

170. Role of Media in Effective Communication for Energy Conservation: A Case Study of Guwahati City

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Abstract. This paper is aimed to review communication activities of the energy producers and suppliers of Assam for energy conservation. The study also tries to find out the consumers or energy users perception on energy conservation, their media habits. The report aims to discuss that most suitable media for energy conservation, which have maximum reach and impact to make aware and conscious the energy consumers and enhance their energy conservation habits. The paper is presented on the basis of all the data collected through interviews with the selected respondents of Guwahati city and officials of government of Assam agencies related to energy production, supply and conservation.

Keywords: Energy conservation, Awareness, Communication, Media habits, Conservation habit

Introduction

Energy conservation refers to actively reducing the amount of energy used, or making sure it is used as efficiently as possible. Energy means the ability to do something like warming something, moving something and lighting something. Energy conservation is meant to reduce the amount of energy being used. Energy conservation can be achieved through efficient energy use, in which case energy use is decreased while achieving a similar outcome, or reduction in the amount of energy consumed in a process or system or by an organization or society, through economy, elimination of waste and rational use.

Energy conservation has emerging as major issue in the country as the demand is increasing in a very rapid rate, which is also expected to be more than double 2030. There is a continuous gap between demand and supply of energy. Conservation and efficient utilization of energy of resources play a vital role in narrowing the gap between demand and supply of energy. Energy conservation also helps to save precious fossil fuel like coal, gas, oil which is used by the generating organization to generate electricity. Also reduction of use of fossil fuel leads to reduction of emission of harmful to gasses into the atmosphere.

While using energy, a considerable amount of energy is wasted. Therefore, conservation is an extreme necessity in present time reduce wastage and consumption which is possible only making aware and conscious the energy users or consumers. The use of communication strategies and techniques in order to disseminate methods and ways of energy conservation and convince people to adopt an energy saving behaviour has been recognized significantly.

To encourage and promote the efficient use energy, the Government of India (GOI) has enacted the Energy Conservation Act 2001 ('EC Act') and has established the Bureau of Energy Efficiency (BEE) in the Ministry of Power as the Nodal Central Government agency responsible for spearheading the improvement of energy efficiency through a combination of regulatory and promotional programmes. The Act recognizes the need for a strong and vigorous decentralized approach at the state level and provides for the establishment of state energy conservation agencies to plan and execute these programmes. It is a long and arduous strategic task to keep promoting energy conservation in the course of the country's economic and social development.

What is Energy Conservation

"Energy conservation" can mean a variety of things; the most common meanings are:

- using less energy in a particular application
- finding the ways to purchase particular forms of energy at lower cost. This is usually accomplished by negotiating
 - with energy providers or by using energy under less costly conditions.
- shifting to different energy sources of lower price
- using "free" or "renewable" energy sources
- conserving water and materials, as well as energy sources. (Donald R. Wulfinghoff)

Why Conservation Energy Requires

- People uses energy faster than it can be produced. Coal, oil and natural gas - the most utilized sources take thousands of years for formation.
- Energy resources are limited. India has approximately 1% of world’s energy resources but it has 16% of world population.
- Most of the energy sources cannot be reused and renewed. Non renewable energy sources constitute 80% of the fuel use. It is said that the energy resources may last only for another 40 years or so.
- The citizen save the country a lot of money when they save energy. About 75 percent of the country’s crude oil needs are met from imports which would cost about Rs 1,50,000 crores a year.
- Energy saved is energy generated. When a person saves one unit of energy, it is equivalent to 2 units of energy produced
- Saving energy may reduce pollution. Energy production and use account to large proportion of air pollution and more than 83 percent of greenhouse gas emissions
- It is a duty to conserve today for tomorrow’s use. An old Indian saying indicates “The earth, water and the air are not a gift to us from our parents but a loan from our children”. (Source: Integrated Energy Policy Report2006, Planning Commission, GoI)

