

REPORT OF THE STATE LEVEL
LAUNCH MEETING

**Demand Side Management &
Renewable Energy in India:
Capacity Building of CSOs**
(DREC Project)



KOLKATA

JUNE 25, 2011

INTRODUCTION

Consumer Unity & Trust Society (CUTS) is implementing a project entitled 'Demand Side Management (DSM) & Renewable Energy (RE) in India: Capacity Building of CSOs' (DREC) with support from The ClimateWorks Foundation, US which is represented by Shakti Sustainable Energy Foundation (SSEF) in India. It will be implemented over a period of two years (2010-2012) in two states of India, i.e. West Bengal & Gujarat.

The project aims to increase long-term capacity/awareness of civil society organisations (CSOs) to demand for DSM and RE initiatives in India and also to understand, document and communicate their specific needs/concerns to the policymakers.

In this context, the state level inception meeting was held in Kolkata on June 25, 2011 with the objective of involving stakeholders, consumer groups, policymakers, regulatory commission and media, from within the state. During the meeting, project details were shared with the aim to solicit specific inputs from stakeholders.

PARTICIPANTS

The meeting was attended by representatives from partner organisations, i.e. CUTS Calcutta Resource Centre (CUTS CRC) & Vikram Sarabhai Centre for Development Interaction (VIKSAT), subject experts, government officials, local CSOs, media and the donor agency (Refer to Annexure I - List of Participants).

INAUGURAL SESSION



Keya Ghosh, Head, CUTS CRC in her welcome address highlighted CUTS bottom-up approach towards DREC project, which is focussing on building capacity of CSOs on issues pertaining to DSM and RE. The CSOs, in turn, will work as a link between consumers and policymakers. To this end, Ghosh also mentioned about the success of a Pilot Project entitled, 'Capacity Building on Electricity Reforms in Bangladesh, Nepal and India' (RESA)¹ where CUTS had undertaken an initiative over two years (2008-2010) to build capacity of consumer groups and CSOs in action-oriented research, and advocacy on regulatory issues in the electricity sector. Ghosh emphasised that CRC would build on the experience and network created during the implementation of RESA project.

SPECIAL ADDRESSES



Speaking on the occasion, **Malay Kumar De**, Secretary, Department of Power and NES, Government of West Bengal, emphasised on the need to move away from excessive dependence on fossil fuel and look for alternative sources which are less polluting. He further stressed on the need for energy conservation on the part of consumers and touched upon two intertwined concepts of DSM and RE. Today, globally we are relying on fossil fuel as a primary source of energy, which other than environmental concerns having several other implications such as fast depletion rate, tariffs rates increasing above

¹ <http://www.cuts-ccier.org/RESA/>

inflationary rates etc. Thus, there is a need to find alternative source of energy (RE), and at the same time work on the options available, i.e. DSM & energy efficiency, which literally cost nothing more than a conscious approach towards energy use. In this context, he mentioned that the total potential for energy saving in India is close to Rs 100,000 crore/year, which is roughly around two percent of India's gross domestic product (GDP).

He further added that Government of India has set-up several missions to address the climate change issue viz. National Action Plan on Climate Change, National Mission on Enhanced Energy Efficiency and National Solar Mission etc. which are going to be the key drivers in energy management especially in the power sector. De mentioned that today RE has almost become synonymous to solar energy and suggested to consider other areas of RE also, such as small hydro, keeping its tremendous potential for West Bengal in mind.

De mentioned that most of the RE resources are scattered unlike conventional energy resources, which is an advantage for the purpose of sourcing energy. Thus, by generating and distributing electricity locally, one can reduce the cost of transmission and distribution and make the process more effective. Further, this, would also lead to improved quality of power supply, as voltage drop will be lesser in local distribution. De emphasised the need for government policies to be aligned towards encouraging more decentralised small capacity RE generation plants in the State and in India. Regarding high tariff of solar energy, he mentioned that earlier solar power use to cost around Rs 25/kwh but now it is around Rs 10/kwh. In next five-seven years due to increase in conventional fuel prices soon solar power will match the grid parity price, i.e. price of solar power would be at par with energy being sourced from conventional means. However, De cautioned that having too much of solar energy today will adversely affect the power tariff therefore, he pointed out to the need of following a gradual approach in adopting solar technologies.



