



Manual for Sustainable Electricity

Demand Side Management & Renewable Energy in India *Capacity building of CSOs*

This manual is an attempt to inform the layperson about the sustainable way of electricity in a simple question answer format. It covers a number of issues related to electricity vis-à-vis energy efficiency/renewable energy and their implications on common man. Its aim is to create an informed society through better consumer awareness, and thus, enhance effective participation in the regulatory process and sustainable way ahead.

GLOBAL WARMING

What is Global Warming?

Global warming refers to the long-term increase in the earth's average temperature, primarily due to emission of carbon dioxide (CO₂) and other Green House Gases (GHGs) from activities viz. burning coal, oil and gas. Global warming, in turn, leads to a change in the existing climatic conditions usually referred to as 'Climate Change'. Thus, carbon emission contributes to global warming which leads to climate change. Since global warming and climate change are causally related hence terms are often used interchangeably in normal daily communications.

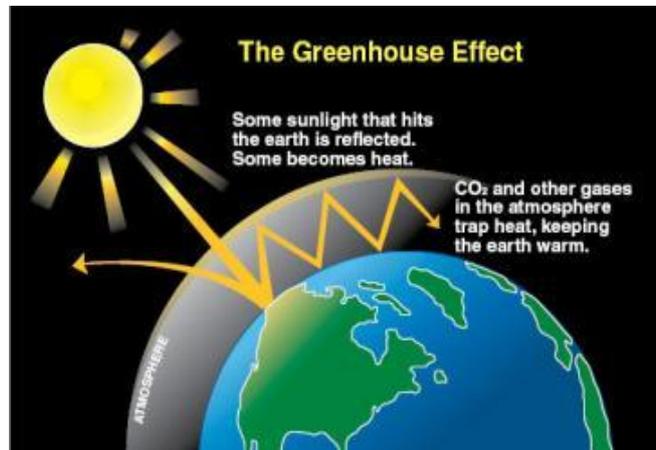


Following are some of the effects of global warming:

- Changes in rainfall patterns;
- Increased prevalence of droughts;
- Heat waves; and
- Other extreme weather conditions.

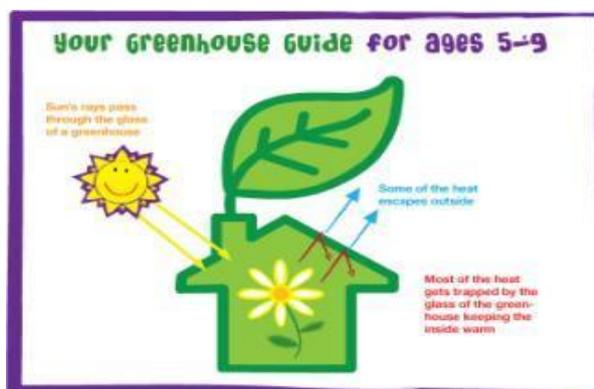
What are GHGs and how do they lead to Green House Effect?

GHGs are those that absorb the heat radiated from the earth's surface and helps keep earth's temperature warm. Water vapour, carbon dioxide, chlorofluorocarbon (CFC), methane etc. is examples of GHGs that are emitted due to various human activities. If concentration of these gases increase in the atmosphere, earth could not radiate its heat since part of it gets trapped by the GHGs and leads to increase in earth's temperature. This is called the 'Green House Effect'.



The Greenhouse Effect for the Earth

Source: www.ecy.wa.gov/climatechange/whatis.htm



Why Greenhouse remains warm all thetime?

Source: <http://theweatherchannelkids.com/climate-code/climate-close-up/greenhouse-gases/>

Causes of Global Warming?

While Earth's climate has changed naturally throughout time, the current rate of change due to human activity is unprecedented owing to human activities causing carbon emission.

a) Natural causes

- Movement of continental blocks
- Volcanic eruptions

b) Human activities

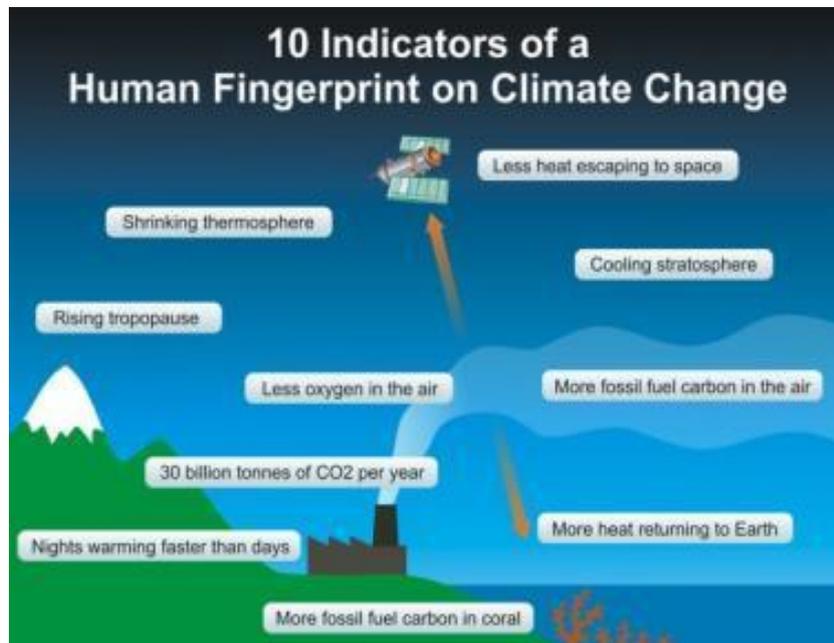
- Burning fossil fuel (Coal, Diesel, Kerosene, Natural Gas)
- Deforestation
- Change in Land use pattern
- Industrial pollution

Why does burning fossil fuel cause Global Warming?

Burning fossil fuel leads to CO₂ emission which then gets trapped in the earth's atmosphere. Increase in concentration of CO₂ (which is also a GHG) acts as a blanket on the earth's atmosphere which then leads to an increase in earth's temperature. Thus, in turn, causes change in earth's climate and manifests itself in natural phenomenon like melting of glaciers, erratic monsoon etc. that severely threaten the future of human civilisation.

At present what are the visible effects of Global Warming?

- Increase in mean average temperature
- Rise in mean sea level
- Erratic monsoon
- Increase in malaria and similar vector borne diseases, heat stroke etc.
- Falling farm productivity

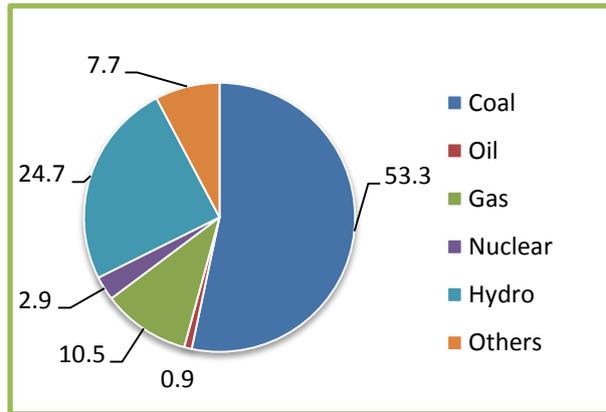


Human Activities leading to Climate Change

Source: <http://350orbust.com/10-indicators-of-a-human-footprint-on-climate-change/>

How is Electricity sector linked to Global Warming?

In 2007 total GHG emission in India stood at 1727.71 million tonnes of CO₂ equivalents. The energy sector emitted 1100.06 million tonnes of CO₂ equivalent in 2007 which means 58 percent of the total GHG emission has been from this sector alone. Electricity generation constituted the highest contributor to GHG emission (65.4 percent) from the energy sector. Since coal is still the predominant fuel used for electricity generation, the sector constituted 51 percent of the total CO₂ emission.



India's Electricity Generation by Source (%)

What can be done to reduce CO₂ emission from the electricity sector (from the perspective of DREC project)?

According to the Integrated Energy Policy (2006), to maintain a growth rate of eight percent by 2031-32 India needs to increase electricity generation capacity by 5 to 6 times from 2003-04 levels. This means that while the present electricity generation is 1,60,000 MW by 2031-32 it will have to reach 8,00,000 MW. Keeping the need for economic growth into perspective it is important that electricity from conventional sources should be used judiciously (to avoid huge capacity additions in the future) and the same should be supplemented by non-conventional sources (viz. solar, wind, biomass, biogas, tidal). Thus, CO₂ emission from the electricity sector could be reduced by:

- using electrical equipment's that consume less electricity;
- switching off electrical equipment's when not in use; and
- using equipment's that use renewable/non-conventional sources viz. solar water heating system, solar home lighting system (instead of generator/inverters).

