



Centre for Science  
and Environment

Chhattisgarh Renewable  
Energy Development Agency



## Workshop on Scaling Up Renewable Energy Mini-grids for Rural Electrification

August 12 – 14, 2013,  
Raipur, Chhattisgarh

**Point of Assembly:** Conference Hall, Chhattisgarh State Electricity Regulatory Commission, Irrigation Colony, Shanti Nagar, Raipur, Chhattisgarh

### Day 1: Field visit

#### DAY 1 - August 12, 2013, Monday

##### Registration - 8.30 AM to 9.00 AM

Presentation by CREDA on site visit 9.00 AM to 9.30 AM

Travel to Barnawapara Sanctuary 9.30 AM to 11.00 AM

**Site Visit:** Village Rawan

*A 4 kW solar power plant was setup in 2003 which was enhanced with another plant of 4 kW capacity in 2007 to suit the needs of 70 households in the village*

11.00 AM to 12.00 PM

Travel to Bar Forest Resort

12.00 PM to 12.30 PM

**Site Visit:** Bar Forest Resort

*Eco tourist resort with 18 kW of solar power and 2 solar powered water pumps managed by the forest department*

12.30 PM to 1.00 PM

Travel to Mohda Resort

1.00 PM to 1.30 PM

##### Lunch - 1.30 PM to 2.30 PM - Mohda Resort

Travel to Mohda Village

2.30 PM to 3.00 PM

**Site Visit:** Mohda Village

*Village with 55 households powered by 4 kW of solar power capacity since 2003*

3.00 PM to 4.00 PM

Travel back to Raipur

4.00 PM to 5.30 PM

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# Workshop on Scaling Up Renewable Energy Mini-grids for Rural Electrification

August 12 – 14, 2013,  
New Circuit House, Civil Lines, Raipur, Chhattisgarh

## DAY 2 - August 13, 2013, Tuesday

### Registration - 9.00 AM to 9.30 AM

### Introductory Session - 9.30 AM to 10.30 AM

Sunita Narain, Director General, CSE	9.30 AM to 9.40 AM
Chandra Bhushan, Deputy Director General, CSE	9.40 AM to 9.55 PM
Rohit Kansal, Private Secretary to the Honourable Minister of New & Renewable Energy	9.55 AM to 10.05 AM
Aman Kumar Singh, Secretary, Energy, Government of Chhattisgarh	10.05 AM to 10.15 AM
Open Discussion	10.15 AM to 10.30 AM

### Tea Break - 10.30 AM to 11.00 AM

### Session 1 - 11.00 AM to 1.00 PM

### Implementing mini-grids: Experience of developers

**Chair: S K Shukla, Director, CREDA**

Jyoti Dar, Director, Kuvam Energy <i>Development of solar mini-grid without subsidy in Bihar</i>	11.00 AM to 11.15 AM
Benudhar Sutar, Managing Partner, DESI Technology Solutions <i>Micro hydel mini-grid in remote villages in the Eastern Ghats</i>	11.15 AM to 11.30 PM
Gaurav Kumar, Senior Manager, Husk Power Systems <i>Biomass mini-grid: Technology &amp; economics</i>	11.30 PM to 11.45 PM
Sameer Nair, Co-founder, Gram Oorja <i>Solar mini-grid: Experience in the Western Ghats</i>	11.45 AM to 12.00 PM
Jorge Ayarza, Director, MinVayu <i>Sustainable models for small wind turbine mini-grids</i>	12:00 PM to 12:15 PM
Open Discussion	12.15 PM to 1.00 PM

### Lunch - 1.00 PM to 2.00 PM

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## Session 2 - 2.00 PM to 3.45 PM

### State policies and programmes: Issues and challenges

**Chair: S P Gon Chaudhuri, Member, Planning Board, Government of Tripura**

Reuben Gergan, Senior Project Engineer, LREDA  
*LREDA's experience in mini-grid* 2.00 PM to 2.15 PM

Ravi Prakash Arora, Director, UPNEDA  
*UP state policy on mini-grids and its implementation challenges* 2.15 PM to 2.30 PM

Sanjeev Jain, Chief Engineer, CREDA  
*Achievements in mini-grid development in Chhattisgarh* 2.30 PM to 2.45 PM

Veena Sinha, Director, Energy Access, MNRE  
*Elements of the Energy Access programme of MNRE* 2:45 PM to 3:00 PM

Open Discussion 3:00 PM to 3.45 PM

**Tea Break - 3.45 PM to 4.00 PM**

## Session 3 - 4.00 PM to 5.30 PM

### Financing mini-grids

**Chair: Sunita Narain, Director General, CSE**

Ashish Khanna, Lead Energy Specialist, World Bank  
*Bottlenecks in policy for scaling up mini-grids: World Bank experience* 4.00 PM to 4.15 PM

Shyam Patra, Director, NatureTech Infra  
*Financing issues faced under the government programme: Developer's perspective* 4.15 PM to 4.30 PM

Y S Naidu, Assistant General Manager, NABARD  
*Channeling subsidies to banks across India: Challenges* 4.30 PM to 4.45 PM

S Murthy, Assistant General Manager, Canara Bank  
*Access to subsidies: Off-grid solar financing* 4.45 PM to 5.00 PM

Open Discussion 5.00 PM to 5.30 PM

## DAY 3 - August 14, 2013

### Session 4 - 9.30 AM to 11.30 AM

#### Grid integration: Issues and challenges

**Chair: Chandra Bhushan, Deputy Director General, CSE**

Ashok Prakash, Chief Technology Officer, Optimal Power Solutions  
*Technical solutions for grid interactivity* 9.30 AM to 9.45 AM

Anil Misra, Senior Programme Advisor, Indo-German Energy Programme, GiZ  
*The German experience in solar roof-top* 9.45 AM to 10.00 AM

D K Srivastava, Director, Grid Management Division, CEA  
*Grid regulation & standards* 10.00 AM to 10.15 AM

Open Discussion 10.15 AM to 11.00 AM

**Tea 11.00 AM to 11.30 PM**

**Way Forward - 11.30 PM to 1.00 PM**

**Lunch - 1.00 PM to 2.00 PM**