Power Scenario of Assam

Electricity consumption per capita in Assam is one of the lowest in the country. Assam accounted for only a small fraction i.e. 0.16 per cent of the total generation of electricity in the country during 2000-2001. On the contrary, consumption of power in the state has been increasing in the recent years. The average per capita consumption of electricity in the state was 120 Kwh in 2000-2001 and 140 Kwh in 2001-2002. (Source: ASEB)

Table 1. Sale of Electricity by Type of Consumers in Assam (In MKWP)

Type of consumption 2001-2002	1999-2000	2000-2001
Domestic 569.31	516.59	540.80
Commercial 164.06	150.63	155.84
Industrial (Total) 375.86	263.11	306.73
Low & medium voltage 24.36	18.75	23.14
High voltage 351.50	244.36	283.59
Public lighting 4.63	4.45	4.39
General purposes 28.32	22.95	26.89
Irrigation 9.49	10.34	9.01
Public water works 29.46	26.86	27.98
Tea garden 294.71	267.90	279.94
Bulk supply in the state 207.14	236.86	251.29
Total unit sold to ultimate consumers	1499.7	1602.87

Source: ASEB

Assam has about 87% of the State’s population living in rural areas. Out of a total number of more than

26000 villages in the State, 70% have been electrified. A large number of households in the State do not have electricity and use kerosene for lighting. Even for those areas, which are electrified, there is a tremendous shortage of power supply. Thus it is not uncommon for these areas to have 10 – 15 hours of blackouts and brownouts every day. As per 2001 census 87.09% of the total population of Assam live in 26,247 villages. As on March 31, 2006, 21,586 villages have been electrified through conventional grid by Assam State Electricity Board (ASEB). Thus the percentage of total villages electrified so far is about 82%. However, only 16.54% of the total households in these electrified villages have electricity connection. Thus while 83.46% of households in the already electrified 21,586 villages is still deprived of electricity, 4661 villages are still to see the light of electricity. (Source: ASEB)

The Study

Communication plays a central role in shaping people's understanding of the natural world and the role of humans therein. Such understandings, in turn, influence the way they act and their support for, or opposition to, specific policies. The media is a central arena for amplifying energy conservation issues and can influence the course of policy and the common masses.

The study is to explore the role of media in energy conservation especially in Guwahati city. Energy is more than just a commodity. It's a privilege. Most of the people don't realize that majority of the energy they use comes from non-renewable sources which consistently pollute air and water; in doing so they pollute themselves. With that being said, there are ways in which they can contribute personally to energy conservation and a more eco-friendly society. Some of the most convenient ways to conserve energy include: turning off lights when not in use, replacing traditional light bulbs with fluorescent ones, turning off power supply/unplugging electronics not being used, and regularly replacing home air conditioning filters etc. Energy conservation is not a one person job. However, just one person doing their part has potential to influence big change. Every person of the society has a duty to do their parts: as individuals and as a community to influence local and government change thus offering great hope for a healthier future.

Objectives of the Study

1. To comprehend the types of stakeholders should be involved in the communication process.
2. To analyze and the desired change in behavior.
3. To identify the constraints in communication with the citizen
4. To study which media of communication would be most effective for energy conservation
5. How will the communication process be monitored and evaluated?

Methodology

The present study was conducted by using mixed approach, combining quantitative information with the qualitative research methodologies. Structured interviews were conducted with the randomly selected household in

15 wards under the Guwahati Municipal Corporation area. Listing and review of existing IEC material were done in terms of media and messages used distribution/delivery, responsibilities and modalities of preparing the material etc. The field survey was conducted in September-October 2010.

Description of the Study Area

Guwahati is the largest city in the North-Eastern Region which is among the first 100 fastest growing city of the world and 5th fastest growing among Indian cities. Guwahati is recognized to be the most critical city in the Northeast India. The city has a well-developed connectivity with the rest of the country and acts as the gateway to the entire North Eastern India. Hence, the development of the city is not only critical to the state of Assam but also to the entire Northeast. It is the largest commercial, industrial and educational center of the N-E region. Given the criticality of the city to the entire region, it is quite evident that population of the city would continue to grow rapidly in the future. The total population covered under the Guwahati Metropolitan Area as per 2001 census is 8,90,773.