S P Gon Chaudhuri, Adviser, RE, Department of Power and NES, Government of West Bengal analysed and appreciated the latest move of the government to hike diesel and gas prices. Chaudhuri argued that consumers need to be made aware of the real prices of fuel, which is again highly subsidised by the government. He pointed out that if the government keeps on increasing prices of fossil-based fuels then price of RE will match the grid parity price by year 2014-15, especially in West Bengal, as it is 96 percent dependant on coal.

Chaudhuri also informed the august audience that the RE installation around the globe is now about 3,38,000 MW, which is more than the nuclear power installation. Chaudhuri, mentioning the government's plan of installing 2,000 MW off grid power under National Solar Mission argued that it has its own limitations. As maintaining a standalone power station is always expensive and makes it costlier than the conventional energy. Therefore, he stressed upon the need to prepare a plan to connect all off-grid power stations to the grid energy in the future.

Analysing the present RE potential of West Bengal remarked that it varies state to state. The state climate action plan in West Bengal is targeting 1,000 MW solar power by the year 2020 which is not ambitious considering total solar power potential of 16,000 MW in the state. In contrast, the wind power potential is 450 MW, small hydro is 250 MW and biomass is 300 MW, which is too less to meet the future requirement. Therefore, he pointed out that in West Bengal the RE future will be more dependent on the solar energy. Before concluding,

Chaudhuri stressed on the role of CSOs to make general consumers aware of the benefits of RE and wished all success to CUTS for undertaking the DREC project in West Bengal.



Prititosh Ray, Member, Governing Body, West Bengal Renewable Energy Development Agency (WBREDA) & Empanelled National Level Monitor, Ministry of New and Renewable Energy (MNRE), Government of India advocated for preparing an a separate Act because the present Electricity Act, 2003 does not elaborate much on RE. Ray also emphasised that while using energy efficient (EE) appliances people forget that even a very efficient gadget used in an inefficient manner is equally inefficient. To this end, Ray stressed on the role that CSOs could play in generating awareness among consumers on the need and benefits of energy conservation. He further emphasised the need for improving operational efficiency of the power generating stations many of which are running below the efficiency of 20 percent.

Over and above that, he mentioned that close to 30 percent of electricity is lost as distribution loss and nearly 20-25 percent of energy is wasted at consumer's premises due to inefficient use and lack of knowledge on conservation of energy. Ray further mentioned that close to 80 percent of the coal that we are burning in the power stations are emitting carbon dioxide without producing a single unit of electricity. He further added that the market price of coal does not reflect its "Real Price" which has never been accessed and has been artificially kept low. He expressed his apprehension that if one puts that cost of coal in the pricing of energy then the price of thermal power station will be very high.



Prasad Ranjan Ray, Chairperson, West Bengal Electricity Regulatory Commission (WBERC) noted that by looking at the history of human civilisation, one can easily find oneself at crossroads. He said that till the end of the 18th century even coal was not important as a commercial figure as the world was largely dependent on the wood. In the 19th century the coal was viewed as the saviour and as a greatest single invention of that time. It was the period of continuous development of technology and the population was also not much, due to the high death rates of poorer countries.

In 20th century by the end of II world war, most of the so called colonised countries became independent even health graphs improved. Countries started adopting the western model of development in a restrictive way due to paucity of funds which led to the crises. The magnitude of the crises was realised only after the price shock coming from the Organisation of the Petroleum Exporting Countries (OPEC) oil regulation in 1970's. After that people realised that it may not be sustainable to guzzle energy in unrestricted manner. At the same time Club of Rome study came up with the concept of sustainable development. In that study the accessibility of the energy resources was projected depending on its depletion rate.

Latest study by the Planning Commission of India indicated that, at present India is already importing 70 percent of oil and within the next 20-30 years India will be importing 30 percent of coal and 90 percent of oil. Under these circumstances, energy conservation through judicious use of electricity, i.e. DSM on the part of end consumers is a very effective tool as it leads to a win-win situation for the utility service provider as well as for the consumers. In this context he highlighted the role of CSOs to sensitise electricity consumers to shift towards EE.

After pointing out the importance of energy conservation Ray underlined the need for utility service providers to purchase and supply electricity from RE sources. To this end he mentioned that those utilities who cannot access RE can also buy RE certificates from the power exchanges.

