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Management

Consumer choice and Utilization for renewable energy schemes-- A Study in Northern Tripura

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ABSTRACT The Energy has become an important and one of the basic infrastructures for economic development of a country. The oil crisis of the country like India Government has taken decision to use alternative source of energy .Similarly Government of Tripura with the help of Tripura Renewable Energy Development Agency (TREDA) jointly taken initiative for the proper utilization of different renewable energy schemes and continuously awareness programme in different district, subdivision ,blocks and panchyat levels for the benefit of people of Tripura.

The study investigates the choice and utilization level of people using alternative source of energy in comparison to traditional source of energy. The case study is being developed after interaction with the people of Panisagar, Kumarghat and Dharmanagar (North Tripura Dist.) People those who are using alternative source of energy for fulfillment of their daily necessities and also they were asked to fill up their opinion regarding some close ended questions which portrays some key facts regarding their choice and selection and utilization of different schemes of non-conventional energy. A maximum numbers of people are moving to use non-traditional source of energy rather than conventional source of energy.

KEYWORDS : Renewable Energy, consumer choice, utilization, Eco-friendly, oil crisis, Environment pollution.

I. Introduction:

Normally, Energy generation depends on Coal, Gas, Water availablity in the country which is called traditional system of power generation. Now due to crisis of Natural resources Government has taken decision on power generation based on wind, tide, Solar System , Geo thermal , hydel power, bio-mass including farm animal waste as human excrate is known as non –conventional energy, all these sources are called renewable energy and it never create any kind of environmental pollution, In modern time government sector as well as private sector organizations jointly showing interest to different types of renewable energy scheme and their utilization in day to day life in commercial sector like Agriculture irrigation, petrol pump, banking services, transport service, computer service etc as well as educational institutions.

In India non conventional sources of energy consists of those energy sources that are natural, infinite and restorable. For example solar energy, tidel energy wind energy, waves rain, geo-thermal heat ,hydel energy etc. The Ministry of New and Renewable Energy (MNRE) is the nodel industry of the Government of India for all matters related to new and renewable energy. The main objective of the ministry is to establish and implement new and renewable energy for substitute of conventional energy which is required in our country.

In Tripura, TREDA (Tripura Renewable Energy Development) is the state Nodel Agency for implementation of new and renewable energy projects which started their journey in the year 1998 and the activities of TREDA are extended through out the state. The case study has been developed after field survey in Panisagar, Kumarghat and Dharmanagar in North Tripura District and trying to understand about consumer choice and in utilities for renewable energy and particularly consumers choice and selection for schemes of TREDA. It is a fact that TREDA is the main institution in Tripura which is continuously working for utilization of renewable energy schemes in Tripura.

II. NEED OF THE STUDY

The traditional sources of power are in some of the cases may not give the sufficient support to meet the consumers demand. Thus there is a need to search for some alternative sources. The study thus establish itself in the zone of identifying and establishing the consumers choice, selection and it's utilities of different renewable energy schemes.

III. REVIEW OF LITERATURE

Three different psychological schools are the main contributors to the field of energy: behavioural psychology, cognitive psychology, and social psychology (especially attitude-behavior models). Most of these approaches stem from and were focused on the individual perspective of behavioural change.In the meantime more psychologists - involved in evaluating energy-related behaviour - stress the role of participation, social context and peer-to-peer networks as well as macro-level factors contributing to energy use, such as technology, economy or institutions and culture (Abrahamse 2005).

Cultural anthropologists debate that goods have – besides their usefulness – different functions. Among other things, they point out the significance of consumption as non-verbal means of communication: "goods allow communication, they create identity and establish relationships. But also they exclude as well as they include since goods are a mean of distinction" (Bartiaux 2003, p. 1240).

Douglas and Isherwood (1979) suggested as a hypothesis that people buy certain products and types of equipment to increase their 'personal availability' and discussed the time-space structure of household labour. They outlined the division of labour between the sexes and the limitation of the action radius of women suffering from periodicity constraints.

The central model of consumption in market economies has conventionally been that of consumer sovereignty. "It portrays that consumers in the market should be sovereign and that they are indeed sovereign, at least partly. Preconditions for consumer sovereignty are freedom of consumption, on the demand side and (perfect) competition, on the supply side. Given their preferences, consumers can determine which goods they want to purchase at what price" (Hansen and Schrader 1997, p. 447).Dynamic and new approaches of behavioural economics or otherway rational choice already constitute empirical results of psychology. The model of bounded rationality assumes and is backed by empirical data – that individuals have difficulty processing all of the information that is available to them.

Attitude-behaviour models have been dominant in social psychology research for a considerable time, that means . models for energy conservation. A number of such models exists and has evolved in last years.Other models are linked to moral issues of behaviour, norms and values (Stern 2000; Martiskainen 2007). Here, participation and the possibility to gain behavioural competence are variables of behavioural change as Kaplan (2000) discussed within his approach of the "Reasonable Person Model".

There is also an increasing debate about the "social dilemmas" related to energy conservation or/and the use of green electricity: in both cases it is the cumulative impact of the behaviour of all consumers that counts. Meanwhile, psychologists and social psychologists are extending their models beyond the traditional individualistic focus and follow the ideas of a more holistic social-ecological framework (in

detail see Kurz 2002).

