

REPORT OF THE

STATE LEVEL TRAINING

WORKSHOP

April 03-07, 2012

Gujarat, India



1. INTRODUCTION

Vikram Sarabhai Centre for Development Interaction (VIKSAT), an institution of Nehru Foundation for Development (NFD) was established in 1977 and works towards holistic development of the societies through participatory management of Natural Resources and sustainable livelihoods. VIKSAT is engaged in promotion of participatory management of natural resources, aided by an enabling role of the government agencies.

CUTS International (Consumer Unity and Trust Society) with support of Shakti Sustainable Energy Foundation (SSEF), New Delhi, is implementing a project titled “*A Diagnostic Study to Build the Capacity/Awareness among CSOs to Demand for Demand Side Management (DSM) & Renewable Energy (RE) in India – DREC Project*”. The overall objective of the project is *to increase long-term capacity/awareness of consumer groups to demand for DSM and RE initiatives especially in the context of climate change, and also to understand, document and communicate their specific needs to the relevant policy makers*. The DREC project is being implemented in two states of India, namely - West Bengal and Gujarat.

To begin with, CUTS had undertaken a baseline survey in Gujarat and West Bengal where the project is to be implemented. In Gujarat, 500 consumers from four districts – Ahmedabad, Kutchh, Mehsana and Patan were interviewed and the survey results revealed that there is a significant gap in the awareness and practice of RE and EE. Another key finding from the survey was that, not only consumers but Civil Society Organisation (CSOs) were equally unaware about the regulatory structure in the electricity sector.

The finding from the baseline consumer survey pressed upon the need to have a capacity building program for CSOs at the grassroots level, so as to sensitize them about the regulatory framework. After identifying the training needs, a five day training workshop was organized in VIKSAT, Ahmedabad, with the primary objective of generating awareness & capacity building in grassroots’ CSOs on issues pertaining to Renewable Energy (RE), Energy Efficiency (EE) and to develop understanding about the overall regulatory structure for the electricity sector.

This report enumerates the proceedings of the entire training programme – topics covered, summary of each of the sessions, major highlights and feedback received from the participants about the sessions in particular and over all training programme in general. To understand the impact of the training programme on the awareness level of the participants, two questionnaires were designed to be filled pre & post workshop. The *pre-workshop questionnaire* was to assess the participant’s level of understanding on various issues before the training workshop and the *post-workshop* questionnaire to assess how much their level of understanding has improved after completion of the training workshop. This report also presents a topic wise comparison and analysis of the pre and post workshop findings. Experts from government agencies, regulatory and law enforcing bodies, NGOs working on related issues and academic institutions from the state were invited to participate as resource persons in the workshop.

2. OBJECTIVE

The training workshop was designed to build capacity of the CSOs in Gujarat, on issues pertaining to RE and EE, develop overall understanding about the regulatory structure of the electricity sector and develop advocacy skills among the CSOs.

3. SCOPE

The training workshop had covered the following issues:

- What is Climate Change and why RE and EE are important to combat climate change?
- What is Demand Side Management and what are the DSM initiatives undertaken in Gujarat?
- What is Energy Efficiency and how it is linked with DSM?
- Scenario of Renewable Energy in Gujarat
- Overview of the available RE Technology/Equipments
- Overview of Regulatory Structure for the Electricity Sector in Gujarat and scope for consumer participation
- Tools of Policy Advocacy
- Components of Electricity Tariff, Role of Consumers in Tariff Determination and how to react to Tariff Petition
- What is carbon credit?

4. FORMAT OF THE TRAINING WORKSHOP

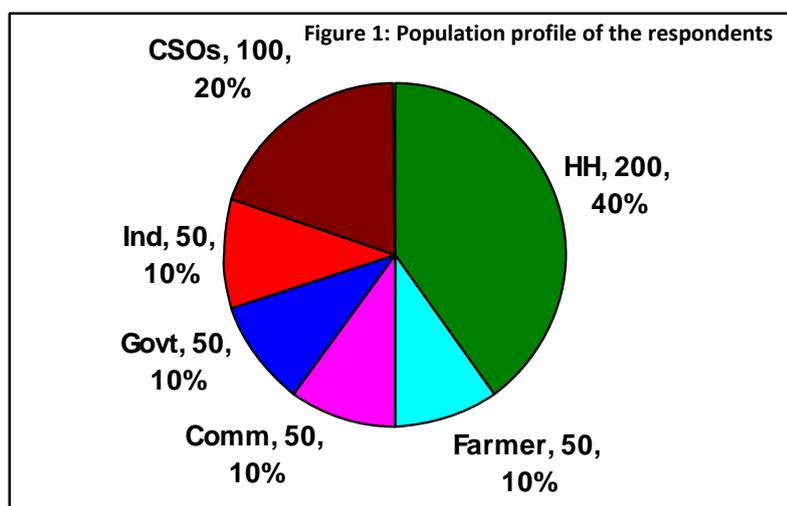
In order to effectively reach out to the participants, multiple training aids like power point presentations, videos, group work, followed by group presentations and discussions were conducted during the training workshop. Group members also performed role plays and made use of folklore to present their learning effectively.

Following is a brief account the presentations made by experts and floor discussions that were facilitated to address the queries of the participants and generate understanding about the key issues.

In the pre-workshop questionnaire participants expected to learn about RE and energy saving initiatives and gather more information regarding how to generate awareness about Renewable Energy Technologies (RET) and carbon credits through this workshop.

5. SUMMARY OF THE RESPECTIVE SESSIONS

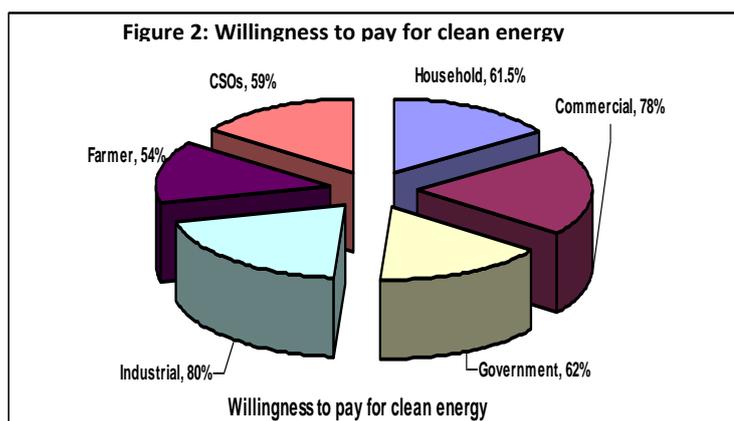
5.1. INAUGURAL SESSION



The five day training workshop began with an inaugural session, chaired by Dilip Surkar, Director, VIKSAT, Dilip Joshi, Director, GEDA, Niyati Mistry, Principal, Government Arts College, Gandhinagar, Ankur Baruah, Project Coordinator, VIKSAT, Sudeshna Bhojia, Programme Coordinator, VIKSAT & Gaurav Shukla, CUTS International.

Dilip Surkar welcomed the participants to the training program. In his address to the gathering he explained the rationale behind the five day workshop on *Demand Side Management (DSM) & Renewable Energy (RE)*. He recognized the important role of CSOs in raising awareness amongst the general public on issues pertaining to RE & EE.

Ankur Baruah made a brief presentation on the key findings of the survey conducted to understand consumer's perception on DSM and RE.



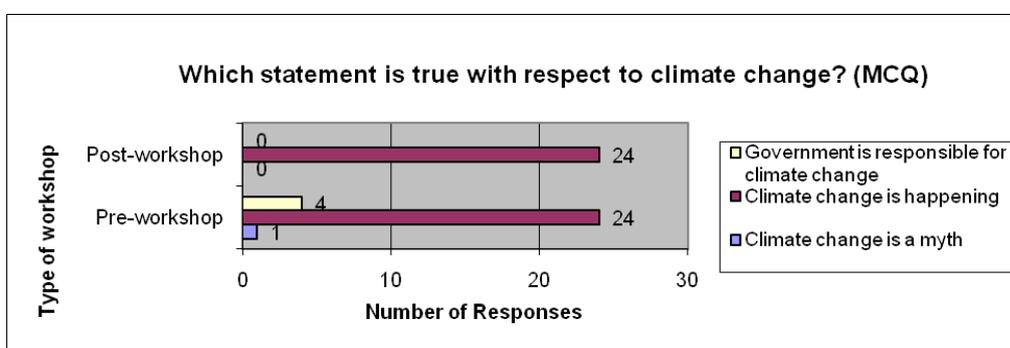
The survey revealed that the majority of the respondents had heard about climate change and they all appreciated the need for acting proactively to prevent further damage

to the environment. There is a significant gap between the awareness and practice of RE sources due to high initial cost and poor after-sales services of RE products. While more than 50 percent of the respondents were aware of energy efficient products, an equal number of respondents were unsatisfied with it. Willingness to pay extra for clean energy was one of the key findings of the survey.

Dr. Niyati Mistry made a brief presentation on Climate Change, explaining the participants about climate changes, its causes and effects on the planet at large. Following her presentation, the participants appreciated the need to take proactive steps to stop further damage to the planet.

Floor Discussion

During the feedback session the participants raised the issue of colossal waste of energy (water and electricity) in government offices and pressed upon the need to bring about change from individual households to big commercial institutions, including the government.



In the beginning of the workshop, all the participants expressed that climate change is happening. But 5 responses indicated that some participants held a multitude of opinions wherein four responses blamed the Government for being responsible for climate change and one response negated the concept, equating it to be a myth. In the post training questionnaire, there was a change in these perceptions and all the participants consented that climate change is happening.

Floor Discussions

Q. There has been a considerable increase in the use of solar cooker, so why has the government removed the subsidy component for the product?

Ans.: Subsidy is a means to encourage people to adopt new technologies. Now that people are aware of the benefits of solar cooker, removing the subsidy is well justified.

Q. VIKAS Center for Development raised query that there are currently 10000 diesel pumps used by the salt manufacturers, which can be easily converted to solar pumps if necessary support is extended by GEDA?

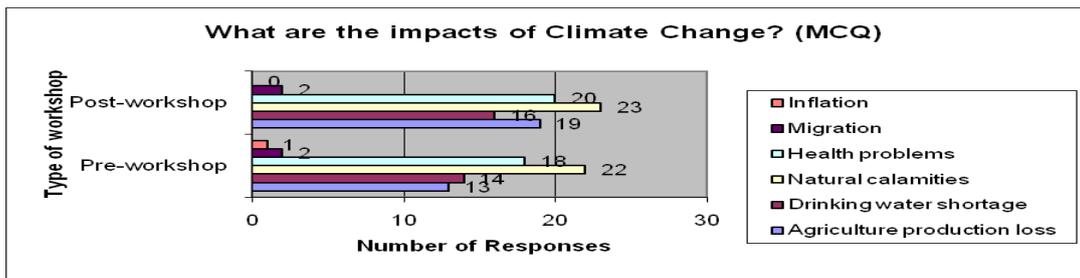
Ans. A proposal in this regard can be submitted to GEDA at the earliest for perusal and necessary action.