Limitations

Like many other research works and techniques, this study also have got some inherent limitations although not affecting much to the final output to any significant level.

Some of the limitations are:-

- Media role in communicating for energy conservation being a vast area of study, within a shorter time all issues related to this are not possible to investigate, however maximum care has been taken to cover most of the important issues.
- The survey restricted among the household consumers and vehicle users; not the industrial sectors, builders and other sectors.

Selection of Respondents and Sample Covered

- (i) Selection of government officials: The concerned official from the headquarter of Assam State Electricity Board (ASEB) and Assam State Designated Agency (asda) and Assam Energy Development Agency have been selected for studying their communication initiatives in energy conservation.

- (ii) Energy users/consumers: The structured questionnaire was administered amongst 125 respondents. The survey covered 80 males and 45 females in 15 wards of Guwahati Municipal Corporation areas. Majority of the respondents belonged to the literate category, except in case which are belongs to slam areas of the city. The respondents include homemakers, government servants, businessman, labors and drivers of public vehicles. More than 50 per cent of the respondents from all wards fall into income category of above Rs. 25,000 per month. 70% respondents have possesses vehicle in their family.

Findings of the Study

- Respondents' knowledge about energy conservation is not perfect.
- Respondents in the study areas are aware about the monetary losses due to their careless uses of electricity or LPG. However they are not informed about other relevant issues like pollution or other information that most of the fuels of the country are imported. They are also less interested about the issues like climate change or harmful effect of their household appliances at Ozone layer etc.
- More than 80% of the respondents from all the study areas have mentioned about the enhanced expenditure for installation of CFL bulb.
- Most of the household head informed that he is aware about the issue, however the same are not practices by their family members at their home though he discusses on the issue with the family members.
- The drivers who are also respondents of the survey mentioned that though they are aware about the fuel losses but never calculated that how much it looses in a month or in a year. They are never approached by anybody about the precaution of burning fuels at traffic signals or at the bus stand.
- The respondents are also blame governmental agencies for not following the energy conservation norms and office employees for careless uses of lights, fans, ACs and governmental vehicles.
- The official of ASEB has mentioned that the private company offices in the city are careless about the conservation of electricity as their bills are being paid by the corporate head office out side the state.
- The hotel owners who are also selected as respondent mentioned that consciousness is important among the general people as everything can't be controlled by enacting laws. They mentioned that most of the customers keep on the switches lights, fans, ACs etc. when that are not in use.
- The respondents (35%) mentioned about the high cost of the equipments uses in production of energy from renewable sources and poor after sales services for maintenances
- The majority of the respondents (60%) express their willingness to know more about the technology being utilized in production of energy from the renewable energy sources.
- On government initiatives, majority of the respondents mentioned that government action didn't touches the common masses; their activities restricted in organizing seminars at star hotels, competition in the aristocrat schools, clubs etc. Most of the literatures are in English, which are also information giving rather then persuasive.
- Respondents also stress upon the involvements of Non Governmental Organisations and renowned persons who can endorse messages to attract the common masses.

Media habits

- In most of the study areas relatives and friends are the major sources about energy conservation
 - Majority of the respondents can't recall any advertisement or any notice which is appeared in any print or electronic media. Instead they prefer to know more on the subject from the media. They accused print and electronic media for ignoring the very sensitive issues though they pumped some other issues which are not relevant to them.
 - As regard source preference for obtaining on energy conservation the largest portions of the respondents mentioned about TV and community meeting. Few respondents also preferred hand bill/pamphlets/ booklets. Help lines were also mentioned some of the respondents.
 - Some of the respondents (20%) mentioned about the Electricity meter reader, who may be trained to impart tips and techniques on electricity saving methods to the customer at their home.
 - In the study areas, majority of the respondents listen to radio programme for less than one hour a day.
 - The survey reveals that most of the respondents agreed to participate in the energy conservation campaign.
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Discussion

The process of social change starts with a stimulus which may come from outside or from within of a particular society. Media can generate that initiative on the energy conservation issue in the society informing shortage of electricity, finite sources of petroleum product, environmental pollution due to burning of fossil fuel etc. However it is extremely important that before launching any media activity the target audience have to be studied thoroughly.