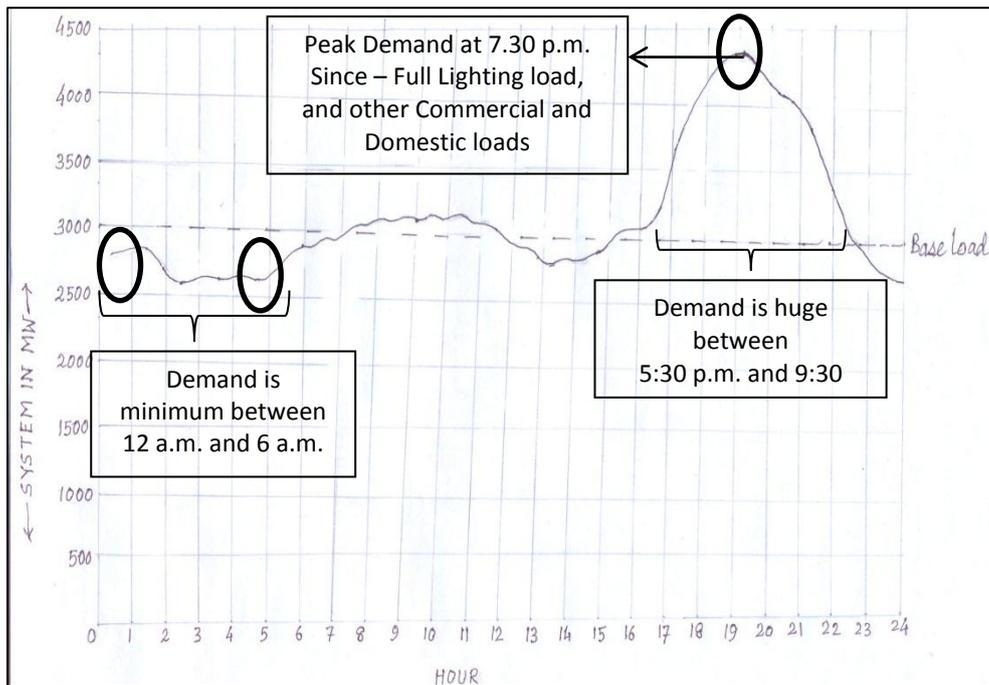
Role of consumers to reduce global warming?

- Consumers should use electricity judiciously to avoid huge capacity additions in future
- Consumers should use clean source of energy such as solar, wind, biomass, biogas, tidal etc. to run their electric equipment's
- Participate effectively in the regulatory process to ensure sustainable and reliable development

DEMAND SIDE MANAGEMENT

What is demand side management?

Demand Side Management (DSM) means managing the demand for electricity. In general, consumers demand electricity and the utility service provider manages the demand by adopting appropriate measures to ensure good quality of service to consumers.



Pattern of electricity use by different category of stakeholders at different parts of the day						
Stakeholder categories	TIME					
	6:00 - 9:00	9:00 - 12:00	12:00 - 17:00	17:00 - 21:00	21:00 - 23:00	23:00-06:00
Household	Fan	Fan	Fan, TV	Light, Fan, TV	Light, Fan, TV	Fan
Agriculture	Not used	Pumpsets	Pumpsets	-	-	-
Shops/Retail Outlets/Offices	Closed	Light, AC, Fan	Light, Fan, TV	Light, Fan, TV	-	-
Trend in Electricity Consumption	<u>MINIMUM</u>	<u>INCREASING</u>	<u>INCREASING</u>	<u>MAXIMUM</u>	<u>DECREASING</u>	<u>MINIMUM</u>

Observations from the Figure

- Base Demand (average demand) = 3,000 MW
- Peak demand = 4,300 MW

Difference between Base Demand and Peak Demand (B-A) = 1,300 MW

For this extra demand for 1,300 MW utility has to arrange additional installed capacity or purchase power at high rate during peak hours. The goal of DSM is to encourage consumers to use less energy during peak hours or to move the time of energy use to off-peak hour's viz. night. For example, the Time of Day (ToD) metering for industrial, commercial and agriculture consumers is an example of DSM.

What is Time of Day (ToD) Metering?

ToD metering is a tool for flattening the load curve shown in figure above. In the case of commercial, industrial and agriculture consumers, electricity tariff during off-peak hours is much lower compared to those of normal and peak hours. Again tariff during peak hours is highest when compared to those of normal and off-peak hours.

Why DSM and Energy Efficiency are important?

Use of energy efficient technologies can lead to a reduction in demand and hence generation of electricity. This, in turn, can prevent further capacity additions (to the existing thermal generation stations) or reduce investment in new thermal generation stations.

Role of Consumers in DSM & RE?

It is being recognised globally that a sustainable way forward for responsible growth is by ensuring a minimal impact on the environment. This can be achieved only through reducing carbon emissions by increasing end use energy efficiency (DSM), and greater utilisation of renewable energy (RE) resources. Thus, it is necessary to enhance focus on energy efficiency & renewable energy.

ENERGY EFFICIENCY

What is Energy Efficiency?

Energy efficiency means using electricity efficiently. The efficient use of electrical energy can be considered at consumers end only. It can be practiced by using electricity judiciously as well as by using electrical equipment's that consume less electricity (i.e. use of energy efficient technology).

Practicing energy efficiency leads to reduction in demand and hence generation of electricity. This, in turn, can prevent further capacity additions to the existing thermal generation stations and reduce investment in new thermal generation stations.

Need for DSM/EE
<ul style="list-style-type: none">• Saving 1 unit of electricity at consumer end avoids nearly 2.5 times of capacity addition.• 1 MW capacity addition of thermal power requires Rs 6 crores for installation and another Rs 3 crores for Transmission and Distribution

How to identify Energy Efficient equipment's?

- Star label
- BEE label

What is BEE?

Bureau of Energy Efficiency commonly known as BEE was established on March 01, 2002 under provisions of the Energy Conservation Act, 2001. The mission of the BEE is to assist in developing policies and strategies with a thrust on self-regulation and market principles, within the overall framework of the Energy Conservation Act, 2001 with the primary objective of reducing energy intensity of the Indian economy. This will be achieved with active participation of all stakeholders, resulting in accelerated and sustained adoption of energy efficiency in all sectors.

What are the Regulatory Functions of BEE?

- Develop minimum energy performance standards and labeling design for equipment and appliances;
- Develop specific energy conservation building codes;
- Develop specific energy consumption norms;
- Certify energy managers and auditors; and
- Define the manner and periodicity of mandatory energy audits.

What is Star and BEE Label?

BEE introduced Star Label to assist consumers in choosing electrical equipment's that are energy efficient. For example, an air conditioner with star label is more energy efficient than an air conditioner

with no star label. Again an air conditioner with one star is less energy efficient than those of an air conditioner five stars. Star Labels come with BEE labels to ensure that the star label is not fake.

Labels For ACs

Energy and Cost saving for 1.5 Ton Windows or Split Air conditioner at different Star Rating

Star Rating	Maximum Cooling Capacity (Watts)	Minimum Energy Efficiency Ratio (EER)	Input Power (Watts)	Units consumption /Day (kWh)	Per Unit Charge Rs. (approx.)	Electricity Cost/ Month Rs.	Cost Saving Rs. Per Year (w.r.t. No star) (Approx.)
NO STAR	5200	2.20	2364	9.45	2.50	709	0
1 (One)	5200	2.30	2261	9.04	2.50	678	308
2 (Two)	5200	2.50	2080	8.32	2.50	624	851
3 (Three)	5200	2.70	1926	7.70	2.50	578	1313
4 (Four)	5200	2.90	1793	7.17	2.50	538	1712
5 (Five)	5200	3.10	1677	6.71	2.50	503	2059

Note: Assuring 8 hrs. operation per day for five months in a year

STAR LABEL for ACs¹

¹<http://centralparkgurgaon.blogspot.in/2012/01/energy-saving-air-conditioning-tips.html>



Understanding Energy Label for Refrigerator



Energy Saved is Money saved

Energy Star Rating of Refrigerator: 1 Star is less efficient and 5 Star is more efficient

Annual Energy Consumption (in kWh) under tested conditions

BEE Logo Authenticity of the label

Test Conditions as specified by the Bureau of Energy Efficiency

Product Details with type of Refrigerator (FF / DC)

Volume in liters (Gross Volume)

Volume in liters Usable Storage Volume)

5/8/2009

ELECTRICITY CONSUMPTION
580*
UNITS PER YEAR

Appliance : Refrigerator
Brand : ABC
Model : XYZ 270/2007
Type : Frost Free
Gross volume : 270 liters
Storage volume : 260 liters

*Under test conditions, when tested in accordance with XXXX. Actual electricity consumption will depend on how the appliance being used.

STAR LABEL FOR REFRIGERATORS

Do all of the equipment's have star label?

No, there are some equipment's where star labelling is mandatory and others where it is voluntary. However equipment's with star label is more energy efficient than those without star label.

Electrical Equipment's under Voluntary and Mandatory Labelling Scheme	
Mandatory Scheme	Voluntary Scheme
Frost Free (No-Frost) Refrigerator	Room Air Conditioners (Cassette, Floor Standing Tower, Ceiling, Corner AC)
Tubular Fluorescent Lamps	Direct Cool Refrigerator
Room Air Conditioners	Induction Motors
Distribution Transformer	Agricultural Pump Sets
	Ceiling Fans
	Electric Geysers
	Colour TV
	Washing Machine
	Computer (Notebook /Laptops)

Source: BEE Website, accessed on 08.05.2012
(<http://220.156.189.26:8080/beeLabel/index.jsp>)

How do I save money by purchasing electrical equipment's with star label?