Q. Small and marginal farmers face a lot of problems in operation and maintenance, while irrigating their lands with solar pump and wind mill?

Ans. In order to build the capacities of these farmers on operation and maintenance of solar pumps and pumps run by wind mills, GEDA would like to work with the local NGO.

Q. Is there any genuine manufactures of solar cookers in Gujarat?

Ans. Currently there are only a couple of manufacturers of solar cookers in Gujarat. In case VRTI is keen on setting up a manufacturing facility, then GEDA would extend all possible support.



Regarding the impacts of climate change, as evident in the diagram above, the participants were well aware of the same and felt that the key areas of impact are increased natural calamities, health problems and shortage of drinking water. In the post workshop questionnaire, increasing number of respondents linked agricultural production loss and migration with climate change. However, surprisingly, that inflation is also fallout of the phenomenon of climate change was not registered as a response from even one participant in the post workshop questionnaire as against one participant in the pre-workshop session.

Dilip Joshi, Director, GEDA spoke about the National Action plan on climate change. Under this plan, government is taking proactive steps on improving the policies. Taking a cue from this plan, the Rajkot Municipal Corporation has made it compulsory for all tenement houses to have solar water heating facility. Similarly, in Gandhinagar, incentives are being provided to residents who would install solar water heaters in their house. He further stated that positive results can definitely be yielded, if both – Government and consumers work together. He also stated that Gujarat can benefit from solar energy as it can generate power for 350 days out of 365 days in a year. The PPP model created by Gujarat in solar power generation in Kutch and Saurashtra are few of the success models in renewable energy projects. Gujarat has the potential to achieve all the targets set in the national action plan on climate change. He also shared the fact that Gujarat ranks second in wind power generation. The encouraging policies adopted by Gujarat have helped in reviving bio-gas plants which were dysfunctional. Based on the above facts he reiterated the need to sensitize the consumers on climate change and energy conservation.

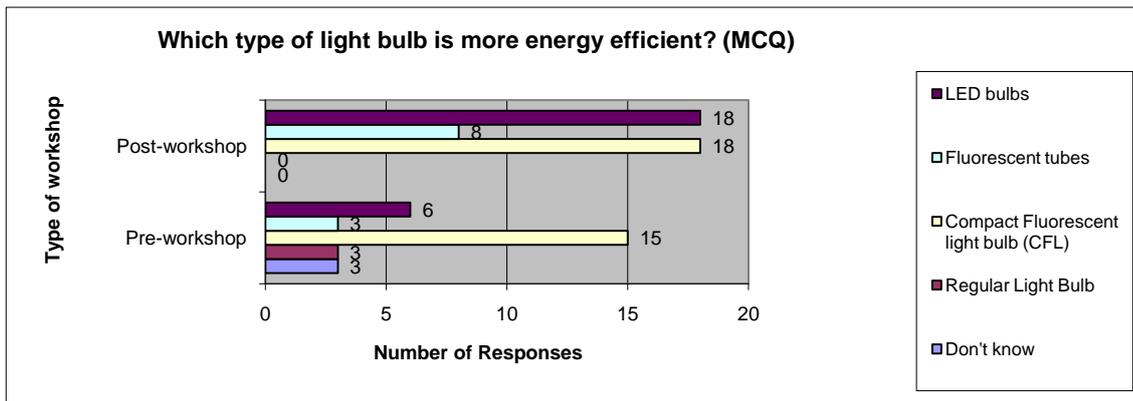
5.2 SESSION I

5.2.1 Demand Side Management: Need, Concept and Scenario in Gujarat

R. N. Pandya, Sr. Project Executive, Energy Conservation, GEDA

R. N. Pandya began his session by defining DSM, its need and the concept. He defined DSM as managing “energy demand” within the limits of “energy supply” by reducing energy demand using efficient techniques & technologies. With the growth and development of the country, the demand for energy is also increasing. Creating new energy sources will increase environmental hazards as power plants are the biggest source of pollution. Hence, there is a need to have a DSM

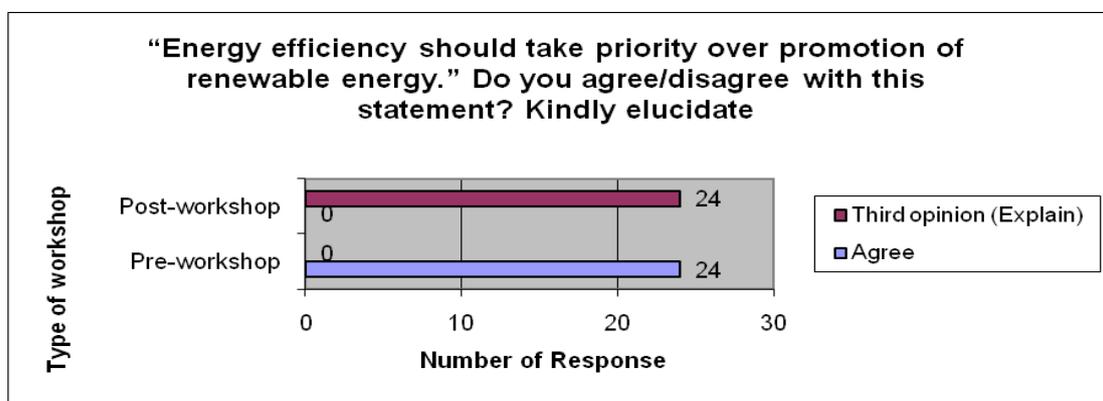
programme in place to play a balancing act between the demand and supply of energy to prevent further damage to the environment.



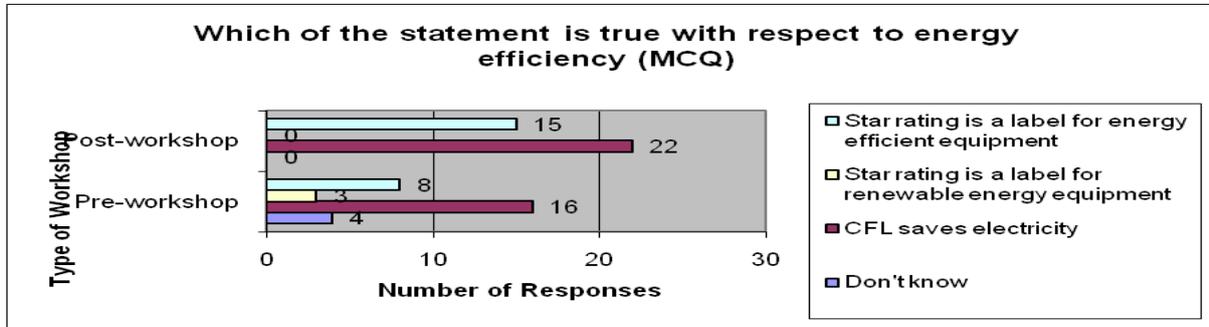
There was a sea change in the perception regarding EE products as it is evident from the diagram given above. The participants learnt more about the range of EE products. In the pre workshop questionnaire, 3 responses were in favour of regular light bulbs as EE product and 3 responses indicated ignorance about the issue. In the post workshop questionnaire, the knowledge about EEP scaled up fairly and the level of ignorance has diminished.

DSM is also pertinent to the Indian subcontinent as a large portion of our FOREX is spent on procuring oil, which can otherwise be used for development initiatives. He also appraised the participants on overall power scenario of the country as well as Gujarat, which is currently surplus in power. He also added that energy was the main culprit for climate change. 70 percent of the GHG emissions world over is caused by electricity generation.

Power Plants & Industries are two major contributors of GHG emission. It is essential that we become more efficient and reduce our energy intensity by preventing wastage, adopting energy efficient pattern of growth and technologies. He also explained about the DSM initiatives and programmes of the government. Instead of investing more on energy generation, we must focus on DSM which is economical, fast, indigenous, eco-friendly and sustainable.



It was unanimously opined at the beginning and towards the end that one cannot choose EE over RE or vice versa; rather there should be judicious mix of both, depending upon local situations and needs. Some had opined that the priority is same but the focus may be different. While in EE, it is more about raising awareness and spreading information, in RE, the focus is on R&D and subsidies.

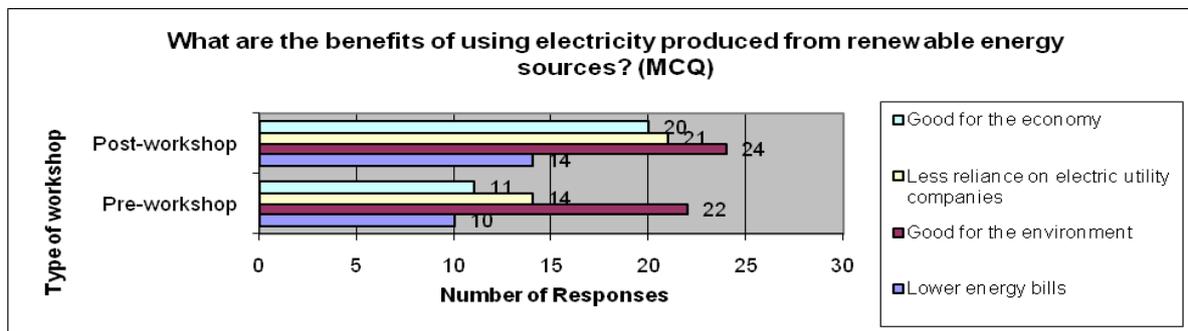


The awareness about star rating and energy efficiency of CFL improved considerably after the workshop as is reflected in the analysis given above. While 7 respondents were unaware of EE or star rating, after the workshop, they were aware about rating of EE products.