The other way which Government of India, Central Electricity Regulatory Commission (CERC) & Forum of Regulators are considering is RE certificate, under which those utilities which cannot access RE can buy RE certificate of that amount from the power exchange. The funds from this can be used somewhere else in the RE generation, although this certification has not been made mandatory so far.

In all these processes, he continued, CSOs play a vital role to take consumers on board and make them aware about the need of the hour.



Natasha Bhan, Programme Associate (Power), SSEF noted that the energy demand of the country is growing with the pace of eight percent and use of conventional methods to meet that demand is leading us to the climate issues, therefore the only solution to sustain growth is RE & DSM. Renewable energy resources cannot be pushed to its optimum use unless the demand comes from the consumer side, and thus CSOs need to ensure that consumers at the grassroots are made aware of the benefits of RE & DSM.



Udai S Mehta, National Coordinator for DREC Project & Assistant Director, CUTS International, presenting the overview of the project emphasised on its key objective, i.e. to touch the base with consumers through CSOs by understanding their concerns and infuse them at the policy level in the state of Gujarat and West Bengal. In order to bridge the gap between consumers at the grassroots and policymakers at the top, it is important to raise long term capacity of CSOs on issues pertaining to RE, DSM and the overall regulatory process for the electricity sector so that they could effectively participate in the regulatory process.

Mehta continued that the DREC project though will be focussing more on the consumers of RE but will also look at the constraints facing the producers in the RE sector. This project will also try to understand the perspective of producers and the challenges faced by them in increasing the generation of the RE resources. Udai also underlined the vital role of CSOs in building capacity of consumers for the demand of RE & DSM. As the key outcome of this project the concerns of consumers should reach policymakers.

The inaugural session followed by presentations consisted of two sessions: 'Nature and Scope of CSO Intervention in the Context of RE & DSM' chaired by **Keya Ghosh**, and 'Successful Interventions by Stakeholders in the Energy Sector in India' chaired by **C R Bhowmik**, Adviser (Engineering), WBERC.

FIRST SESSION

Panel Discussion on 'Nature and Scope of CSO Intervention in the Context of RE and DSM'

During the first presentation in the session **Joy Chakraborty**, Assistant Director, WBREDA highlighted the conflict that exists between growth and use of energy. He mentioned that the biggest challenge before India is to sustain growth at the rate of nine percent which will involve use of fossil-based fuel viz. coal. In this context he mentioned about the present day urban lifestyle which leads to higher levels of carbon emission.

Citing the example of solar cooker Chakraborty explained that it never got popularised due to the mindset of the people. He further added that the post-sale service network is also a big challenge for RE products. He also said that the mindset of people needs to be changed in the first place so that they develop faith in RE products. **Daljit Singh**, Senior Research Fellow, Prayas Energy Group stated that main function of CSOs is to primarily act as pressure groups to promote RE and EE and also act as watchdogs to ensure transparent and clean energy programmes. He noted that CSOs need to have a fair idea of the energy sector and the consumer demand in respect to their requirement to promote RE & DSM.

The cost effectiveness is a major advantage of EE and same should be persuaded with proper knowledge and understanding of the DSM. Even media can play a vital role in awareness generation. CSOs should also need to focus on long term capacity building plan to maintain the momentum, which require continuous follow up and monitoring. He also cited an example of *Prayas* monitoring the work done in CFL programmes in Nasik and finding more than 50 percent of distributed CFL bulbs non-working within a short span of six months.

Sunil Dhingra, Senior Fellow and Internal Resource Adviser, The Energy and Resources Institute (TERI) noted that subsidised conventional energy cost much less than the RE as government is keeping it artificially low. This also impacts the DSM & RE negatively. He also cited example from Kerala where it was found that the rubber industry was highly subsidised to around 80 percent but when the subsidy was removed the industry collapsed and resulted in closure of almost half of the companies. In order to come out of that crises the company had to rely on the RE as more reliable and sustainable resource. He also flagged off the fact that instead of giving more prominence to the solar energy in the RE sector, other sources should also be given equal weightage.