Using energy efficient equipment's mean getting the same service but by consuming less electricity. This means paying for less number of units of electricity consumed in the monthly electricity bills which definitely means saving in terms of money. For example, consider Table below which shows the monetary savings from using star labelled refrigerator *vis-à-vis* no star rated refrigerator. It also shows the monetary savings from using star labelled air conditioner *vis-à-vis* no star rated Air conditioner.

Energy and Cost Saving for 250 liters Frost Free Refrigerator with Different Star Rating							
Star Rating (1)	Energy Consumption per year (Approx.) (2)	Per Unit Charge (Approx.) (3)	Electricity Cost/Year (4) = (2)x(3)	Total Savings (w.r.t. No Star Every Year) (5)	Refrigerator Cost (6)	Cost Difference from no star refrigerator or (7)	Pay Back Period for the extra amount paid for purchasing star labelled products (8)= (7) /(5)
	Units (Kwh)	Rs	Rs	Rs	Rs	Rs	Years
No Star	1,100	2.50	2,750	0	14,000	0	0
 One Star	977	2.50	2,443	307	15,000	1,000	3.25
 Two Star	782	2.50	1,955	795	15,500	1,500	1.89
 Three Star	626	2.50	1565	1185	16500	2500	2.11
 Four Star	501	2.50	1253	1498	17500	3500	2.34
 Five Star	400	2.50	1000	1750	18500	4500	2.57

Source: Bureau of Energy Efficiency (BEE)

Energy and Cost Saving for a 1.5 tonne Air Conditioner with Different Star Rating							
Star Rating (1)	Maximum Cooling Capacity (2)	Minimum Energy Efficiency Ratio (EER) (3)	Input Power (in Watt) (4)	Cost per unit of electricity consumed (5)**	Per Unit Charge (Approx.) (6)	Monthly Total Expenditure (7) = (5)x(6)x30*	Total Saving in 5 months (8)=[(7)-(6)]x5**
	Units in Watt		Rs	Rs	Rs	Rs	Rs
No Star	5200	2.20	2364	9.45	2.50	709	0
 One Star	5200	2.30	2261	9.04	2.50	678	155

 Two Star	5200	2.50	2080	8.32	2.50	624	425
 Three Star	5200	2.70	1926	7.70	2.50	578	655
 Four Star	5200	2.90	1793	7.17	2.50	538	855
 Five Star	5200	3.10	1677	6.17	2.50	503	1030

Source: Adopted from the data available from BEE

*Since there are 30 days in a month

**The Air conditioner operates for 8 hours a day for 5 months

Energy and Cost Saving for 21 inches CRT Television with Different Star Rating				
Star Rating (1)	Energy Consumption per year (Approx.) (2)	Per Unit Charge (Approx.) (3)	Electricity Cost/Year (4) = (2)x(3)	Total Savings (w.r.t. No Star Every Year) (5)
	Units (KwH)	Rs	Rs	Rs
No Star	200	2.5	500	0
 Three Star	188	2.5	470	30
 Four Star	143	2.5	358	143
 Five Star	114	2.5	285	215

Source: Adopted from BEE website

Note:

- Energy consumption by a CRT colour television is higher compared to LCD Plasma television
- Information on 1 star and 2 star products are not available

Lumens per watt for various category of Star Labelled Tube Lights					
STAR RATING	 One Star	 Two Star	 Three Star	 Four Star	 Five Star
Lumens per Watt at 100 hrs of use	<61	>=61 &<67	>=67 &<86	>=86 &<92	>=92
Lumens per Watt at 2000 hrs of use	<52	>=52 &<57	>=57 &<77	>=77 &<83	>=83

Lumens per Watt at 3500 hrs of use	<49	>=49 &<54	>=54 &<73	>=73 & 78	>=78
<p>LUMENS – the degree of illumination Degree of illumination for a 5 star rated tubelights is higher than those of one or two star rated products</p>					

Which energy efficient equipment available in the market?

- Home Lighting (LED, CFL, various categories of tubelights T3, T4 etc.)
- Refrigerator
- Air conditioner,
- Fan
- Television
- Washing machine
- Agriculture pump sets
- Laptop/Computers

What is an Energy Audit?

An energy audit is a preliminary activity towards instituting energy efficiency programs in an establishment. It consists of activities that seek to identify conservation opportunities preliminary to the development of an energy savings program.

Role of an Energy Audit

To institute the correct energy efficiency programs, one need to identify the areas which establishment unnecessarily consume too much energy, e.g. which is the most cost-effective to improve. An energy audit identifies where energy is being consumed and assesses energy saving opportunities, so consumers get to save money where it counts the most.

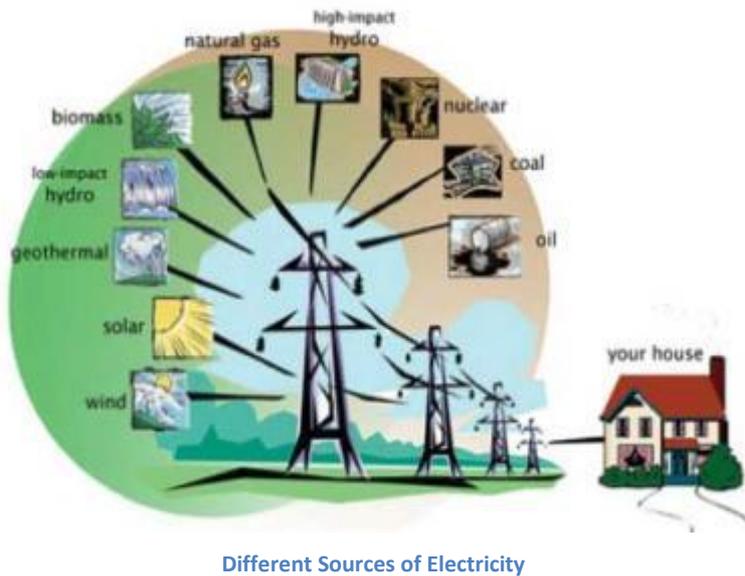
In the factory, doing an energy audit increases awareness of energy issues among plant personnel, making them more knowledgeable about proper practices that will make them more productive. An energy audit in effect gauges the energy efficiency of your plant against “best practices”. When used as a “baseline” for tracking yearly progress against targets, an energy audit becomes the best first step towards saving money in the production plant.

Audit activities, in general order, include:

- Identify all energy systems
- Evaluate the condition of the systems
- Analyze the impact of improvements to those systems
- Write up an energy audit report

RENEWABLE ENERGY

What is Renewable Energy and why electricity generated from RE sources are considered to be clean?



Source:

www.teachengineering.org/view_activity.php?url=collection/cub_/activities/cub_energy2/cub_energy2_lesson04_activity5.xml

Renewable sources are those that replenish itself naturally after use. For example, take the case of solar power. Electricity generated from solar energy does not reduce the energy available from sun. If we take fossil fuel for example, the availability of coal is limited. If we apply the simple law of economics this means that excessive use of coal will lead to a shortage in its supply and hence an increase in its price. Since diesel and kerosene are also fossil fuels the same rule applies for them as well.

What are the renewable sources from which electricity is generated?

- Solar
- Wind
- Biogas
- Biomass
- Tidal

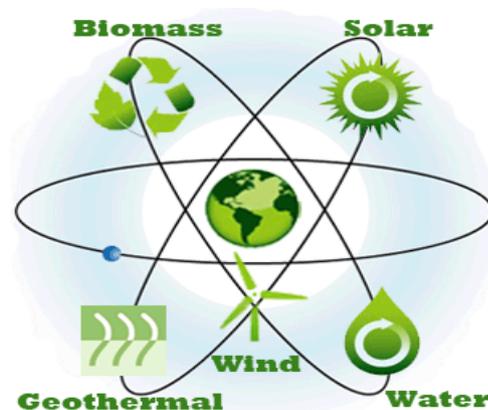


Figure 1. Different Sources of Renewable Energy

Source: <http://defineterms.com/essays/renewable-sources-of-energy-renewable-sources-of-energy/>

What are the available technologies that use solar energy, what are their prices and what government subsidy is available?

Individual Equipments							
Item	Price Range	Details/queries about performance	Pay-back period	Lifespan	Warranty/	Government Subsidy	
Solar Lantern	1500 – 3000	LED – 100-150 lumen. CFL – 150 – 300 lumen	1 year	2 years	6m – 1yr	No	
Solar lamp	650 - 2000	LED – 30 – 100 lumen	1 year	2 – 5 years	1yr	No	
Solar Mobile/camera/other equipments Battery Charger	500 - 2000	Charging directly through panel or through battery. Available in different sizes			1 yr	No	
Solar Fan	800 - 1500	12W - 18W		2-4 years	6 months	comes along with solar home system	
Solar Water Heater	16000 above	Temperature - 60-70 degrees	2.5 yrs	10 yrs	1 yr	Rs. 50/litre	
Solar pumpset		Available in different sizes. However, this has not been successful				Subsidy available – different schemes	
Home Power Systems							
Solar Home Power system DC	10000 above	Run time in hours	2-3 yrs	10 yrs	5 yrs	30 - 40%	
Solar run Home Power System AC/ solar inverter based system	50000 above	Capacity 200W and above. Runs current loads and appliances	3-5 yrs	10 yrs	5 yrs	30%	

Source: Information received from ONergy, a private organisation involved in manufacturing and marketing of solar equipment's

What other RE technologies available at consumers end?