5.2.2 Scenario of Renewable Energy in Gujarat

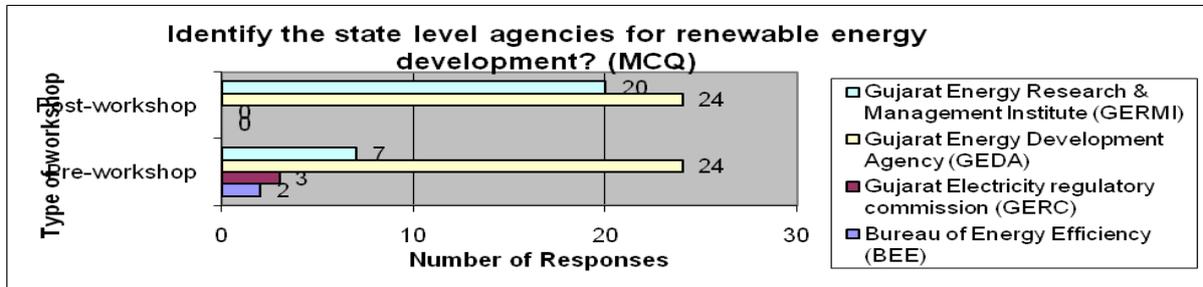
R N Pandya, Sr. Project Executive, Energy Conservation, GEDA

In his presentation on Renewable Energy, Pandya explained the different sources of RE and its potential in Gujarat. He said that Gujarat is strategically located to tap energy from Solar, Biogas, Biomass Energy Plantation and Wind. **1 percent of the total wasteland has a potential of setting up 10000 MW Solar Power Plant.** He spoke about the Jawaharlal Nehru National Solar Mission and also informed the participants on the various initiatives taken by the Govt. of Gujarat to promote the use of RE.



RE is not only beneficial for the environment but also good for the economy and reduces dependency on the utilities and lowers the energy bills: this fact was well understood by the participants during the workshop, as reflected in the above diagram. However, there is a difference in understanding regarding the billing process, while in off grid connections for RET, the bill is

lowered, in case of on grid connections, there is no change unless demand side is not efficiently managed.



The knowledge about GEDA as an institution for promoting RE in Gujarat was universal since the beginning of the workshop. After the workshop, the participants came to know about GERMI and its contribution in the sector. Five respondents acknowledged BEE and GERC as state level agencies for RE development prior to the workshop which was remedied in the post workshop questionnaire.

5.3 SESSION II

5.3.1 Tariff filing procedure

Kamal Sindhi, Deputy Engineer, UGVCL

Kamal Sindhi explained the tariff filing procedure, referring to the Multi Year Tariff Framework, as well as drafting a petition and procedures to be followed by SERC & DISCOMs. While speaking on MYT, he explained the principles & background, concept, its need and benefits to stakeholders and framework.

Floor Discussions

Q. Is there any difference in the power tariff in rural and urban areas?

Ans. Yes. The difference is usually 40 to 50 paisa per unit. The urban consumer pays more.

Q. In case a farmer defaults payment of electricity bill by one day, can he be fined Rs. 100?

Ans. The power bill has to be paid within 10 days from the receipt of the bill. In case a consumer fails to pay the bill then 15 days notice is given to him to settle the dues. After that the connection is disconnected and to reconnect the supply a fee of Rs.100/- is levied from the consumer.

5.3.2 CGRF and Ombudsman Regulations

Dr. Ketan Shukla, Secretary GERC

Dr. Shukla, in his presentation, spoke about the Consumer Grievances Redressal Forum and Ombudsman for Regulation. He explained the schematic of institutional and policy structure as well as institutional framework. He appraised the rights and responsibilities of the consumer and the goals laid down in the National Electricity Policy.

- The policy aims at providing access to electricity for all households by 2010 and increase the per capita availability of electricity to over 1000 units by 2012;
- Minimum lifeline consumption of 1 unit/household/day as a merit good by year 2012;
- Cross subsidies to be reduced gradually;
- Provision of support to lifeline consumers (households below poverty line having consumption of 30 units per month) with tariff being at least 50% of average cost of supply.
- Grievance Forum and Ombudsman to be set up
- Government and RCs to facilitate capacity building of consumer groups

He also explained the Complaint Redressal Mechanism under Electricity Act, 2003 and GERC regulations as well as the legal provisions.

Floor Discussions

The participants appreciated the session and were interested to learn about the rights and responsibilities of the CSOs. While CSOs can play an important role in ensuring efficient use of electricity they do have another role of being a watch dog and capacitate people to be alert about misuse and abuse of energy.

5.3.3 Participant's feedback – Day 1

- Information provided by GEDA on various means of energy, especially solar energy was very useful. NGOs can work on various schemes informed by GEDA.
- The presentation on Climate Change was very informative.
- The PPP model adopted in watershed management should also be replicated in the energy sector. This would be beneficial for consumers as well as farmers.
- Session on tariff petition was difficult to understand
- There were too many sessions crammed up in the first day. Most of the topics were new for the participants and it was a very intensive experience.

DAY II

5.3.4 Group Activity (Exercise on Energy Efficiency)

The day started with a prayer by one of the participants. In order to gauge the understanding of participants on energy efficiency, group activities were carried out. Three groups comprising of 8 members each, were formed and each group was given a case study in which the group had to analyze and evolve a sustainable solution on how energy could be saved in each case. The case studies given to the group members were focused on energy conservation in agricultural, household and institutional level. The groups discussed about the gaps in energy saving practices in domestic use, commercial and agricultural sector. Separate measures to be taken in each of the sectors to facilitate efficient energy use and planning were discussed.

Case-I

Bachchu bhai is anxious. He has a 30 acre farm. Till now electricity was provided in the day time. But, from today onwards, it will be provided in the night time only. Bachchu bhai is 75 years old. He takes regular medication and finds it difficult to stay awake after midnight. So, he connects the pipe with the water source and puts on the switch of the pump before going to sleep.

WHAT ARE THE DIFFERENT ENERGY EFFICIENT PRACTICES IN AGRICULTURE SECTOR? WHAT WILL YOU RECOMMEND TO BACHCHU BHAI TO CONTRIBUTE TO ENERGY SAVING?

Case -II

Gauriben is a busy woman. Diwali is just round the corner. She has to ground the flour the previous night so that in the day, she can make the sweetmeats. Gauriben however, loves to listen to music on her music system. She has discarded the broken utensils, crockery, newspapers and is waiting for the raddi-wallah to pass by. Thanks to her stitching skills, all the old and worn out clothes, bed sheets and other textiles have been made into 'godra'. The children are having a great time as well, enjoying their vacations. While one is watching TV, the other is playing computer games in the study-room. Her husband is also at home and playing a card game on the laptop.

WHAT ARE THE ACTIVITIES THAT ARE CONTRIBUTING TO SAVING ENERGY AND THOSE THAT ARE LEADING TO INEFFICIENT USE OF ELECTRICITY?

Case-III

The boys' hostel in Delhi has a capacity of accommodating 500 boarders on double-sharing basis. Due to diversification of the courses offered in the institute, in 2011-12, there has been an increase in the admissions leading to an increase in the number of students seeking accommodation. Currently, there are 700 boarders on triple-sharing basis. The facilities to be provided are:

- Water heating in bathrooms
- Water-coolers
- Breakfast and two meals
- Laundry facility
- Net connectivity
- Entertainment facility in the common room

DRAW UP A PLAN TO ENSURE THAT ENERGY IS USED EFFICIENTLY IN THE HOSTEL.

Group-1

Agriculture practices

- Energy inefficient practices lead to lessen the agricultural productivity
- Affects the land and soil quality
- Leads to mismanagement and degradation of natural resources
- Need to replace traditional means of irrigation by MIS as per the crop production pattern
- Adoption of valve system and pipes with less bends
- Choice of crops that require less water
- Use of solar energy run pumps
- Use of ISI mark pumps

Group-2

Energy efficient activities in a household

- Energy saving habits
- Recycling of waste paper and other materials
- Recycling of waste cloth by making them into mattresses

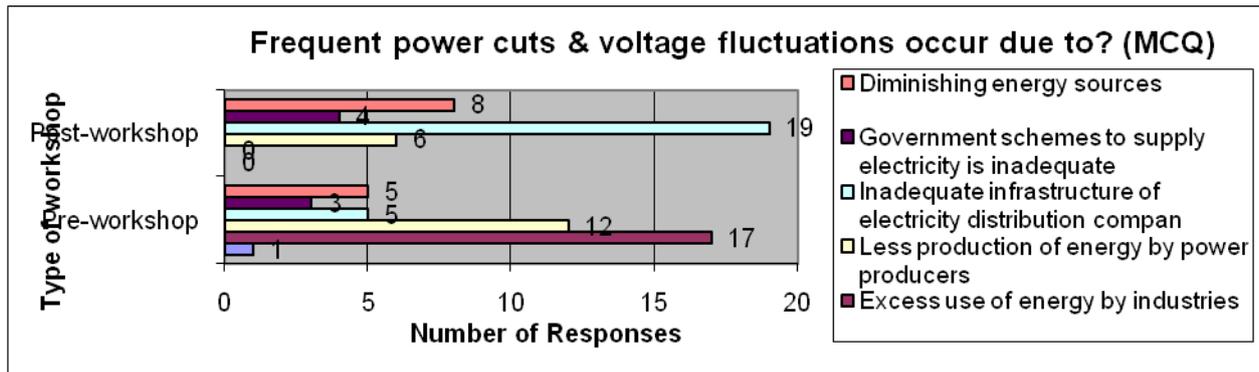
Energy inefficient activities

- Flour making can be undertaken during day time while the sweet meat can be made during the night time
- Common entertainment plans for the family members can be drawn out

Group-3

EE Plan for the hostel

- Replace heaters in the bathrooms. Install solar systems centrally and provide connections to the washrooms, kitchens etc.
- Replace thermal source of energy by renewable sources like solar or bio mass in the canteen and kitchen
- Use the water heated by solar panels in the laundry
- Install Wi-Fi for internet connectivity
- Replace the conventional lighting systems with CFL bulbs, use solar lanterns, Solar PV panels etc.



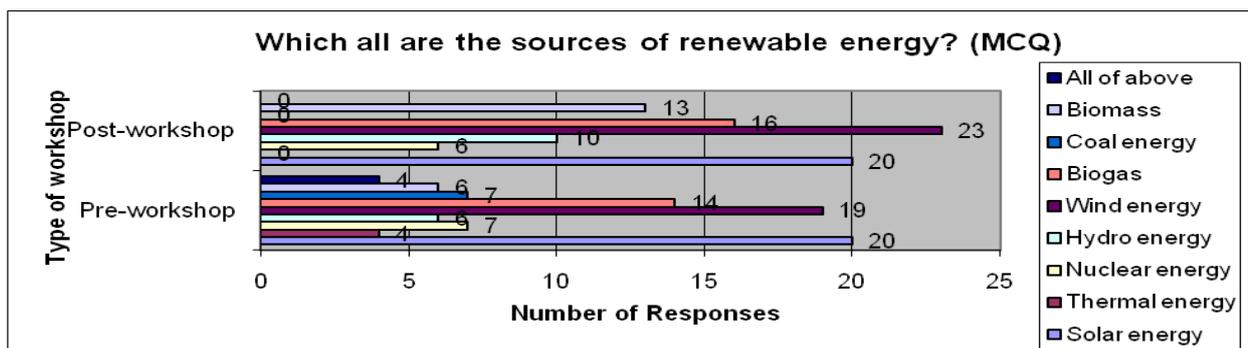
The perception regarding poor quality of electricity supply underwent a revision after the workshop. While factors like industrial use and less generation of electricity were considered to be responsible agents for power cuts and voltage fluctuations, in the post workshop questionnaire, infrastructural problems of the DISCOMs and diminishing energy sources were pointed out by the respondents as the areas of concern.