K K Bagchi, Executive Director, Amrit Bio-Energy, comparing biomass with the solar energy stated that biomass has an immense potential as a RE source and hence, provides viable companion for the solar energy. In biomass commercialisation is important keeping its running cost in mind. He also emphasised on stringent regulatory actions and compulsory submission of energy audit to the concerned department. It requires better clarity in the system and regulations for new developers in the industry. He also reiterated the point to shift the focus on other RE resources other than solar energy.



FLOOR DISCUSSION

The most important point emerged during the floor discussion was the concern of consumers towards the comparatively high price of the RE, which was critically analysed by the panel before assertion that there are several reasons behind the cheap conventional energy; subsidies, free resource material etc. are few of them. However, the increasing cost of conventional energy will soon place RE equivalent to conventional grid price parity. Even government is also focusing on R&D to reduce the price of RE but there is a need to focus more on technologies to ensure the efficient use of RE. There is unawareness on part of consumers regarding RE which leads to lot of misconception in their minds.

SECOND SESSION

Successful Interventions by Stakeholders in the Energy Sector in India

Mario Ferro, Husk Power Systems, Bihar explained that how Husk Power has added value to the rice husk which was earlier considered as waste by generating electricity and how they have reduced the distribution cost by decentralised system. Husk power systems are producers of small power plant based on biomass, i.e. husk. They provide electricity in remote villages of Bihar which are not yet connected to grids. A small power plant that can supply electricity till 1.5 km, allow minimising the distribution loss and thus reducing the cost. The husk is used as a partial combustion in the power plant which produces silica which also has a value in market and can be used in several other purposes.

Ranjit Kumar Mohanty, Programme Coordinator, VIKSAT, Nehru Foundation for Development, Gujarat in his presentation highlighted Gujarat's potential in solar and wind energy resources with 325 days of clear sun and no major fluctuation in the wind speed. Recently, Gujarat has also started experiment with the tidal energy to meet major energy demand through RE. Mohanty identified several bottlenecks as a deterrent for able to utilise the state RE resources to its optimum use instead of all such ascendancy. The solar policy of Gujarat is silent on several issues including consumer's participation in energy initiatives. Similarly the private participation in the RE sector is negligible and most of the technologies are being imported. There is also lack of awareness among consumers and the regulatory system. He also emphasised on the skilled human resources and the need of RE forum to interact on issues related to RE & DSM.

B K Dutta, Vivekananda Institute of Biotechnology, West Bengal asserted on the need of energy generation through RE and shared few case studies/success stories of the solar gasifier in villages. He suggested a model of community initiative for non-conventional energy under which whole village could be connected to RE supply at the *panchayat* level. The benefit of this model is that there is no need for government to allocate huge investment for bigger plants as smaller ones will take care of the need of that locality and also reduce the distribution cost of the electricity, which is almost 30 percent of the total energy generation.

C R Bhowmik while summarising the proceedings of the session noted that the willingness of consumers to pay little extra is the most important concern in any RE initiative. This requires awareness on benefits of RE in the long run and damages by the conventional energy resources to the ecosystem. He also added that DSM should not be seen only related to RE but can also be connected with several aspects such as water, gas and other resources to have a sustainable future.



CONCLUDING REMARKS

Udai S Mehta, National Coordinator for DREC project & Assistant Director, CUTS International while concluding the session noted that the key message of this deliberation is that we are at the crossroads. There are lot of experiments done at various places, and several debates on issues related to RE & DSM, which need to be consolidated. CSOs have to act as watchdogs to ensure clean energy and a pressure group to promote RE & DSM, but for that CSOs need to build their own understanding and capacity pertaining to the energy related issues, which is the main objective of this project.

KEY ISSUES

The meeting was successful with active participation from all stakeholders including government officials and CSOs. All presentations were very useful and informative. Comments/suggestions were also received on ways of enriching the output of the project. We have learned that the specific demand of the RE will come from the consumers only when RE will match the price parity with the grid-connected energy and the standard in quality. The price issue can be countered through a new concept of community initiative for renewable energy in which the installation burden will be shared within the community. Whereas for quality, there is a need to promote R&D in the RE sector as well as to encourage private participation for investment and research. Few other key issues deliberated in the meeting are as follows:

- Need for awareness on the issues related to EE.
- Capacity building of CSOs to act as pressure groups to promote RE & DSM.
- Generate awareness and sensitise consumers to pay extra for the RE & DSM.



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