenty Sixth Meeting of Forum of Regulators (FOR) held at Solan, Himachal Pradesh on 9<sup>th</sup> and 10<sup>th</sup> October 2011, FOR accepted both the models
- Further, FOR recommended to develop Model Regulations for Implementation of the off-grid business models

# REC based Model



# Model Off-Grid REC Regulations

---

- CERC (Accreditation, Registration and Issuance of Renewable Energy Certificates for Community level Off-grid Distributed RE Generation Projects) Regulations, 2012
  - Definitions
  - Scope and Extent of Application
  - Consent of Rural Local Body for Off-Grid Renewable Energy System (ORES)
  - Central Agency, State Agency, SLDC and their functions
  - Rural System Operator (RSO) and its functions
  - Distribution Licensee and its functions
  - Consumers in Project Area and Framework for sale of electricity
  - Categories of Certificates, Denomination and Issuance of Certificates
  - Eligibility and Registration for Certificates, Revocation Conditions
  - Dealing with Certificates, Pricing, Validity, Fees & Charges
  - Monitoring & Verification



## Statutory Provisions



# Electricity Act, 2003 : Enabling Provisions

- Section 3: National Electricity Policy and Plan for development of power system including renewable sources of energy.
- Section 4 - Central Govt. shall, after consultation with State Govts, prepare and notify a national policy, permitting stand alone systems for rural areas.
- Section 5 - for rural electrification and for bulk purchase of power and management of local distribution in rural areas
- Section 6: Concerned State and Central Government shall endeavour to provide access to electricity to all areas including villages and hamlets

# Electricity Act, 2003 : Enabling Provisions

- Eighth provision under Section 14 of EA 2003 provides the framework for generation and distribution of electricity in Rural Areas:
  - “Provided also that where a person intends to generate and distribute electricity in a rural area to be notified by the State Government, such person shall not require any license for such generation and distribution of electricity”
  - Para 8.1 of Rural Electrification Policy clarifies that rural areas mean all areas identified pursuant to 73rd Amendment to Constitution
- Section 61(h): Tariff Regulations by Regulatory Commission to be guided by promotion of generation of electricity from renewable energy sources
- Section 66: Commission to promote development of market including trading
- Section 86(1)(e): Regulatory Commission to Specify Renewable Purchase Obligations for Obligated Entities



## Salient Features of Regulations



# Definitions

---

- **Off-grid Renewable Energy System (ORES)** means stand alone systems comprising power plant generating electricity from RE sources where grid is not connected & distribution network including associated appliances used for distributing electricity produced by said plant to end users in Project Area
- **Project Area** means un-electrified habitation in which electricity is proposed to be supplied from ORES
- **Rural System Operator (RSO)** means the company or a person or a group of persons that develops and operates Off-grid Renewable Energy System;



# Applicability of Regulations

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- If RSO wishes to adopt the Off-Grid REC framework, these regulations shall be mandatory;
- Regulations shall have only prospective effect. Existing projects may register the project as ORES under these Regulations. However, benefit of REC shall be available only for generation recorded after registration of the project with the Central Agency;
- Project shall cover un-electrified census village or cluster of villages, or padas / bastis / hamlets of electrified census villages or cluster of padas/bastis/hamlets;

# Eligibility Criteria

---

- Village/ hamlet – wherein no provision of supply of electricity exists. For existing projects, RSO & its system shall be sole source of electricity supply
- RSO – net worth of Rs 5 lakh
- Selection of Technology & Sizing of the Plant – RSO shall follow the guidelines, if any, issued by Appropriate Commission for selection of technology & sizing of plant.
- If Appropriate Commission has not issued such guidelines, selection of technology & sizing of plant shall be done in consultation with the RLB.

## Metering

- Metering shall be provided both at generation end and at consumer level
- Installation & operation of Meters shall be in conformity with relevant regulations notified by CEA from time to time.

# Consent of RLB

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- RSO to seek consent from RLB for confirmation of rural area/project area.
- RLB to confirm un-electrified status of village, number of households to RSO
- RLB to provide confirmation for establishment of generation & distribution of electricity in a particular area within 1 month after the submission of application by RSO
- In case of receipt of more than 1 application, RLB to select RSO that maximises benefits:
  - Harnessing of local resources,
  - Local employment generation opportunity,
  - Support for productive load development,
  - Long term sustainable and cost effective solution for energy needs.
- After selection of RSO, RLB to provide approval to RSO in writing & shall facilitate selected RSO to co-ordinate with DISCOM for smooth implementation of the Project Scheme;
- For existing projects, RLB to confirm electrification status of village, metering status of village, no. of households covered, etc. to RSO so as to enable accreditation of project for the purpose of this Regulation