5.4 SESSION III

5.4.1 Overview of RE Technologies / Equipments

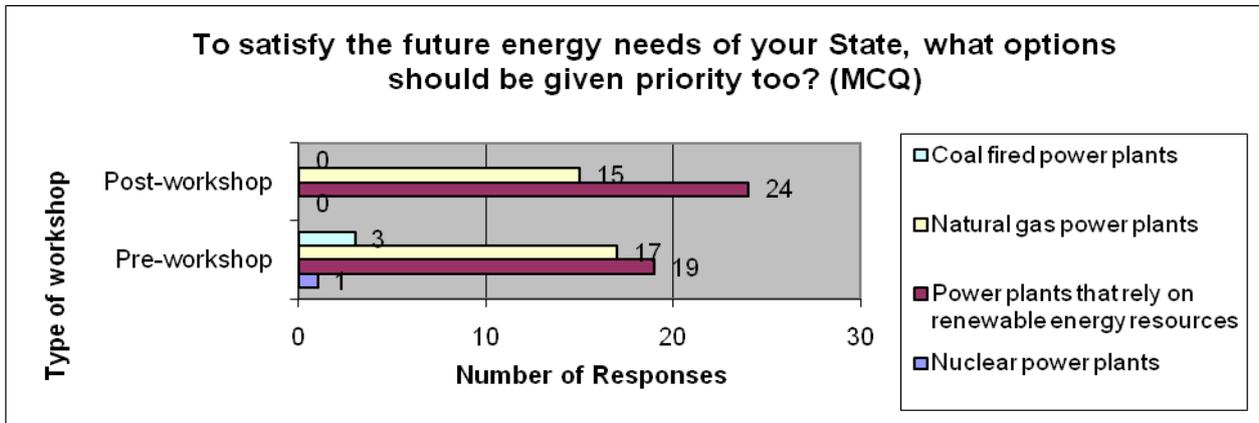
Dr. Sagar K. Agravat, Scientist (Solar), Gujarat Energy Research & Management Institute (GERMI)

Dr. Sagar explained about the various options available under Renewable Energy, commercial trends in solar energy and types of solar energy conversions. He explained in details how power is generated using geothermal, ocean waves, wind and solar energy. In his presentation he also appraised participants on the current technologies being used across the globe in RE.



Prior to the workshop, participants were mostly aware about solar, wind and biogas as the sources of RE. Post workshop, they took cognizance of biomass and hydro as sources of RE. The number of participants opting for wind energy is quite high, which may be due to the fact that Gujarat poses a high potential for this source along with solar energy. Those who had the misconception that thermal and coal energy were RE sources, rectified their opinion. 4 responses supporting all the mentioned sources were also put right on the RE sources in the post workshop questionnaire. There

was much clarity regarding the positioning of RE as the futuristic option for meeting the energy needs of the state as is reflected in the diagram below.



5.5 SESSION IV

5.5.1 Carbon Credit

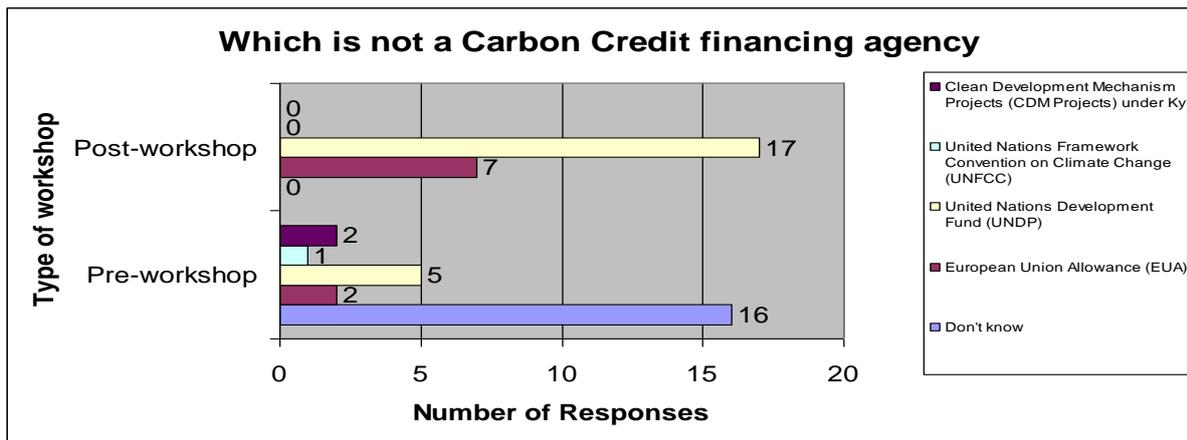
Dr. R. Gopichandran, Principal Research Scientist, GERMI

Dr. Gopichandran began his session by asking the participants about their understanding of carbon credits. Then he explained them about the 'Polluter Pays Principle', where the party responsible for pollution pays the damage done to the environment. To tackle the growing pollution done by the industries the United States and the European Union came up with a new concept - 'Right to Pollute'. Under the Right to pollute principle each industry has the right to pollute but up to a prescribed level. If an industry exceeds the limit then it shall have to pay a fine and if it pollutes less than the prescribed limit then it earns credit – Carbon Credit. There are five key indicators for calculating carbon credit: 1. Fungibility 2. Accountability 3. Transparency 4. Consistency and 5. Measurement. An industry earns one carbon credit if it reduces its pollution by 1 ton carbon dioxide. He also explained the financial gain behind earning carbon credits. The discussion was very well received by the participants.

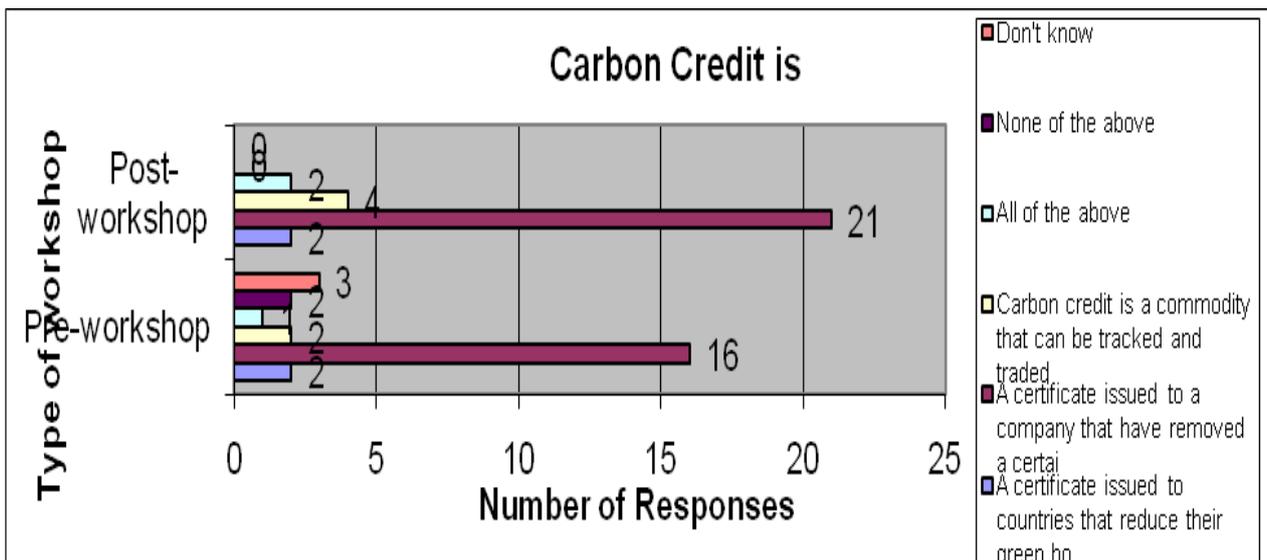
Floor Discussions

There were discussions on whether agricultural practices and installation of solar energy pumps were eligible to earn carbon credits. To this the resource person responded that although farming per se is a 'green' initiative, yet the scope of causing pollution by farming are many ranging from use of chemical fertilizers, use of diesel, misuse of water sources, improper land use and cropping pattern and so on. Thus, it is not possible to quantify the losses and gains in farming sector vis-à-vis environment protection.

While theoretically, by replacing diesel pumpsets with solar run equipments is eligible for earning credits, yet, the scale is negligible and hence practically not possible. However, if the state undertakes this initiative on a larger scale, then the reduction of pollution will be measurable.



Awareness about carbon credits and CDM increased after the workshop as is evident from the above diagram. That UNDP is not a Carbon Credit financing agency was uniformly understood during the deliberations. The diagram below has helped the participants understand that carbon credit is a certificate issued to a company for controlling carbon emissions and thereby protecting the environment. There were few participants who were ignorant about the term and found the workshop quite useful to increase their awareness.



5.6 SESSION V

5.6.1 Group Activity - Case study on RE at community level

Case Study on Use of Biomass for Domestic Cooking

Dineshbhai, Samarpan Trust, Mehsana

Dineshbhai spoke on compact biomass plant based on kitchen waste, about the functioning of biomass plant, factors affecting its functioning and its cost benefits compared to conventional

biomass plant. He explained the installation of the system, its cost implication, maintenance aspects and the outputs. He showed a video of the biomass plant which he had installed on the rooftop of his residence, the challenges faced and the future plans for improvisations, research and innovations.

Floor Discussions

The participants discussed about the designing of the plant in a way so that the input channels were positioned in a suitable manner to facilitate elimination of slurry without interfering with the input of raw materials.

It was also observed by the participants that biomass plant would be more suitable for large institutions like hostels and highway hotels where there is significant amount of kitchen waste on daily basis.

Case Study on Use of Solar Energy by Salt Pan Workers

Purushottam bhai, VIKAS Centre for Development

The case study emphasised on how solar motors can effectively replace conventional water pumpsets that use diesel. The presentation demonstrated the effectiveness of solar motors in terms of power, performance and economy. Videos on the performance of the solar motors were also shown to the participants.

Floor Discussions

The discussions centered on feasibility of installation of the equipment, financial incentives, the level of acceptance amongst the salt pan workers and the challenges faced therein. Since the salinity of the water is very high, there were a few concerns regarding the rusting of the motors. It was debated that the durability period of 25 years as given by the company was not rational keeping harsh climatic conditions in mind. The scope of RET in water lifting is an area suggested by one of the participants.