Solar Technologies



Biogas & Biomass Plant

Source: <http://ningping.en.made-in-china.com/product/UMqmSupcJJYX/China-Biomass-Gasification-Gas-Engine-Generator.html>

What other RE technologies is available at consumers end?

Name of the system	System Description	Tentative Cost	Tentative subsidy per system
Bio Gas plant	1 cu.mtr. plant	Rs 10,000 – 12,0000	Rs 4,000/-
Bio Gas plant	2 cu.mtr. plant	Rs 20,000 – 24,0000 for areas in Darjeeling and Sunderbans. Rs 16,000 – 20,000 for areas other than Darjeeling and Sunderbans	Rs 10,000 for areas in Darjeeling and Sunderbans and Rs 8,000 for areas other than Darjeeling and Sunderbans

Source: Information received from WBREDA

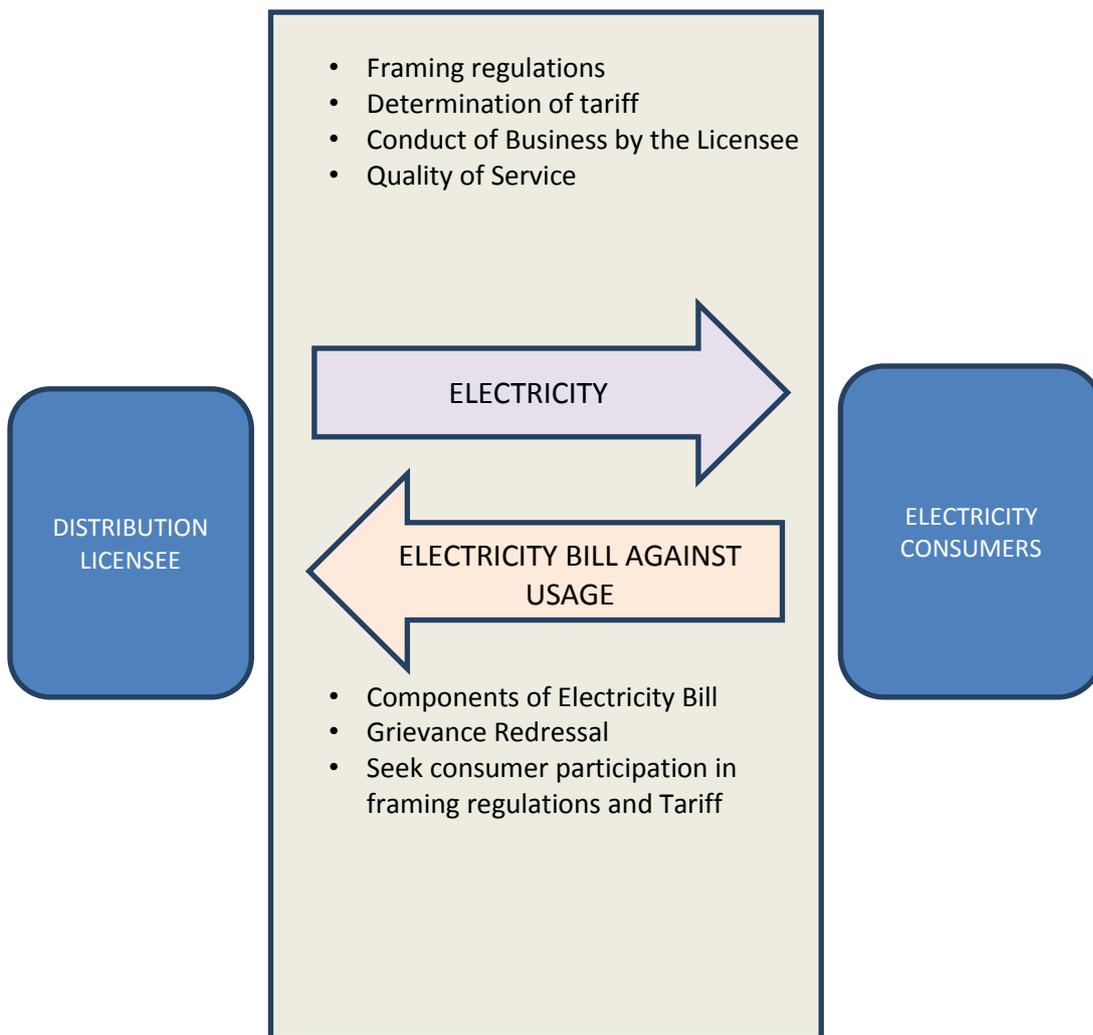
REGULATORY FRAMEWORK

What is meant by Regulation?

A rule designed to control the conduct of those to whom it applies. For example, there exist a number of regulations that guide conduct of business by the licensee and also protect consumer rights.

Who frame the regulations?

Regulatory agencies in the respective sectors frame regulations. For example, West Bengal Electricity Regulatory Commission (WBERC) frames regulation for the electricity sector; Telecom Regulatory Authority of India (TRAI) frames regulation for the telecommunication sector.



Role of WBERC

Who is the regulatory agency for the electricity sector?

West Bengal Electricity Regulatory Commission (WBERC) is the regulatory agency for the electricity sector in West Bengal and guided by the Central Electricity Regulatory Commission (CERC) at the Centre.

How are regulations in the electricity sector prepared?

Step I: WBERC frame draft regulations and place it on their website for comments. WBERC also publish this information in local *dailies*.

Step II: Interested people can then go through those regulations and provide their comments. Written comments had to be sent to WBERC before the last date of receipt of application.

Step III: WBERC go through the comments. Based on the merit of comments WBERC decides whether to accept those or not.

Step IV: Based on comments revisions are done in the draft regulations and the final one is then published.

How can individual consumers / CSOs participate in the regulatory process?

Individual consumer and/or CSOs can participate in the regulatory process in the following two cases:

- a) When WBERC seek suggestions from the consumers on draft regulations
- b) When WBERC seek comments from consumers on the draft tariff petitions

In both cases consumers or CSOs can send their written comments /suggestions directly to WBERC.

What is the process of determining electricity tariff?

Step I: Utility service provider (viz. WBSSEDCL, CESC, DPSC etc.) submit tariff petition to WBERC

Step II: WBERC put it on their website for comments. WBERC also publish this information in local news dailies

Step III: Interested people can then go through the petition and provide their comments. Only Written comments had to be sent to WBERC before the specified date

Step IV: WBERC go through the comments. Based on the merit of the comments WBERC decides whether to accept those comments or not

Step V: Based on the comments revisions are done in the draft regulations and the final one is then published

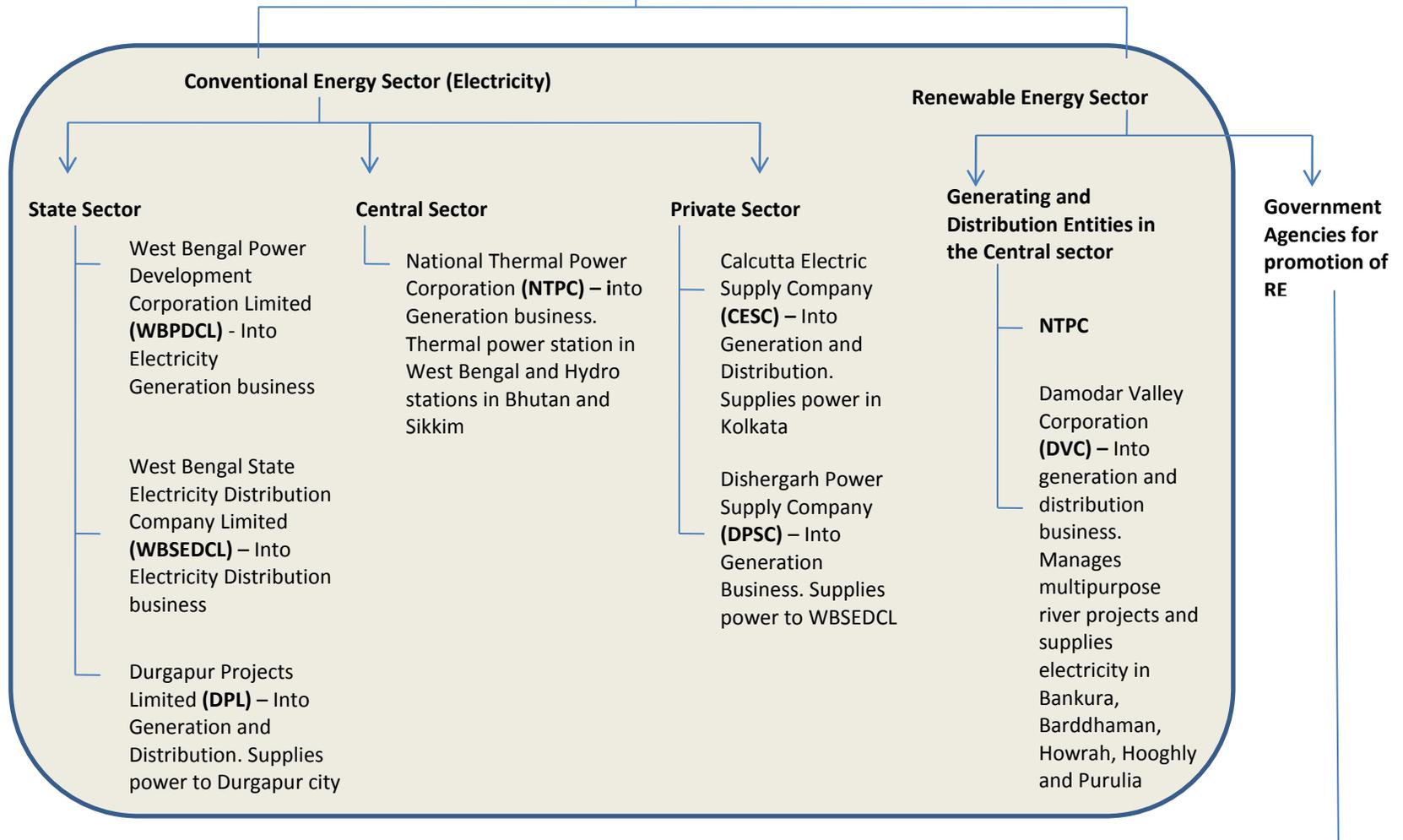
Role and Responsibility of CSOs?