# Rural System Operator – Role & Functions

- RSO to identify rural area, co-ordinate with concerned RLB & develop a project scheme
- RSO to finalize appropriate size & technology based on local renewable resources
- RSO to submit application to RLB seeking confirmation of rural area, number of households and establishments, un-electrified status of village subject to the purposes of the eighth proviso to Section 14 of the Act
- RSO to undertake the detailed prefeasibility study of the project and prepare DPR
- Rural System Operator to avail consent from concerned RLB for establishment of Project Scheme
- RSO to submit application to State Agency for accreditation of the ORES.
- RSO to pay one time non-refundable application processing fees & annual charges towards Accreditation
- RSO to develop off-grid RE plant, to set up rural distribution network, generate & distribute electricity to consumers in Project Area & to sell the off-grid RECs;

# Rural System Operator – Role & Functions

- RSO to submit declaration to State Agency that it shall sign PSA with consumers of Project Area under any of the following commercial arrangement:
  - At Tariff Rates as applicable for consumers of same consumer category of the Distribution Licensee
  - At mutually agreed tariff, provided that Tariff shall not exceed 150% of applicable tariff determined by Commission for the same consumer category.
- RSO to avail “Accreditation Certificate” from State Agency
- RSO to apply for revalidation or extension of validity of existing accreditation at least 3 months in advance prior to expiry of existing Accreditation
- RSO to develop & commission project within period not exceeding 12 months from date of grant of Registration Certificate by CA
- RSO to raise invoices on consumers at the end of every month
- RSO to submit monthly reports to DISCOM outlining electricity generated, distributed and losses in its area of operation based on meter readings
- RSO to apply for registration as eligible entity for receiving off-grid RECs
- RSO to pay one time non-refundable registration fee and annual charges

# Rural System Operator – Role & Functions

- RSO to avail the “Registration Certificate” from CA;
- RSO to apply for revalidation or extension of validity of existing Registration at least 3 months in advance prior to expiry of existing Registration;
- RSO to submit application for issuance of off-grid RECs along with the copies of the accreditation certificate, registration certificate and copies of the energy accounting reports
- RSO shall sale the off-grid RECs on Power Exchange(s)

# State Agency

- SA to undertake accreditation of any off-grid RE generation project of RSO upon availing consent for establishment from concerned RLB.
- SA to verify application of accreditation of the off-grid RE generation project
- SA to undertake preliminary scrutiny of the Application within 7 working days from date of receipt of such Application
- SA to verify the following information:
  - Confirmation of 'Availability of Land' in possession
  - Consent from RLB for development, installation and operation of project
  - Confirmation of compliance of ORES with grid connection guidelines
  - Confirmation of Metering Arrangement and Metering Location;
  - Date of Commissioning (scheduled or actual) of off-grid RE project;
  - Details of application processing fees/accreditation charges;

# State Agency

- Permission granted by SA in form of accreditation certificate to RSO shall be valid for 5 years from date of accreditation certificate
- SA shall grant “Certificate of Accreditation” after detailed verification
- Process for accreditation to be completed within 1 month after the date of receipt of complete information
- SA to intimate accreditation of particular off grid RE project to the host SLDC and DISCOM in whose area the proposed project would be located;



# Central Agency & its functions

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- Registration of eligible entities or RSO,
- Issuance of certificates,
- Maintaining and settling accounts in respect of certificates,
- Repository of transactions in certificates
- CA to issue procedure for registration of eligible entities, verification of generation of electricity & its injection by RSO as & when grid reaches its area of operation, issuance of certificates
- CA to formulate procedures in consultation with State Agencies and other stakeholders, before seeking approval of the Commission.

# State Load Despatch Centre

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- SLDC to receive energy accounting report from DISCOM on quarterly basis
- Energy accounting report be received by SLDC in first week of the next quarter month
- Accounting report shall consist of electricity generated, electricity distributed to consumers, losses in area of operation, in respect of each accredited off-grid RE project separately
- Within next 3 weeks, SLDC shall verify energy accounting report & shall provide accounting report to CA
- SLDC may also seek clarification on Quarterly Report from DISCOM within 5 working days for submission of any further information, if necessary, to further consider the accounting report or reject the report subject to rules for verification of the same;

# DISCOM

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- DISCOM to analyze monthly reports of electricity generated, electricity distributed to consumers and losses in the area of operation of RLB as submitted by RSO
- DISCOM to prepare detailed energy accounting reports on quarterly basis and submit it to SLDC in the first week of the next quarter
- DISCOM be entitled to inspect the records or witness the meter readings/recording, with sufficient notice to RSO

## Consumers in the Project Area

- Consumers shall regularly pay electricity charges within 15 working days to RSO after receipt of bills.
- In case of delay in payment beyond due date, delayed payment charges at 1.25% per month or part thereof shall be applicable.