5.6.2 Group Activity – Drafting and finalization of Press Release/News Article

Sanjay Dave, Coordinator-Trustee, Charkha

The facilitator discussed about the five basic tenets of preparing a press release 5 W (Why, Where, What, Who, When) and 1 H (How). A group activity was undertaken to prepare a draft press release.

5.6.3 Participant's feedback – Day 2

The technical sessions undertaken by Dr. Agravat and Dr. Gopichandran were highly appreciated. The learning curve went high due to the simplicity with which the technical and difficult-to-grasp topics were undertaken and interactions that happened during the sessions

The session taken by Dr. Gopichandran was accepted well due to the anecdotes used by him to simplify the complex topic

In the case study presentations by the NGO representatives the interaction amongst the participants was the highest

DAY 3

5.7 EDUCATIONAL VISIT

An educational/exposure visit was conducted for the participants to Sardar Patel Renewable Energy Research Institute (SPRERI), Vallabh Vidyanagar, Gujarat and then to Muni Sewa Ashram, Goraj, Vadodara, Gujarat.

5.7.1 Sardar Patel Renewable Energy Research Institute (SPRERI)

SPRERI is a leading institute in India in promoting RE. New experiments on Solar Energy are carried out in SPRERI and all new solar products invented or modified in the country are BIS certified by SPRERI. Work on Solar energy, Biogas Technology and Thermo-Chemical Conversion is currently being carried out in the institute. The group was also informed that portable chulhas (fire places) were being distributed in tribal areas. Equipments operated by photovoltaic panels were also showed to the participants. SPRERI also offers assistance to the below mentioned issues / topics

1. Testing and valuation of RE equipments.
2. Research and development.
3. Establish, design, distribute and develop RE process.
4. Undertakes technical survey
5. Marketing of products including exhibition and sale of RE products.

5.7.2 Muni Sewa Ashram

The visit to Muni Sewa Ashram was facilitated by Shri. Deepakbhai Gadhiya, Director of the NGO. Currently 12 different types of projects are being implemented by the organization which includes Biogas, solar and alternative energy. A cancer hospital is also run by the institute. The organization is equipped to run a 100-ton air conditioning unit using solar energy, which provides efficient cooling to the hospital. In the absence of solar energy the equipment is run on Biogas (Gobar) plant. The participants were informed about the functioning of the kitchen by using solar energy. The exposure visit to Muni Sewa Ashram helped the participants to understand the importance and effective use of RE on a large scale.

5.7.3 Participant's feedback – Day 3

In spite of initial communication with SPRERI and planning meetings by VIKSAT, the group met with a very lukewarm response from the team at SPRERI. The plans were shuffled and instead of the visit to field applications of SPRERI, the organizing team made a makeshift plan of visiting Muni

Sewa Ashram. While, the shift in plans was a blessing in disguise, since the participants learnt a lot during the visit to the ashram, yet, there was a lot of mismanagement of time. As a result, the plans to visit GERMI had to be cancelled.

Day-4

5.8 SESSION VI

5.8.1 Overview of Regulatory Structure and Role of Consumer in Regulatory Process

Dr. Omkar Jani, Principal Research Scientist (Solar), Gujarat Energy Research and Management Institute (GERMI)

Dr. Jani made a presentation on Regulatory Structure and Role of Consumer in Regulatory Process. The presentation touched upon the Electricity Act 2003 - its impact on various segments, National Electricity Policy 2005, National Tariff Policy and Integrated Energy Policy 2006. He also explained the roles of various organizations involved in the regulatory system. Further he also appraised the participants on the State Electricity Regulatory Commission and its functions. He also spoke about the 5 MW Gandhinagar Photovoltaic Rooftop Programme.

5.8.2 Components of Tariff and Role of Consumers in Tariff Determination

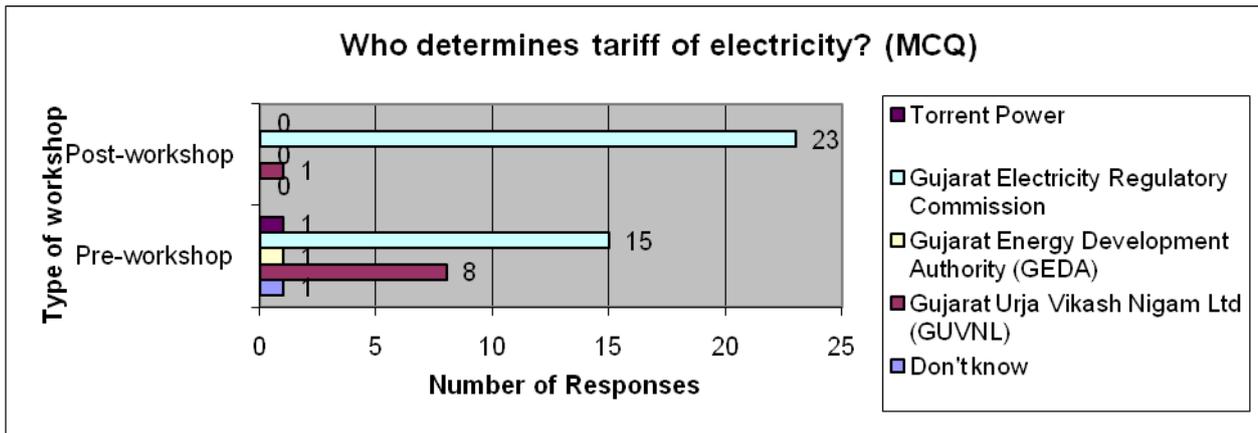
Dr. Omkar Jani, Principal Research Scientist (Solar), Gujarat Energy Research and Management Institute (GERMI)

Dr. Jani began his presentation by outlining the significance of the Electricity Act 2003. He listed out the factors that determine the tariff as well as the procedure followed to establish it.

Floor discussions

- Using diesel pumps is very expensive for poor farmers? How to reduce their burden and promote the use of solar pumps? GERC willing to subsidize the installation of solar pumps.
- The components/spares of solar equipment are very expensive.
- Adopting new technology is easy for an urban citizen rather than a farmer. Hence it is necessary to introduce technology to the farmers only when the ROI is very good.
- In Junagadh & Porbandar small fishermen use diesel/kerosene motors to run their boats. Can these be converted into solar? It would be difficult as addition of panels to the boat might destabilize it.
- We need to represent the issue to the right authority.
- Many people are unaware of the system as well as the hierarchy and hence there is a need for proper representation in government.

Suggestion by Speaker: Create an action group which would take forward all the points raised in the discussion.

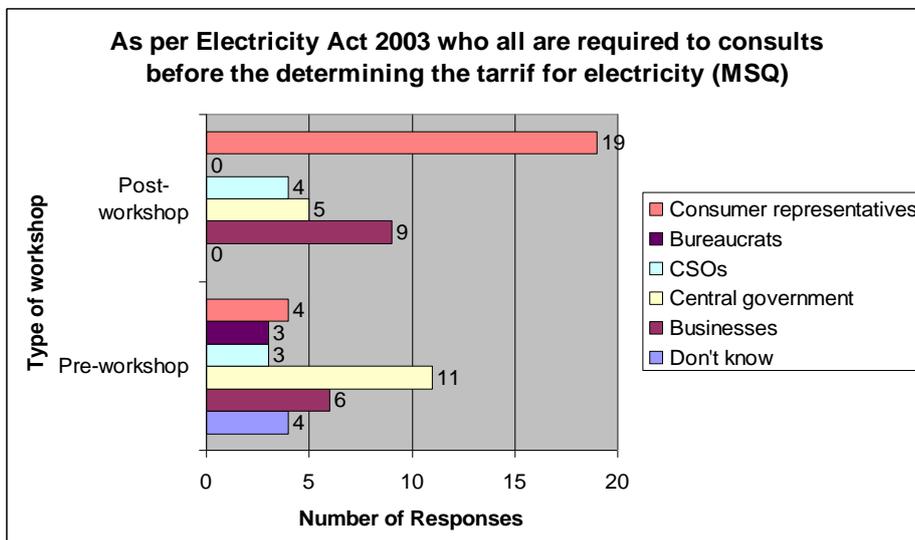


Knowledge about the role of GERC in tariff determination in Gujarat was well understood by all. Some participants felt that the DISCOMs were responsible for the same. But after the workshop, there was a common level of understanding about the roles of different institutions.

5.8.3 Drafting and Filing of Complaint

Govind Parmar, Advocate, Gujarat High Court

The session was jointly undertaken by Parmar and Ankur Baruah wherein they explained the distribution process of electricity as well as various players involved in its generation and distribution. They also explained the tariff determination process and how people could participate at various levels of discussion with the relevant agencies.



The workshop succeeded in establishing the missing link, i.e. the role of consumers in determining tariff, a fact that most of the respondents, except for four, were ignorant of. That tariff determination was an important activity requiring participation of all stakeholders was well understood.

5.9 SESSION VII

In the last session of the fourth day, the participants were divided in to three groups of eight members each and were asked to prepare presentations on three topics. Each group was given 45 minutes to prepare the presentation and present the same on the concluding day of the training programme.

Group 1: Role of CSOs in Energy Efficiency

Members: Sangita Dave – KK Memorial Trust, Dhasa (Bhavnagar)
Dhanji Bhingradia - VIKSAT, Bhuj
Dinesh Gandhi – Community Science Centre, Vadodara
Falgun Patel – Anand Khadi Gram Udyog Trust, Gandhinagar
Umed Makwana – SSP Rapar (Kachchh)
Vikram Yadav – Shree Pragati Sarvajanik Trust, Gandhinagar
Vaju Jadav – Siddharth Development Foundation, Junagadh
Ramesh Ghor – VRTI, Mandvi (Kachchh)

Group 2: Role of CSOs in promoting Renewable Energy

Members: Pappubhai Sodha – GSS, Rapar (Kachchh)
Prof. D. S. Ker – Gramya Vikas Trust, Dwarka
Bhumika R. Shah – ABC Trust, Bhuj (Kachchh)
Nilabhai A. Parmar - Shree Sarvoday Gram Vikas Vividlaxi Mandal, Jandla (BK)
Urmilaben K. Sadhu - Vadhiyar Niketan, Baspa (Patan)
Ashaben S. Chaudhary – Motibhai Foundation, Mehsana
Janakbhai K. Vyas - ANaRde Foundation, Mehsana
Dineshbhai B. Patel – Samarpan Trust, Visnagar (Mehsana)