- Participate in the regulatory process
- Report power theft
- Use and popularise use of RE and EE technologies
- Generate awareness about the benefits of using RE and EE technologies and hence facilitate greater uptake of RE and EE

**Department of Power and Non Conventional Energy
Sources, Government of West Bengal**

West Bengal Electricity Regulatory commission

- Issues Regulations to promote fair business in the electricity sector
- Protect Consumer Interest
- Issue tariff



West Bengal Renewable Energy Development Agency (**WBREDA**) – established in 1993 it has a mandate to promote Renewable Energy technologies and create an environment conducive to their commercialisation through innovative projects.

West Bengal Green Energy Development Corporation Ltd. (**WBGEDCL**) – to promote different grid connected renewable energy based power projects through private sector and also to ensure investment of private sector in Renewable Energy system manufacturing.

GRIEVANCE REDRESSAL

Consumer's Rights

- Right to Safety
- Right to be Informed
- Right to Choose
- Right to be Heard
- Right to Seek Redressal
- Right to Consumer Education
- Right to Basic Needs
- Right to healthy environment

Grievance Redressal Mechanism for Electricity Consumers:

Step I: An aggrieved consumer has to submit a written complaint to the station manager in the local office. The consumer may also register the complaint using toll free numbers provided by the service provider. In case the consumer is submitting a written complaint he/she should collect a received copy of the complaint letter. In case consumer is complaining using the toll free number then he/she should always keep the docket number for future reference.

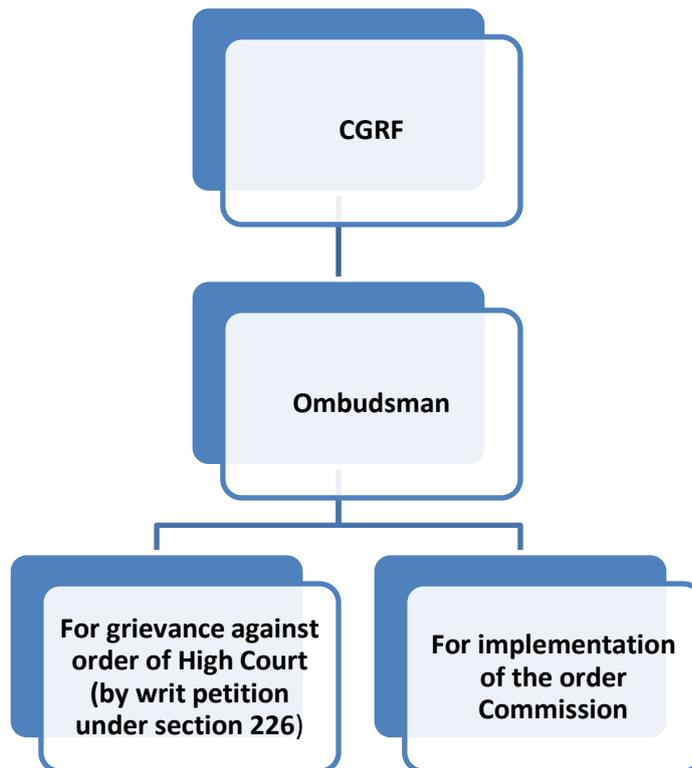
Step II: In case the consumer's grievance is not redressed within the time stipulated in the Regulation 27, the consumer should submit a written complaint (along with the received copy of the previous complain) and all relevant documents to the Consumer Grievance Redressal Officer (CGRO) at the district/zonal/central office of the service provider. The CGRO will acknowledge receipt of documents within seven days of receiving the same. CGRO will look into the matter and give his decision within 21 days (if no technical inspection is required) or 45 days (if technical inspection is required) of receiving the complaint.

Step III: In case the consumer is not satisfied with the decision of CGRO then he/she needs to write to the Ombudsman (appointed by WBERC) explaining details of the complaint and submitting all relevant documents including a copy of CGROs decision. In case the consumer is not satisfied with CGROs decision then he/she should write to the Ombudsman within 60 days of getting decision from the CGRO. In case the consumer has not received any decision from the CGRO then he/she should write to the Ombudsman within 30 days of writing to the CGRO.

Nature of complaints to be dealt by CGRF and Ombudsman

- Billing
- Estimate for new connection or extension of load
- Non-release of connection

- Disconnection.
- Reconnection of service
- Meter related complaints
- Interruption in power supply
- Quality of power supply
- Delay in any service from licensee
- Safety related complaints
- Breach of rules and regulations by licensee
- Compensation for nonobservance of SOP



Name and Address of the Ombudsman in the electricity sector:

Office of the Ombudsman
West Bengal Electricity Regulatory Commission
Bikalpa Shakti Bhawan
Block-EP, J-1/10, Sector-V, Electronics Complex
Salt Lake City, Kolkata – 700 091
Telephone: 2357-2416
Telefax: 2357-2415

ADVOCACY

What is Advocacy?

- Advocacy originated from the word *Ad-voca* which means amplifying the voice of those whose voice is not heard.
- Advocacy can also be explained as act of taking up any specific issue with the right person in the right manner to achieve desired results.

What is an advocacy campaign?

An advocacy campaign is a long-term set of activities that includes research, planning, implementing, monitoring, and evaluating advocacy efforts. Alleviating poverty, challenging injustice, or supporting sustainable development etc. are all common themes of advocacy campaigns.

Table 1. KEY STAKEHOLDERS IN THE SOCIETY		
Government Sector (State and Centre)	Private Sector	Civil Society Organisations
<ul style="list-style-type: none"> • People's Representative i.e. Ministers, Sabhapati and Karmadhakya at the Zilla Parishad and Panchayat Samity level, Pradhan at the Gram Panchayat Level etc. • Government Departments viz. Department of Power and Non-Conventional Source, Department of Health and Family Welfare, Department of Telecom, Department of Consumer Affairs etc. • Objective is to maximize welfare of the citizens by adopting appropriate Policies, Acts and Rules. For example - The Energy Conservation Act, 2001 was aimed at promoting energy conservation; The consumer Protection Act in India is aimed at protecting the rights of consumers. 	<ul style="list-style-type: none"> • Private Companies, Multi National Corporations etc, small business etc. • Main objective is the maximize profit and advance private interest 	<ul style="list-style-type: none"> • Individual Citizens / Group of Citizens / Community Based Organisation / Local Clubs / Associations etc. • Main objective is to advance public interest • Not guided by Profit Motive or Political Motive • Independent of the Government or the private agencies

Why do we need advocacy?

- For influencing the power relationship in favor of the marginalized, poor and ordinary people.
- For bridging the gap between policy makers and those we will be benefitted/adversely affected by the policy
- To flag State's obligation to protect and promote the rights of its citizens
- Promoting good governance

When do we need advocacy?

- Policies framed by the government are not always rational. Advocacy will be required to plug in gaps in the existing policies and hence facilitating effective implementation of the policies
- Government machineries do not always reachout to the target stakeholders at the grassroots. Advocacy will be required to ensure reaching out to the right kind of people at the grassroots

- Advocacy is also an effective tool to highlight areas/issues where appropriate policies need to be adopted

Who can do advocacy?

- Individual consumer
- Civil Society Organisation (CSO) / Non-Government Organisation (NGO)
- Communities and Community Based Organisations

What are the requirements of a good advocacy exercise?