# Contractual Framework

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- There shall be Power Supply Application-cum-Agreement between RSO and the consumers at mutually agreed tariff or at tariff rate applicable for consumer category.
- Benefit of capital subsidy, revenue subsidy, financial assistance from Central or State Government, if any, shall be passed onto consumers in terms of mutually agreed tariff or at tariff applicable for relevant consumer category.
- RSO shall also sell off-grid RECs on the Power Exchange;
- Revenue earned by RSO in terms of sale of electricity and RECs, shall be retained by the RSO;

# Cost Sharing & Use of Existing Network

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- RSO to develop the rural distribution network at its own cost
- In case the distribution network of DISCOM is extended to area of operation of RSO at later stage, DISCOM shall use the network of RSO
- For using the network of RSO, DISCOM shall compensate RSO, a cost as mutually determined between RSO and DISCOM;
- If no agreement is reached within period of 3 months; the same would be referred for adjudication to the Appropriate Commission.

# Framework for Sale of Electricity to Consumers

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- RSO to generate & distribute electricity to consumers in Project Area at mutually agreed tariff or at tariff applicable for relevant consumer category.
- RSO to adopt following guiding principles while determining the tariff for consumers:
  - Tariff for sale electricity to consumers shall not be more than 150% of the Tariff Rates applicable for other consumers of DISCOMs belonging to similar consumer category
  - Benefit of capital subsidy, revenue subsidy, financial assistance from Central or State Govt., if any, shall be passed onto consumers in terms of mutually agreed tariff
  - Need to rationalise tariff on basis of actual cost of generation & distribution and considering revenue from sale of off-grid RECs
  - Need to provide transparently the appropriate incentives, in a non-discriminatory manner, for a continuous enhancement in the efficiency of generation, distribution and supply and up-gradation in the levels of service;

# Categories and Denomination of Certificates

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## Categories of certificates (solar and Non-solar)

- Solar certificates - generation of electricity based on solar as RE source,
  - Non solar certificates - based on RE sources other than solar
- Solar and Non-Solar certificates be sold to obligated entities to meet their respective RPO targets

## Denomination and Issuance of Certificates

- RSO to apply to CA for Certificates on quarterly basis
- Certificates be issued by CA within 15 days from the date of application
- Certificates issued to RSO on basis of units of elect. generated as certified by DISCOM
- Each Certificate issued shall represent 1 MWh of electricity generated
- Partial unit of RECs (partial MWh) shall be accumulated until it crosses 1 MWh of electricity.
- Condition of time period of 3 months for date of application shall not be applicable in case of partial accumulation of MWh

# Conditions for Registration and Revocation

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## Eligibility and Registration of Certificates

- RSO be eligible to apply for registration for issuance of and dealing in Certificates if,
  - it has obtained accreditation from SA
  - it has signed PSA with the consumers to supply electricity at mutually agreed tariff
- CA to accord registration to applicant within 15 days from date of application

## Revocation of registration of RSO in any of the following cases :-

- RSO in opinion of CA, makes wilful and prolonged default
- RSO breaks any of terms and conditions of its accreditation or registration,
- Default to pay fees, other charges required by its accreditation or registration



# Dealing in Certificates

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## Pricing of Certificate

- Certificates shall be dealt through the Power Exchange
- The price of Certificate shall be as discovered in the Power Exchange:

## Validity and Extinction of Certificates

- Certificate shall remain valid for 365 days
- Certificate shall be deemed to have been extinguished after it has been exchanged by way of sale and purchase in the Power Exchange;

## Fees and Charges

- Commission may from time to time, determine, by order, fees and charges payable by RSO for participation in scheme for registration, eligibility of certificates, issuance of certificates
- Fees & charges paid by RSO be collected by CA & utilised for purpose of meeting cost & expense towards remuneration payable to compliance auditors, officers, employees, etc.

# Next Steps

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- Modification of existing REC Regulations to address requirements of Off-Grid REC schemes upon due regulatory process.
- Development of Model Power Supply Application-cum-Agreement
- Identify capacity building requirements at DISCOM/ SLDC/ State Agency for implementation



*Thank You*

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