Group 3: Develop a business model

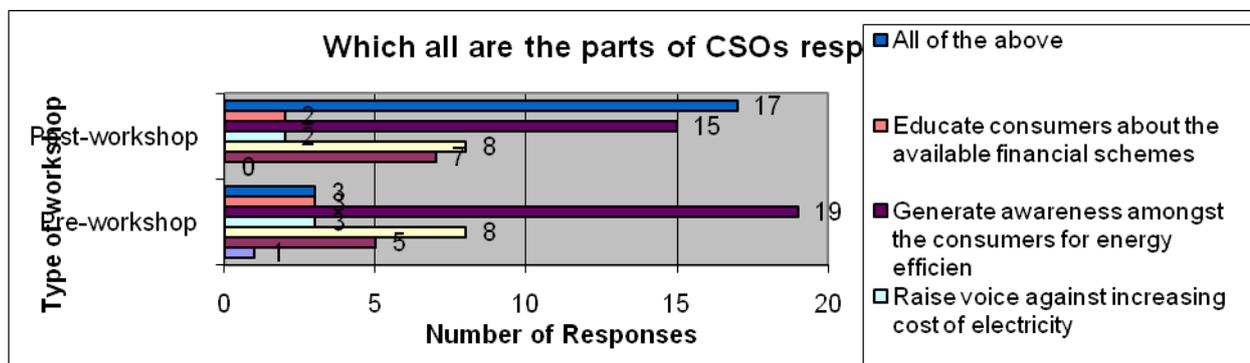
Members: Shambhubhai T. Desai - ANaRde Foundation, Mehsana
Ashok Shelar – Shikshan ane Samaj Kalyan Kendra, Amreli
Jaskanbhai Chaudhari, Motibhai Foundation, Mehsana
Bhanu Dasa, SAVA, Porbandar
Bashirbhai - Gram Swaraj Sangh, Nilpar (Kachchh)
Manish Patel - Shree Vasundhara Sarvajanik Trust, Gandhinagar
Purushottam Sonagra – Vikas Centre for Development, Dhangadhra
Farida A. Solanki - Forum Foundation & Charitable Trust, Gariyadhar (Bhavnagar)

Floor discussion

The session was animated by cross questioning and intense interaction. Some of the discussions revolved around the following topics:

- The role of the CSOs should not be limited to awareness generation alone but it is important that CSOs develop their technical understanding in EE and RE which will be important in undertaking advocacy and negotiating with other stakeholders
- CSOs are also poor in documenting and sharing their innovations and for effective dissemination and cross learning
- To improve energy efficiency it is important to be a role model for the others to follow and learn from
- To sustain a business model it is important to do value additions and make the product need based

Group I focused on the role of CSOs in promoting RET through awareness generation and IEC activities. Group II factored the steps to be taken in agriculture and domestic sector for improving energy efficiency and role of CSOs therein. Group III developed a business model for penetration of solar pumps in domestic sector in urban settings, agriculture sector and commercial buildings.



The workshop also helped to establish the important role to be played by the CSOs in DSM and RET which is reflected in the diagram above.

5.9.1 Participant’s feedback – Day 4

- The sessions by Dr. Jani was highly appreciated. The interactions held with the participants were also very enriching.
- The group work was also enjoyed by the participants. Lively plays and folklore presentations were made by the participants.

DAY 5

5.10 Valedictory Session

The five day workshop was organized with an objective to increase long-term capacity/awareness of Civil Society Organizations for Demand Side Management and Renewable initiatives. Building CSOs’ capacity to actively participate in regulatory processes and develop a mechanism to bridge the gap between CSOs and Policy makers concluded with a valedictory session, where Padmashree Kartikeya Sarabhai, Managing Trustee of NFD, addressed the gathering.

Speaking to the participants he reiterated the need to have sound policies complemented by effective implementation. He emphasized on the need to have tailor- made solutions for different problems as well as the need to analyze the solution after considering the local environment. He also pressed upon the need to measure/ quantify the demand side management to convince the policy makers to take concrete measures. There is a need to educate the population and change their mindset with reference to energy conservation and switching to renewable energy sources.

Following the address of Kartikeya Sarabhai, Arnab Ganguly, Project Officer, CUTS International, presented his experience of conducting the same workshop in West Bengal. He shared that the awareness about Renewable Energy in West Bengal was very less as compared to Gujarat as people in that part of the country could not afford the one-time capital investment required to adopt RE. He emphasized that CSOs must take responsibility for raising awareness amongst the people on Energy Conservation and Renewable Energy. He also said that CSOs must also focus more on advocacy.

Finally, Dilip Surkar, Director, VIKSAT and Udai Mehta, Associate Director, CUTS also addressed the gathering and appreciated the active participation of the candidates during the training programme.

5.11 GROUP PRESENTATION

In the last working session the three groups made presentations on the given topics before the panel of experts. The panel members comprised of seven members:

1. R. N. Pandya, Sr. Executive, GEDA
2. Dilip Surkar, Director, VIKSAT
3. Praveen Prakash, Industry Initiative Programme, CEE
4. Jatin Seth, Programme Coordinator, VIKSAT
5. Govind Parmar, Sr. Advocate, Gujarat High Court
6. Udai Mehta, Associate Director, CUTS
7. Arnab Ganguly, Project Officer, CRC, CUTS

5.11.1 Group I: Role of CSOs in Energy Efficiency

The presentation by group I focused on the role of CSOs in sensitizing the farmers, households and other organizations on energy efficiency practices. The group explained in detail how various stakeholders could contribute towards energy conservation if minor changes were made in their current practices. Use of CFL, LED lights, using straight pipes for irrigation, purchasing BEE certified electrical appliances and adopting renewable source of energy were some of the key suggestions made by the group. The groups also explained their strategy to reach out to maximum number of people.

Feedback by panel members on the presentation:

- It is very important to communicate to the masses for maximum impact.
- There needs to be a sense of ownership to reach the desired objective
- CSOs also need to focus on sensitizing the people on 'Standby power'. Standby power is that power which is used by electrical appliances like TV, AC etc when not in use, while still connected to the power socket. Other example quoted was of full-charged mobiles connected to power sockets.
- CSOs need to emphasis on monetary benefits of energy efficiency.

- There is a need to identify local manufacturers who can supply cost-effective energy saving appliances
- Local media should be used for disseminating information.
- The local leaders must be identified and sensitised on RE/EE, as they can communicate the same to a larger group more effectively and can also move things at policy level.
- CSOs need to identify the challenges in this area and then plan activities to address the same.
- CSOs must also conduct consumer interface meetings and focus on implementing the learning of last five days in the field.
- Energy is a very technical topic. People are averse to change and we need to quantify the benefits to yield positive results.

5.11.2 Group II: Role of CSOs in promoting Renewable Energy

The group made presentation on the role of CSO in promoting use of RE for conservation of environment and explore the scope of sustainable energy sources for mass use. The group presentation focused on promoting the use of equipments run by solar, wind and bio-gas amongst domestic consumers, agricultural and public institutional consumers.

Feedback by panel members on the presentation:

- The role of CSOs must not be limited to disseminating the information on RE but also to participate in the policy and intervention as and when required. We need to educate the consumers on various schemes available and motivate them to adopt RE sources.
- We need to understand people's need before we suggest them to shift towards clean energy.
- People spend more money on wood than gas. We need to present field facts to the people.
- Our objective must be to improve the quality of life.
- We need to create a pressure group to put forth the demands of the people to the agency.
- There is a need to bridge the gap between awareness and practice
- There is a need to continue the network created over the last five days.
- There is a need to create a federation of all participating NGOs in the workshop.

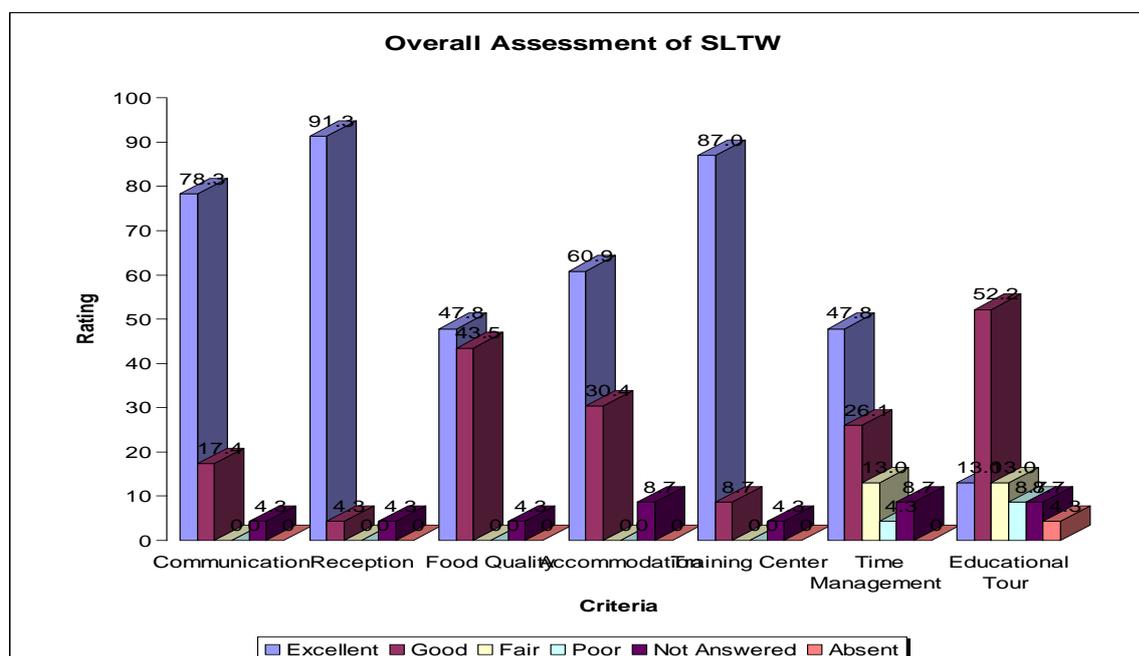
5.11.3 Group III: Develop a business model

Group III made a presentation on business model to promote the use of solar pumps. The group presented all the key elements of business planning and the arrangement was well received by the participants.

A few technical questions raised by the participants and panel members were addressed by the group members. Questions asked were mainly focused on viability, acceptability, feasibility and sustainability of the programme looking at the diverse energy needs of the consumer groups.

5.12 Feedback about the workshop

Rate your satisfaction as: 1= Excellent 2=Good, 3=Fair, 4=Poor



The participants were satisfied with the pre-workshop communication, reception at the venue, facilities at training centre, food quality and accommodation facilities. Yet the dissatisfaction quotient was greater with time management and educational tour.