- **Engaging with communities** – involving as many community members as possible will help to strengthen advocacy efforts
- **Ensure Legitimacy** – advocacy should be done based on real facts and figures and not on emotional feelings, personal and / or political biases
- **Maintain transparency throughout the advocacy exercise** – community members should be consulted in a transparent manner throughout the advocacy exercise. Progress of the advocacy exercise should be discussed at regular intervals with the communities.
- **Act peacefully** – Any violence, coercion should be avoided while doing advocacy as these acts will only create a distance between the communities and policy makers and will make the process difficult
- **Act Timely** – It is important to undertake advocacy at the right time. It is often seen that organisations undertake advocacy initiative much later when the issue loses significance.

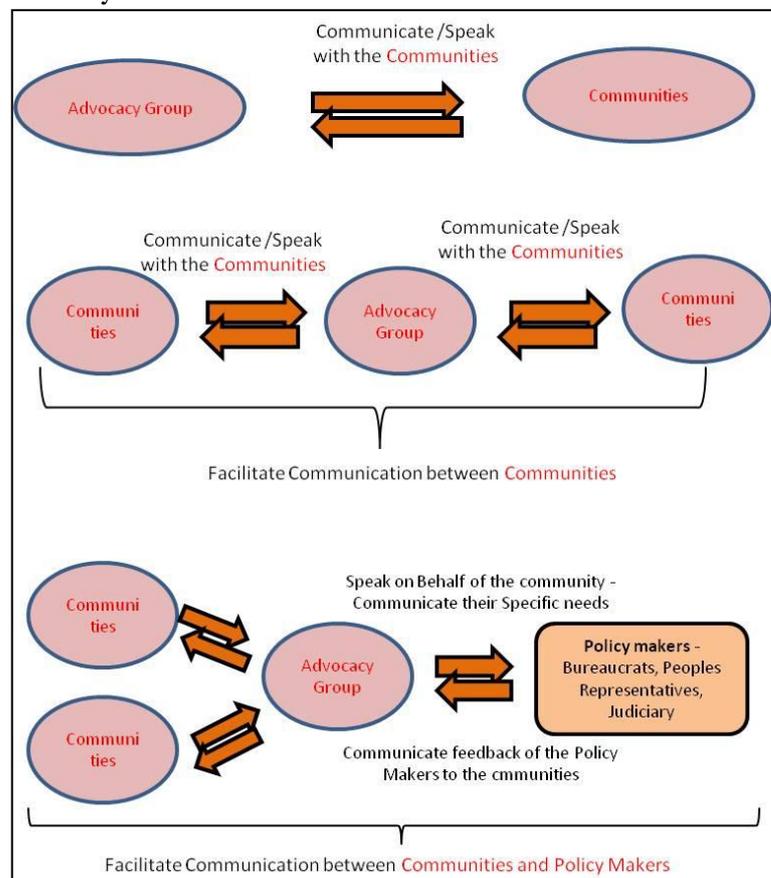


Figure 2: Advocacy and Networking

Where to do advocacy?

This will depend upon the context of the advocacy exercise and scope of the issue which the advocacy exercise is trying to address. Broadly speaking advocacy can be done at following six levels –

- At the Micro/Local level - Ward, Municipality, Village, Gram Panchayat
- At the Block Level
- At the District level
- At the State level

- At the National level
- At the international level

Depending upon what the issue is and who all are the stakeholders involved, advocacy can be done either at any one or all the levels. This will also depend upon the presence of the advocacy group at the levels mentioned above. For example, CUTS does advocacy at all the levels depending upon the issue.

5.7. How to do advocacy - Advocacy Planning Cycle?

Planning is one of the key component of an advocacy initiative. It is important to identify what needs to be done, how it is to be done, by whom and within what time frame. Figure 2 depicts the various stages involved in an advocacy planning cycle.



Figure 3: The Advocacy Planning Cycle

Step 1: Identifying the issues

The first step in any advocacy initiative is to identify the issue on which advocacy needs to be done. Following are some of the requirements of a good advocacy issue –

- The issue should be relevant for the communities both in the short term as well as in the long run
- Communities (including women) should be eager to take up the issue and hence participate in the advocacy initiative
- Addressing the issue should translate into real improvement in the quality of life of the community members
- There should be scope for linking local concerns with global issues
- The issue should be in line with the long term mission and vision of the advocacy group

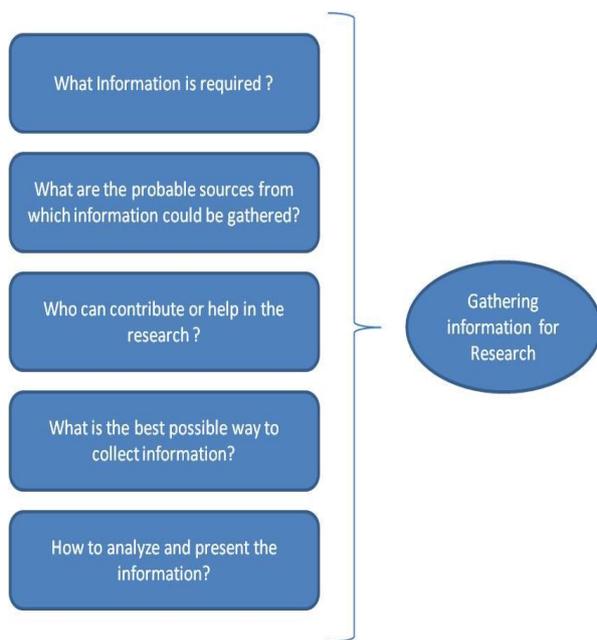


Figure 4: Getting Information is the key to a Good Research building alliances

Step 2: Finding out more about the issue through research

Research is necessary in the advocacy initiatives since–

- It helps building rational arguments in favor of the advocacy issue (giving evidences in favour of the advocacy initiative)
- It helps refining advocacy messages and build credibility to the advocacy initiative
- It helps identify the various stakeholders (government agencies, private etc.) who needs to be involved in the advocacy initiative
- It also helps in identifying CSO networks working on similar issues and thereby assist in

Box 1. Research Tools
<ul style="list-style-type: none"> • Secondary Literature Review • Questionnaire Survey • Focussed Group Discussions • Key Informant Interviews

Box 2. How to present the main findings from the Research
<ul style="list-style-type: none"> • Briefing Paper / Position Paper • Research Report • Advocacy Paper

Box 3. DO's and DON'T's of a Briefing Paper / Position Paper
<p>DO's</p> <ul style="list-style-type: none"> ✓ Using appropriate language for the target audience ✓ Keeping it brief, within 4-5 pages ✓ The community should understand and agree to the information provided and viewpoints expressed ✓ Provide reference to the information given in the paper <p>DON'Ts</p> <ul style="list-style-type: none"> ✗ Try not to distribute any paper that contradicts major objectives of the advocacy exercise ✗ Try not to use abbreviations

- ✘ Try not to use the word “Advocacy”
- ✘ Try not to provide irrelevant information

Step 3: Setting Objectives

After research and analysis it is important to define the key objectives that the advocacy initiative intends to achieve. Use of SMART framework is an effective tool to determine the major objectives of the advocacy initiative (See Box 4).

Box 4. The SMART framework for setting objectives

In the SMART framework an objective should have the following characteristics –

- **SPECIFIC** – What exactly the exercise attempts to achieve?
- **MEASUREABLE** – How will you know that the objectives have been achieved?
- **ACHIEVEABLE** – Whether the objective is at all achievable given the available resources and time?
- **RELEVANT** – Is the objective at all relevant to the communities?
- **TIMEBOUND** – By when the objectives could be attained?

Step 4: Identifying target stakeholders

After setting the major objectives of an advocacy initiative, the next step is to identify the target stakeholders who should be involved / addressed in the advocacy exercise. Broadly such stakeholders can belong to any of the following three categories –

- **Allies** – those who will help in the advocacy initiative
- **Fence Sitters** – those who are neutral and has not arrived a concrete decision whether to be a part of advocacy initiative or not
- **Opponents** – those who are not convinced about the advocacy exercise and will oppose the advocacy initiative

An effective advocacy strategy should look to build one’s own strength by increasing alliances with like minded citizens (and/or organizations) and also by attracting the fence sitters. This should be accompanied by building evidence / reasons in favor of the advocacy initiative (mentioned in Step2).

Box 5. How to identify Key Decision Makers?

In identifying the key decision makers it is important to identify the following –

- ✓ Which government department is dealing with the issue?
- ✓ Which ministry is looking after the portfolio?
- ✓ Who is the minister for the department at the state and central level?
- ✓ Which Karmadhakya is dealing with the portfolio at the District / Block level?
- ✓ Who is the Coordinator for the department at the Gram Panchayat level?
- ✓ Which government/private/non-government agencies are working on the issue?

Box 6. Characteristics of an effective message

- ✓ Should summarise the change you want to bring about
- ✓ Should be short and punchy, just one or two sentences
- ✓ Should be understandable to someone who doesn’t know the issue, and be jargon free
- ✓ Should include the reasons why the change is important
- ✓ Should be memorable

Step 5: Defining the Message

After identifying the main objective of the advocacy initiative and the target audience, the next step is to develop the core message(s) to be communicated to the target audience. It is also equally important to frame the messages according to different category of target audiences and also choose the best possible medium through which such messages should be communicated effectively. For example, the way a message is delivered to the government officials at the state or national level should be more holistic compared to those at the district, block or panchayat level.