Using mass media can be counterproductive if the channels used are not audience-appropriate, or if the message being delivered is too emotional, fear arousing, or controversial. Undesirable side effects usually can be avoided through proper formative research, knowledge of the audience, experience in linking media channels to audiences, and message testing. The finding of the survey reveals different choices of media. The study shows that better results or outcomes could be achieved with a combination of participatory media along with the other electronic and print media. After interacting with the respondents it is presumed that following media will be more effective for awareness campaign for energy conservation.

Poster: Posters can be designed to be both eye-catching and convey information. It is a visual which has to catch the attention of the audience and pass on to them a simple message at a glance. This medium may be useful to remind the tips and techniques of energy conservation.

Flash card: A flashcard is a set of cards bearing information, as words or numbers, on either or both sides, used in classroom drills or in private study. One writes a question on a card and an answer overleaf. Flashcards can bear vocabulary, historical dates, formulas or any subject matter that can be learned via a question and answer format. Each card is 'flashed' before the audience accompanied by the verbal commentary. The electricity meter reader can use this medium to convey a message of electricity conservation.

Bulletin board: A bulletin board can be utilized for display of news sheets, announcements, booklets, bulletins, circular letters, newspaper cutting etc. The board may be hanged at city bus stoppages, bus terminal, railway station, airport, shopping mall etc.

Exhibition: This medium is very useful to demonstration of various equipment of production of energy from the renewable energy sources. By seeing people may attract to use the equipment new machines.

Hoarding: Hoarding is another good medium to catch public attention. The medium is useful for any product or service at the introductory stage or repeating something for permanent behaviour change. Hoarding normally placed at busy areas where 'opportunity to see' is more.

Street play: Street play is one of the effective medium to highlight on any current issues like shortage of electricity, finite sources of fuel, rising demand of energy etc.

Folk songs and folk dances: There is really no such genre as folk dancing. Rather, there is a large body of unrelated non-classical dance forms. The only thing common among these dance forms is they are rural origins. This is a good medium for the people of slum areas of the city.

Meeting: Meeting is one of the important tools of communication. Meeting may be organized in every wards of the city. The citizen gets opportunity to ask questions during the interaction period with the resources persons.

Radio: Among the electronic media FM Radio is the popular medium in Guwahati city. The medium may be used to provide tips of energy saving in a regular interval.

Television: Television is also one of the popular medium in the surveyed villages. However the villagers watch TV mostly on entertainment purposes rather than as a medium of education or information. The medium have high potentials in creating awareness on energy conservation.

Newspaper: Newspaper is also a powerful medium creating awareness for energy conservation through the information providers or the extension workers. The vernacular newspapers are more useful in this regard.

Conclusion

With this limited investigation, it may conclude that media can be catalyst promotion of energy conservation and creation an energy conservation habits among the common masses. However it is important that media should carry the need based information applicable to the consumers' day-to-day life. It is also important that the message should be designed as per the receivers' education and fit with their local culture. Media is a good tool for this distribution and sharing of knowledge of tips and techniques for energy conservation which stimulate for growth and development of the energy sectors of the state/country. Media may empowers people to take rational and informed decisions through appropriate knowledge; inculcates necessary skills and optimism; facilitates, stimulates pertinent action through changed mindsets, modified behaviour and reinforces the same.

The government agencies should design and deliver participatory public communication campaign approach which should raise awareness and ease communication barriers among the agencies, institutions, governments departments, NGO/CBOs involved in public awareness campaigns capacity-building efforts in the state.

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