5.13 Learning from the training workshop

Sr. No.	Topics	Rank improvement in understanding level (0-lowest, 5-highest)						Total
		0	1	2	3	4	5	
1	About climate change	-	1	-	4	7	12	24
2	About energy efficiency	-	-	2	3	4	15	24
3	About renewable energy	-	-	1	2	5	16	24
4	About RE technology	-	-	-	6	5	13	24
5	About practical use of RE in my project area	-	1	3	2	11	7	24
6	About CSOs role in EE and RE	-	-	-	4	5	15	24
7	About carbon credit	-	1	3	4	8	8	24
8	About electricity regulation	1	-	4	6	10	3	24
9	About tariff petition filing	-	-	7	9	5	3	24
10	About press release	1	-	-	2	8	13	24
11	Overall understanding of the energy sector	-	-	1	2	8	13	24
	Total Responses	2	3	21	44	76	118	264

The above table shows that the participants have benefitted considerably from the workshop. The participants voiced that there was improvement in their understanding regarding the topics discussed during the workshop.

5.14 WAY AHEAD:

VIKSAT plans to undertake a series of capacity building exercises for wider dissemination of the learning gained from the workshop by the CSO representatives who received training in the state level training workshop. The main objective is to reach out to the grassroots level stakeholders and identify the needs, misconceptions and the gaps that exist amongst the consumers pertaining to RE & EE. There will be Consumer Interface Meetings (CIMs) for specific stakeholders, CSOs, households, SMEs and commercial sector in the respective districts of the partner organizations (Patan, Kutch, Mehsana and Ahmedabad) in the coming months. A simple and easy-to-use electricity manual developed by CUTS would be used for dissemination and distribution during these CIMs.

ANNEXURES

ANNEXURE – I

STATE LEVEL TRAINING WORKSHOP

Capacity building of CSOs on Demand Side Management and Renewable Energy
April 03 to 07, 2012, VIKSAT, Ahmedabad, Gujarat

Training Programme Agenda

Day One - Tuesday, April 03, 2012	
09:30 – 10:00	Registration/Introduction: VIKSAT Team
Opening Session	
10:00 – 11:00	<u>Chair:</u> Dilip Surkar, Director, VIKSAT <u>Chair:</u> D.P.Joshi, IAS, Director, GEDA, Gandhinagar <u>Presentation:</u> Ankur Baruah, Project Coordinator, VIKSAT <u>Speaker:</u> Niyati Mistry, Faculty, School of Liberal Studies
11:00 – 11:30	Tea Break & Filling Pre-workshop Questionnaire by Trainees
Session I	
11:30 - 12:15	Demand Side Management: Need, Concept and Scenario in Gujarat <u>Resource Person:</u> R.N Pandya , Sr. Project Executive, Energy Conservation, GEDA
12:15- 13:30	Energy Efficiency: Linkages with DSM, Methods, Technologies, and role of CSOs in Gujarat <u>Resource Person:</u> R.N Pandya, Sr. Project Executive, Energy Conservation, GEDA
13:30 – 14:30	Lunch
Session II	
14:30 – 15:00	Scenario of Renewable Energy in Gujarat <u>Resource Person:</u> R.N Pandya, Sr. Project Executive, Energy Conservation, GEDA
15:00 – 16:00	Drafting Tariff Petition <u>Resource Person:</u> Kamal Sindhi, Deputy Engineer, UGVCL
16:00 – 16.15	Tea Break
16:15 – 17:30	Consumer Grievances Redressal Forum & Ombudsman <u>Resource Person:</u> Dr. Ketan Shukla, IFS, Secretary, GERC
17:00 – 17:30	Closing Session
Day Two - Wednesday, April 04, 2012	
09:00 – 09:30	Group Activity (Exercise on EE) <u>Resource Person:</u> VIKSAT
Session III	
09:30 – 11:15	Overview of RE Technology/Equipments <u>Resource Person:</u> Dr. Sagar Kumar Agravat, Scientist, GERMI
11:15 – 11.30	Tea Break
Session IV	
11:30 – 12:30	Carbon Credit <u>Resource Person:</u> Dr. R. Gopichandran, Principal Research Scientist, GERMI
12:30 – 13:30	Group Activity - Case study on RE at community level <ul style="list-style-type: none"> ▪ Case Study on Use of Biomass for Domestic Cooking <u>Resource Person:</u> Dineshbhai, Samarpan Trust
13:30 – 14:30	Lunch
Session V	
14:30 – 15:30	Group Activity - Case study on RE at community level <ul style="list-style-type: none"> ▪ Bio Gas Plant: Dineshbhai, Samarpan Trust, Mehsana ▪ Case Study on Use of Solar Energy by Salt Pan Workers <u>Resource Person:</u> Purusottambhai, VIKAS Centre for Development

15:30 – 16:30	Group Activity – Drafting and finalization of Press Release/News Article <u>Resource Person:</u> Sanjay Dave, Coordinator-Trustee, Charkha
16:30 – 17:00	Closing Session
Day Three - Thursday, April 05, 2012	
08:30 – 18:00	Educational Visit
11:00 – 13:00	Sardar Patel Renewable Energy Research Institute (SPRERI), Vallabh Vidyanagar, Gujarat
13:30 – 14:30	Lunch
14:30 – 17:30	Muni Sewa Ashram, Goraj, Vadodara Gujarat
Day Four - Friday, April 06, 2012	
09:00 – 09:30	Recap of the previous day
Session VI	
09:30 – 10:30	Overview of Regulatory Structure and Role of Consumers in Regulatory Process <u>Resource Person:</u> Dr. Omkar Jani, Principal Research Scientist, GERMI.
10.30 – 10:45	Tea Break
10:45 – 11:30	Components of Tariff and Role of Consumers in Tariff Determination <u>Resource Person:</u> Dr. Omkar Jani, Principal Research Scientist, GERMI.
11:30 – 12:30	Group Activity – Drafting and Filing of Complaint <u>Resource Person:</u> Govind Parmar, Advocate, Gujarat High Court
12:30 – 13:30	How to Draft a Tariff Petition <u>Resource Person:</u> Govind Parmar, Advocate, Gujarat High Court
13:30 – 14:30	Lunch
Session VII	
14:30 - 16:30	Group Activity – Preparation of Presentations for the Seminar and mock presentation <u>Resource Persons:</u> VIKSAT/CUTS
17:00 – 17:30	Closing Session
Day Five - Saturday, April 07, 2012	
10:10 – 10:30	Filling Post-workshop Questionnaire by Trainees & Feedback Form
10:30 – 11:00	Valedictory ceremony Opening speech –Dilip Surkar, Director, VIKSAT Valedictory speech – Padmashri Kartikeya V Sarabhai, Managing Trustee, NFD
11.30-1.30	Presentations and Panel Discussion Theme-I Role of CSO in promoting Energy Efficiency Theme –II Role of CSOs in promoting Renewable Energy
13:30 – 14:30	Lunch
14.30-15.30	Group presentation (contd.) Theme-III A business model for Renewable Energy and role of CSOs in it
15.30-16.00	Closing and Certificate Distribution

ANNEXURE – II
DREC PROJECT- State Level training Workshop
Gujarat (April 3rd - April 7th, 2012)

Sr. No.	Name of participants	Designation	Name of NGOs	Place	Mob	Email address- To
1.	Shri. Dinesh Gandhi	Sr. Prog. Coordinator	Community Science Centre	Vadodara	9825916874	cscvadodara@yahoo.co.in dkgandhi_rural@yahoo.in
2.	Shri. Bhanu Dasa	Social Mobilizer	Saurashtra Voluntary Actions (SAVA)	Porbandar	9998819299	sava.porbandar@gmail.com decent29@ymail.com
3.	Ms. Farida Solanki	President	Forum Foundation & Charitable Trust	Gariyadhar	9723565552	ffct.rajkot@gmail.com
4.	Shri. Umed Makwana	Cluster worker	Swayam Shikshan Prayog (SSP)	Rapar	9978731131	ssrapar@gmail.com preeth.peddy@gmail.com
5.	Shri. Purshottam Sonagare	Coordinator	VIKAS centre for development	Ahmedabad	9638603797	saveled@gmail.com psonagra79@yahoo.com
6.	Prof. D. S. Ker	Chairman	Gramya Vikas Trust	Dwarka	9824069942	gvtdwarka@yahoo.com
7.	Shri. Ashok Shelar	Project Leader	Shikshan Ane Samaj Kalyan Kendra	Amreli	9426281764	sskkamreli@gmail.com sskkvaw@gmail.com
8.	Ms. Sangita Dave	Director	Shree Kalubhai Katatiya Memorial Trust	Dhasa	9825921557	kk.memorialtrustdhasa@yahoo.co.in
9.	Shri. Vaju Jadav	President	Siddharth Development Foundation	Junagadh	9879448642	orgsdf@yahoo.com org.sdf@gmail.com
10.	Shri. Nilabhai Parmar	President	Shree Sarvoday Gram Vikas Vividlaxi Mandal	Jandla	9924374219	nileshpar86@gmail.com
11.	Shri. Manish B. Patel	President	Shree Vasundhara Sarvajanik Trust	Gandhinagar	9723816108	manish_shell@yahoo.co.in
12.	Shri. Vikram Yadav	President	Shree Pragati Sarvajanik Trust	Gandhinagar	9427070310	vikram_santosh@yahoo.com
13.	Shri. Falgun B. Patel	President	Anand Khadi Gramudhyog Trust	Gandhinagar	9426363582	patelfalgun16@yahoo.in
14.	Shri. Dhanji Bhingradia	Field Coordinator	VIKSAT	Bhuj	9925041750	viksatsat.bhuj@gmail.com
15.	Ms. Bhumika Shah	Project Coordinator	Ashapura Bahulaxi Charitable Trust	Bhuj	9898778391	abctrust@gmail.com
16.	Shri. Bashir Noyda	Project Coordinator	Gram Swaraj Sangh [GSS]	Nilpar	9879296131	gssnilpar@rediffmail.com

Sr. No.	Name of participants	Designation	Name of NGOs	Place	Mob	Email address- To
17.	Shri. Pappu Sodha	Project in charge			9712041704	
18.	Shri. Kishor Bhadra	Project Manager	Vivekanand Research and Training Institute [VRTI]	Mandvi	9825235790	vrti_mandvi@yahoo.com vgsbatik@rediffmail.com
19.	Shri. Ramesh Gor	Project Staff			9099971833	
20.	Shri. Jaskanbhai Chaudhari	Director	Motibhai R. Chaudhari Foundation	Mehsana	9825328328	motibhaifoundation@gmail.com
21.	Shree Ashaben Shankarbhai Chaudhary	Project Staff			9428942682	
22.	Shri. Dinesh B. Patel	Director	Samarpan Trust	Visnagar	9428460961	dinesh_deloli@rediffmail.com
23.	Shri. Shambhubhai T. Desai	District Coordinator	ANaRde Foundation	Mehsana	9426174793	anarde_meh@yahoo.com
24.	Shri. Janakbhai Vyas	Project Staff			7359943553	
25.	Shree Urmilaben Sadhu	Project Staff	Vadhiyar Niketan	Baspa	9662086968	vnbaspa@yahoo.com
26.	Shri. Ankur Baruah	Programme Coordinator	VIKSAT	Ahmedabad	9925029102	ankur.baruah@viksat.org
27.	Mrs. Sudeshana Bhojia	Programme Coordinator	VIKSAT	Ahmedabad	9428997549	sudeshna.bhojia@viksat.org
28.	Shri. Bipin Parmar	Project Associate	VIKSAT	Ahmedabad	9662041758	bipin.parmar@viksat.org
29.	Shri. Gaurav Shukla	Research Asst.	CUTS Centre for Competition Investment & Economic Regulation	Jaipur	9982222822	gs3@cuts.org