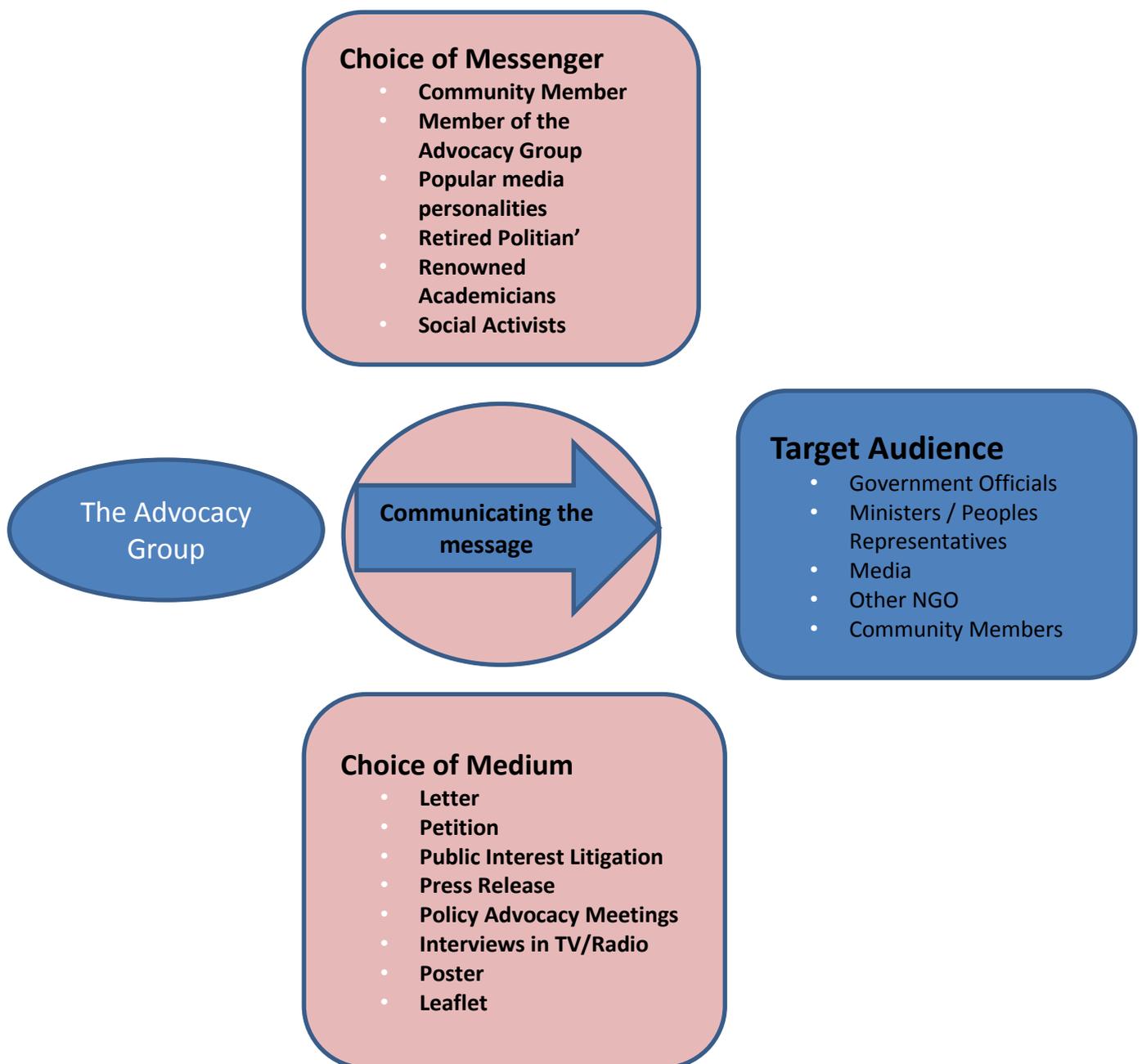


Figure 6: Aspects of Effectively Communicating the core message

Step 6: Assessing Resources

Before starting the advocacy exercise it is important to do an assessment of resources available with the advocacy group. This involves looking at the following aspects required to undertake the exercise –

- Human Resource – It is important to understand staff strength advocacy group who will be involved in the advocacy campaigns and other activities under the advocacy initiative
- Skill and Expertise of staffs on the advocacy issue – It is crucial to assess quality of the staffs involved in the advocacy initiative. If the organisations own understanding on the issue is not clear then it is advisable to consult experts outside the advocacy group and accordingly chalk out the future roadmap
- Partners – capacity/experience of the partners on similar initiatives will be an advantage for the success of the advocacy initiative
- Relationships – Maintaining good relationship with relevant stakeholders is crucial for any advocacy initiative
- Time – It is necessary to chalk out in advance what timeframe will be required for a successful advocacy campaign
- Financial Resources – Any advocacy campaign will require financial resources. Hence it is important to assess the advocacy group's own financial resources and also identify donors who can support the initiative with financial resources

Step 7: Forging the right alliances

Box 7. Advantages of Alliance and Coalitions
Advantages <ul style="list-style-type: none">• Increase size and coverage of the advocacy initiative• Increase knowledge base of the advocacy group• Bring in new contacts and strengthen the advocacy network• Adds visibility to the advocacy initiative

For an advocacy initiative to be successful it is important to –

- Join hands with similar organisations,
- Like minded citizens,
- Form coalitions

This will ensure greater participation and also wider dissemination. In addition such steps would also ensure sharing of resources among diverse organisations which could be an added advantage to the advocacy initiative.

Box 8. Requirements of a good alliance
<ul style="list-style-type: none">• Consensus on the issue• Sectoral representation and network with policy makers• Previous experience of working on similar issues• Reputation of the allies• Degree of Political biasness

Step 8: Drawing up an advocacy action plan

After identifying the major objectives of the advocacy initiative along with the target audience and the right kind of allies, it is necessary to translate advocacy into practice. This however requires a concrete action plan to be developed. An action plan can look like as presented in Table 2.

Table 2. Preparing Advocacy Action Plan						
Objectives (1)	Target Audience (2)	Activities (3)	Indicators (4)	Timing (5)	Responsibility (6)	Review (7)
<i>Explaining the advocacy action plan</i>						
(1) - A comprehensive action plan should start with an objective for each action undertaken under the advocacy initiative.						
(2) - After identifying the objective it is important to identify the target audience.						
(3) - Appropriate activities need to be chalked out						
(4) - It is important to stick to the timeframe of the advocacy initiative						
(5) - It is important to assign responsibility of an activity to a person from the advocacy group.						
(6) - After each action it is important to review the same and identify critical success factors						
Source: <i>Wateraid, September 2007, The Advocacy Sourcebook</i>						

Step 9: Translating Advocacy into practice

i) Face to face Meeting / Lobbying with Policy Makers: Face to face meeting with decision makers is an effective and one of the popular tools for advocacy. It provides the opportunity to build relationship with policy makers which could prove useful in the future. It is extremely important to prepare well before heading for the meeting (Box 9).

It is useful to write to the policy maker after the meeting thanking him for giving the appointment. It is also important to mention the action points that evolved from the meeting.

Key messages could be delivered using either of the following ways

- A Powerpoint presentation
- A brief (1-2 page) advocacy note

Box 9. Preparing for meetings
<p>Step 1: Know your target - Analyse the target audience</p> <ul style="list-style-type: none"> • Know his/her background • Know his/her limitation and jurisdiction • Know his/her influence in the decision making process <p>Step 2: Focus on your message - Choose your main objective and develop a simple message from it:</p> <ul style="list-style-type: none"> • What you want to achieve? • Why you want to achieve it (the benefits of taking action, and/or the negative effects of doing nothing; evidence for the problem – statistics and anecdotes)? • How you propose to achieve it? • What action you want the decision maker to take? <p>Step 3: Choose the right messenger - Often the messenger is as important as the message. If a friend arranged the meeting, ask them to come to the meeting with you. Or someone directly affected by the issue or problem may be able to ‘personalise’ the issue and get the decision-maker’s attention. Make sure the messenger has appropriate negotiation skills and appropriate attitude to result in a positive outcome.</p> <p>Step 4: Practise - Rehearse your message with colleagues or friends. Ask someone to role-play the meeting, pretending to be the decision-maker, asking difficult questions.</p>

ii) Persuading through Drama: Drama is an effective advocacy method because it can bring a theoretical issue to life, making it emotionally powerful, more interesting, easy to understand and relevant to people's lives. In some situations, a play is more likely to be noticed and memorable than a written report. Drama can address sensitive issues that are difficult to talk about. Performances can be video-taped to share with people in positions of influence who cannot attend a live performance.



iii) Using the Media (Print and electronic media) – Media is the most effective tool to disseminate advocacy messages to a large group of stakeholders. Issuing Press Release or organising Press Conference are some of the effective tools to inform the media about objective of the advocacy initiative and its key messages. This is also called Media Advocacy. One should always prepare oneself for interviews in newspapers, television and radio.

Steps in media advocacy:

- Step I – Know Your Media
 - ✓ What are the issues they work on?
 - ✓ Where do they work i.e. at the state/national/local level?
 - ✓ Who are their target audience?
 - ✓ What language they use?
- Step II – Prepare Media List
- Step III – Develop Contacts with target media houses
 - ✓ Who are the journalists/correspondents who regularly work on the advocacy issue?
 - ✓ What components in the news they look for?
 - ✓ How frequently they write?
- Step IV – Set Advocacy Goals
 - ✓ How to use media as an advocacy tool?
 - ✓ What kind of news to be given?
- Step V – Set Media Goals
- Step VI – Decide Target Audience
 - ✓ Who will be targeted through the news?
- Step VII – Frame Message
 - ✓ What are the messages to be delivered through the media?
- Step VIII – Decide Media Outlets
- Step IX – Implement Plan



© Alexia Lougiaki * www.ClipartOf.com/34864

Figure 5.
<http://www.clipartof.com/portfolio/alexialougiaki/television>

Box 10. DO's and DON'T's for a Press Release

DOs

- Be clear about what you are trying to achieve when using the media in your advocacy work.
- Research the most relevant journalist(s) and send the release directly to them, using the correct contact details.
- Co-ordinate all your media work through one person so that there is one-person for journalists to contact.
- Provide a 24-hour contact phone number on the press release if possible, so that you are contactable at all hours.
- Consult people directly affected by the issue or problem.

DON'T's

- Does not hand write a press release.
- Do not include jargon – if in doubt, explain technical words, abbreviations, initials.
- Do not assume that the journalist knows about your issue – explain the key concepts or attach additional notes.
- Do not to quote someone without their permission.

A press release must clearly answer the following questions (5 Ws and an H)–

- Who is involved?
- What is happening?
- Where is it happening?
- When it is happening?
- Why is it happening?
- How this is happening?

Step 10: Monitoring and Evaluation

This is the last step in the advocacy planning cycle. Monitoring and evaluation should be inherent components of any advocacy initiative. These will not ensure effective implementation of the advocacy exercise but will also help in identifying the areas where the advocacy initiative was successful or where has the advocacy initiative gone wrong. Monitoring and evaluation are two distinct activities (Table 3).

	Monitoring	Evaluation
Timing	Continuous throughout the project	Periodic review at significant point in project progress – end of project, mid point of project, change of phase
Scope	Day to day activities, outputs, indicators of progress and change	Assess overall delivery of outputs and progress towards objectives and goal
Main Participant	Project staff	External evaluators/facilitators, project users, project staff, donors
Process	Regular meetings, interviews – monthly, quarterly reviews etc.	Written report with recommendations for changes to project – presented in workshops to different stakeholders
Source: <i>Wateraid, September 2007, The Advocacy Sourcebook</i>		

5.8. What does the DREC project trying to do?

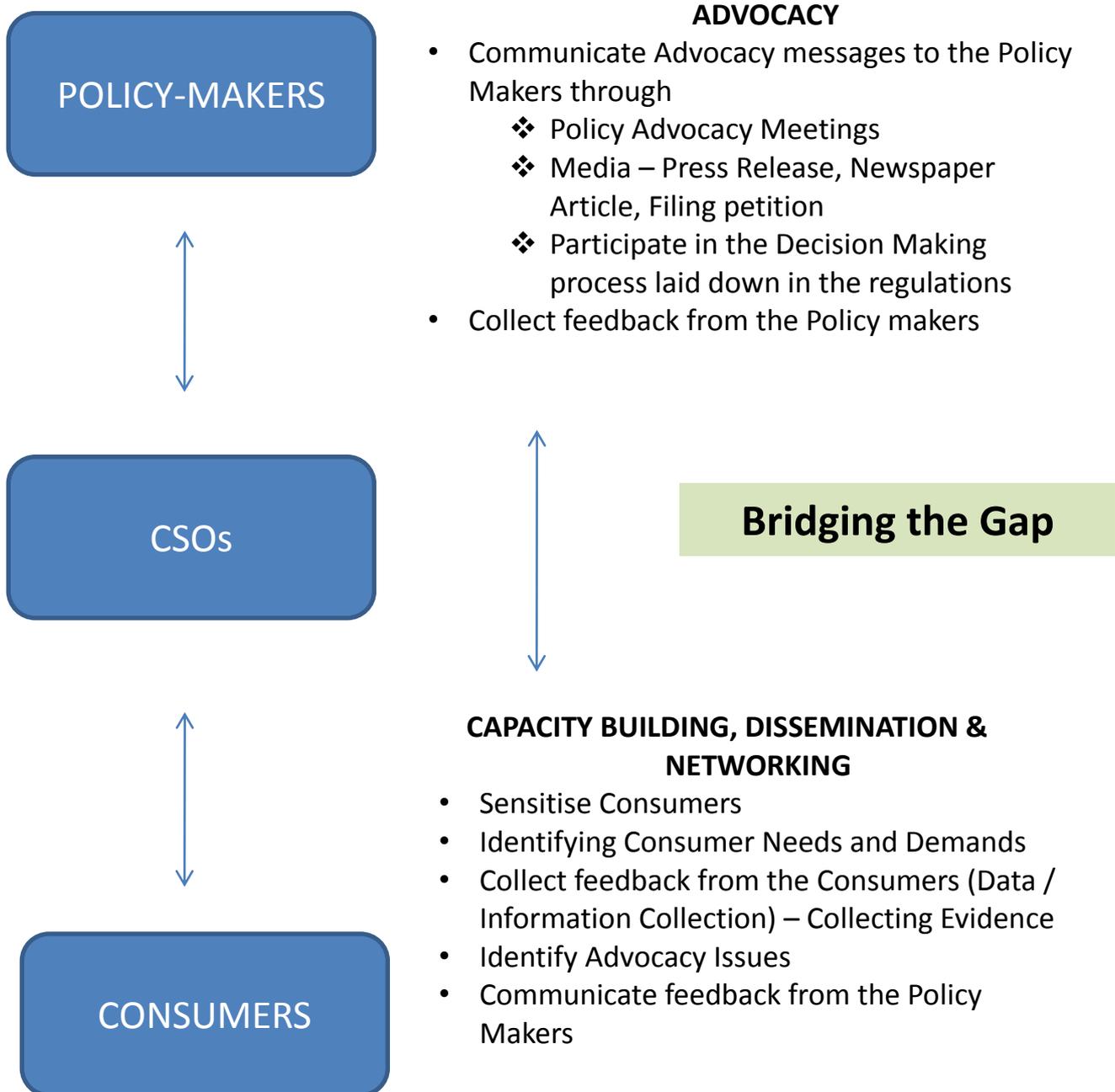


Figure 6: Advocacy Strategy for the DREC project

The DREC project attempts to bridge the gap between consumers and policy makers to facilitate higher uptake of **Renewable Energy (RE)** and **Energy Efficiency (EE)**. It envisages the role of CSOs as the most viable medium to bridge the gap (Figure 7).

5.9. How can CSOs facilitate greater uptake of RE and EE?

At the consumers end -

- Build capacity of the consumers and other CSOs on the need for RE and DSM especially in the context of climate change and the increasing price of conventional sources of energy
- Generate awareness about RE and EE technologies available in the market
- Generate awareness about the monetary benefits available to the consumers by replacing existing technologies with RE and EE technologies
- Document needs and demands of consumers for using RE and EE technologies. For example, lack of after sales service is a major reason why consumers are not eager to use RE technologies. Such problems and evidences need to be gathered and well documented.

At the Policy Makers end –

- Present the need and concerns of consumers for using RE and EE technologies
- Advocate for necessary changes in the existing regulatory structure that will lead to popularizing use of RE and EE technologies. For example, the baseline survey under DREC revealed that 79 percent of the respondents are willing to pay higher for getting access to reliable and clean power. Now if the regulations are not favorable for encouraging development of RE sources then such lacunas need to be presented before the policy makers with appropriate and workable recommendations.

Feedback from the policy makers also needs to be communicated back to the consumers and in this way CSOs can bridge the gap between the consumers and the regulatory agency and facilitate greater uptake of RE and EE.

SOME ENERGY SAVING TIPS

- Switching off electrical appliances when not required will reduce consumption.
- Use tube lights or energy saving lamps, such as CFL. This is applicable for A.C. supplies only.
- Use of electronic chokes with tube lights and electronic regulators with ceiling fans reduces consumption of electricity.
- Frequent opening of refrigerator door should be avoided.
- Keeping TV, Computer etc. on stand-by mode should be avoided because it consumes power in that mode also.
- Clean the lamps, bulbs and its reflectors regularly.
- Use more sunlight. By doing so, you can avoid using electricity to illuminate your home or office during the day.
- Use white or light colours for the walls, ceilings, curtains, drapes and furniture as they help retain more light within the building and therefore, further reduce the cost of lighting.
- Use domestic appliances which conform to ISI standards.
- Iron your clothes and linen at one go. Do not keep the hot iron upright for long.
- Before putting anything in the refrigerator, allow it to cool to room temperature and stack food items inside the refrigerator in such a way so as to allow adequate air circulation.
- Clean the air filter of the air-conditioner regularly. It increases compressor efficiency.