Annexure III

Name and Details of Resource Persons and external observer			
Sr. No.	Name	Organisation & Designation	Address, Contact Details
1	Dr. Niyati Mistry	Government Arts College, Gandhinagar Principal	niyati.mistry@gmail.com
2	Shri D. P. Joshi (IAS)	GEDA, Gandhinagar Director	director@geda.org.in
3	Shri R. N. Pandya	GEDA, Gandhinagar Sr. Project Executive	+919909922457 rnpandya@geda.org.in
4	Shri Kamal Sindhi	GERC, Ahmedabad Deputy Engineer UGVCL	+919909939929 gerc.ugvcl@yahoo.com
5	Dr. Ketan Shukla (IFS)	GERC, Ahmedabad Secretary	(079) 26584692 secretary@gercin.org
6	Dr. Sagar K. Agravat	GERMI, Gandhinagar Scientist	+919099950356 sagar.a@germi.res.in
7	Dr. R. Gopichandran	GERMI, Gandhinagar Principal Research Scientist	+919825409031 r.gopichandran@germi.res.in
8.	Shri Sanjay Dave	Charkha Coordinator-Trustee	+919825724608 charkhaguj@gmail.com
9	Dr. Omkar Jani	GERMI, Gandhinagar Principal Research Scientist	+919624000264 omkar.j@germi.res.in
10	Shri Govind Parmar	Gujarat High Court Advocate	+919427523448 govindparmar@rediffmail.com
11	Shri Ankur Baruah	VIKSAT, Ahmedabad Programme Coordinator	+919925029102 ankur.baruah@viksat.org
12	Shri Dinesh B. Patel	SAMARPAN, Visnagar Director	+919428460961 dinesh_deloli@rediffmail.com
13	Shri Purushottam Sonagra	VIKAS Centre for Development, Ahmedabad Coordinator	+919638603797 pasonagra79@yahoo.com
Name and Details of CUTS Staff			
Sr. No.	Name	Organisation & Designation	Address, Contact Details
1.	Udai Mehta	Associate Director, CUTS International	D-217, Bhaskar Marg, Bani Park, Jaipur-302016, India Phone: +91.141.228 2821 Fax: +91.141.228 2485 M: +91.98292 85926 Email: usm@cuts.org
2.	Gaurav Shukla	Research Assistant, CUTS International	D-217, Bhaskar Marg, Bani Park, Jaipur-302016, India Phone: +91.141.228 2821 Fax: +91.141.228 2485 M: +91.9982222822 Email: gs3@cuts.org
3.	Arnab Ganguly	Project Officer, CUTS Calcutta Resource Centre	3 Suren Tagore Road, Kolkata – 700019 West Bengal, Mob: +91 9874410391 Email: ag@cuts.org

ANNEXURE – IV

Pre and Post Workshop Questionnaire

DREC Project State Level Training Workshop, Gujarat (03 April - 07 April, 2012) Pre-Workshop Questionnaire			
Name of the Trainee			
Educational Qualification:			
Name of the Organisation			
Sr. No.	Questions	Options	Comments
01	Which statement is true with respect to climate change?	<ol style="list-style-type: none"> 1. Climate change is a myth 2. Climate change is happening 3. Government is responsible for climate change 4. Climate change will not affect human beings 	(Mark all that apply)
02	What are the impacts of Climate Change?	<ol style="list-style-type: none"> 1. Agriculture production loss 2. Drinking water shortage 3. Natural calamities 4. Health problems 5. Migration 6. Inflation 7. None 	(Mark all that apply)
03	Which are the sources of renewable energy?	<ol style="list-style-type: none"> 1. Solar energy 2. Thermal energy 3. Nuclear energy 4. Hydro energy 5. Wind energy 6. Biogas 7. Coal energy 8. Biomass 	(Mark all that apply)
04	What are the benefits of using electricity produced from renewable energy sources?	<ol style="list-style-type: none"> 1. Lower energy bills. 2. Good for the environment. 3. Less reliance on electric utility companies. 4. Good for the economy. 5. There will not be any benefit. 	(Mark all that apply)
05	To satisfy the future energy needs of your State, what options should be given priority to?	<ol style="list-style-type: none"> 1. Nuclear power plants 2. Power plants that rely on renewable energy resources 3. Natural gas power plants 4. Coal fired power plants 	(Mark all that apply)
06	Identify the state level agencies for renewable energy development?	<ol style="list-style-type: none"> 1. Bureau of Energy Efficiency (BEE) 2. Gujarat Electricity Regulatory Commission (GERC) 3. Gujarat Energy Development Agency (GEDA) 4. Gujarat Energy Research & Management Institute (GERMI) 	(Mark all that apply)
08	Frequent power cuts & voltage fluctuations occur due to?	<ol style="list-style-type: none"> 1. Excess use of energy by industries 2. Less production of energy by power producers. 3. Inadequate infrastructure of electricity distribution company 4. Government schemes to supply electricity 	(Mark all that apply)

		is inadequate 5. Diminishing energy sources	
09	Which of the statement is true with respect to energy efficiency	1. CFL saves electricity 2. Star rating is a label for renewable energy equipment 3. Star rating is a label for energy efficient equipment 4. Energy efficiency saves government expenditure but doesn't benefit common people	(Mark all that apply)
10	Which type of light bulb is most energy efficient?	1. Regular Light Bulb 2. Compact Fluorescent light bulb (CFL) 3. Fluorescent tubes 4. LED bulbs	(Mark all that apply)
11	"Energy efficiency should take priority over promotion of renewable energy." Do you agree/disagree with this statement? Kindly elucidate.	1. Agree 2. Disagree Reasons: 3. Third opinion (Explain)	
12	Carbon Credit is	1. A certificate issued to countries that reduce their green house gas emissions 2. A certificate issued to a company that have removed a certain amount of CO2 from the environment 3. Carbon credit is a commodity that can be tracked and traded like any other commodity 4. All of the above 5. None of the above	
13	Which is not a Carbon Credit financing agency	1. European Union Allowance (EUA) 2. United Nations Development Fund (UNDP) 3. United Nations Framework Convention on Climate Change (UNFCC) 4. Clean Development Mechanism Projects (CDM Projects) under Kyoto Protocols	
14	Which are the parts of CSOs responsibility?	1. Participate in regulatory process 2. Raise consumers concerns before the appropriate authority 3. Raise voice against increasing cost of electricity 4. Generate awareness amongst the consumers for energy efficiency and renewable energy 5. Educate consumers about the available financial schemes 6. All of the above	(Mark all that apply)
15	Who determines tariff of electricity?	1. Gujarat Urja Vikash Nigam Ltd (GUVNL) 2. Gujarat Energy Development Authority (GEDA) 3. Gujarat Electricity Regulatory Commission 4. Torrent Power	
16	As per Electricity Act 2003 who are required to be consulted before determining the tariff for electricity?	1. Businesses 2. Central government 3. CSOs 4. Bureaucrats 5. Consumer representatives	(Mark all that apply)

17	What are your expectations from the workshop?	1. 2. 3. 4. 5.						
18	How you have benefited from the training workshop	Topics	Rank improvement in understanding level (0-lowest, 5-highest)					
		About climate change	0	1	2	3	4	5
		About energy efficiency						
		About renewable energy						
		About RE technology						
		About practical use of RE in my project area						
		About CSOs role in EE and RE						
		About carbon credit						
		About electricity regulation						
		About tariff petition filing						
		About press release						
		Overall understanding of the energy sector						
19	I would like participate in similar workshops in future	1. Yes 2. No	Comment:					

Note: Question no. 17 was replaced by question no. 18 in the post-workshop questionnaire

ANNEXURE –V

Resource Person Feedback Form

To be filled immediately after the completion of each session

Rate your satisfaction as: 1= Excellent 2=Good, 3=Fair, 4=Poor

Sr. No.	Date	Subject	Resource Person	Trainer's presentation skills	Trainer's knowledge about the subject	Trainer's ability to answer your questions	Scope for participation	Relevance and usefulness of the session	Quality of resource material	Overall rating of the session
1	3.4.2012	About Climate Change: Causes and Effects	Dr. Niyati Mistry							
2	3.4.2012	Demand Side Management: Need, Concept and Scenario in Gujarat	Shri R. N. Pandya							
3	3.4.2012	Energy Efficiency: Linkages with DSM, Methods, Technologies, Role of CSOs in Gujarat	Shri R. N. Pandya							
4	3.4.2012	Group Activity (Exercise on EE)	VIKSAT TEAM							
5	3.4.2012	Scenario of Renewable Energy in Gujarat	Shri R. N. Pandya							
6	4.4.2012	Overview of RE Technology/Equipments	Dr. Sagar Agrawat							
7	4.4.2012	Overview of Regulatory Structure for the Electricity Sector in Gujarat and scope for consumer participation	Dr. Omkar Jani							
8	4.4.2012	Group Activity – Drafting and Filing of Complaint	Shri Govind Parmar							
9	4.4.2012	Carbon Credit/Policy Advocacy	Dr. Gopi Chandran							
10	4.4.2012	Group Activity – Drafting and finalisation of Press Release/News Article	Shri Sanjay Dave							
11	5.4.2012	Educational Visit GERMI & SPRERI (as applicable)	VIKSAT TEAM							
12	6.4.2012	Role of Consumers in tariff determination /grievance redressal	Dr. Ketan Shukla							
13	6.4.2012	Group Activity – Components of tariff	Shri Kamal Sindhi							
14	7.4.2012	Panel discussion (as applicable)	VIKSAT TEAM							

Annexure VI

Feedback about the workshop

To be filled at the end of the 5th Day

Rate your satisfaction as: 1= Excellent 2=Good, 3=Fair, 4=Poor

Sr. No.	Description	Rating
1	Pre-workshop communication by host agency	
2	Reception by the host agency	
3	Food quality	
4	Accommodation facilities	
5	Training centre facilities	
6	Time management during the sessions	
7	Arrangements made for exposure trip	

Any other specific feedback/suggestion