Daily "micro-decisions" are part of the process of identity management – a concept that was developed and described mainly by French sociologists in the 1990s (Tap 1998). Kaufmann (Kaufmann 1993 und 1997) differentiates this approach with regard to housework and its share in self-identity construction.

Technical sociologists discuss the concept of lifestyle regarding consumption practices with the implications of context and follow the definition of Giddens (1991, p. 81): "A lifestyle can be defined as a more or less integrated set of practices which an individual embraces, not only because such practices fulfil utilitarian needs, but because they give material form to a particular 'narrative of selfidentity'. (Van Vliet 2002 p. 13) They herewith build on the structuration theory of Giddens (1991) and study different types of behaviour of individuals and the underlying reasons and motives in the context of social practices: "Beliefs, norms and values are therefore not assumed to exist in a 'social vacuum' – but in a context" (Van Vliet 2002, p. 11).

As regards the use of energy, sociologists have stated that people do not actively consume energy, but use energy services to raise their family, or run a business,for example (Wilhite et al 2000). Due to the historically centralized system of supply, users have (had) little involvement and responsibility. Energy use in the home is mostly invisible, and our energy consuming behaviour is based on habits and routines.

Individual choice is influenced by contextual conditions at various levels. There is no "one-dimensional" consumer behaviour – moreover, such behaviour results from "a diverse and interdependent mix of roles as citizen, market participant,employee and as member of a household or family performing coordination,repair, provisioning and purchasing functions" (Wissenschaftlicher Beirat für Verbraucher- und Ernährungspolitik beim BMVEL 2003, p. 21).

IV. OBJECTIVE OF THE STUDY:

- To find out consumer's choice and selection of different renewable energy schemes of the people of Panisagar, Kumarghat and Dharmanagar, North Tripura.
- To know whether a person get Government subsidy and other benefits from "TREDA" and in such a situation whether they are ready to change over to non- tradition source of energy from traditional source.
- To find out utilities of different renewable energy schemes to people for their day to day life.

V. SCOPE AND LIMITATION:

The study is focused on the consumer choice and selection as well as its utilization about the renewable energy . Study was concentrated in Northern Tripura.

VI. RESEARCH METHODOLOGY AND DATA:

The present study is of the nature of exploratory. The exploratory research as the name states intends merely to explore the research questions and does not intend to offer final and conclusive solutions to present problems. The research does not intend to offer final and conclusive solutions to existing problems. In this case study a set of questionnaire has been developed and beneficiaries from the (i) age group of 25 to 35 years , 36 to 45 year and 46 & above. (ii) income level from minimum Rs. 5000/- per months to about Rs. 25000/- per month (iii) both male and female (54% & 46 %) were selected .The study also covered (iv) Usage of power and (v) Consumer choice and utilities of "TREDA" scheme etc. The sources of data are primarily obtained from the field survey.

VII. CASE STUDY AND RESULT:

This section tries to explore the various key finding about people choice ,selection and utilities of different renewable energy scheme as well as people perception of Panisagar, Kumarghat and Dharmanagar of North Tripura District .Power generation is being shown as a sign of optimism in connection of two on going power projects in Polatona and Manarchak. After operation started sometimes it created problem for power generation a number of times due to poor quality of gas supply by ONGC. In the power project it created problem specially mechine disturbance and break down . As a result power project could not fulfill power demand of Tripura State. It is also important to mention that for stable supply of power to household, installation and maintenance of cable, transformers ,electricity posts is necessary. Due to above mentioned problems TREDA has taken initiative to supply energy to 7278 number of households by the renewable means.

The survey was conducted among 50 number of participant in the North district of Tripura. During the month of June- July of 2016 among the participant 54% was male and rest 46% of female . Their income range values from Rs 5000 pm to Rs 25000 pm and above . Age group varies from 25 years to 45 years . Usages of energy for domestic as well as commercial purpose etc.

Among all the participant all are using trading sources of energy (100%) among them 52 % people using traditional system of energy as well as non tradition (renewable energy) .Regarding disturbance of electric line 58% people were facing load shedding, 22% people facing low voltage and 20 % people facing line disturbance. Regarding hour of load shedding it is seen that 50% people faced one hour load shedding, 46 % people faced two hours load shedding and 4% people faced more than two hour load shedding. As the respondents are traditional villagers they do not require more than 100 units of electricity in a month. It has been observed that majority of the users consume electricity for domestic purpose only approx 56%, for Business/ Industries 20 % and others 24 %. It is also seen that in the North Tripura District 92% people's choice is solar lantern and 8% people choice is other schemes. A typical observation has been found during research that power supply is inadequate according to the demand of village people and almost 96% of people agree to this perenial problem North Tripura District. In this context 76% people agree with above mentioned statement ,16% people also strongly agree and 8% people were neutral. It is also observed that in North Tripura District, people preferred different renewable energy scheme due to Government subsidy. Only fixed cost which is very low and Maintenance cost is also very low. 58% of people preferred government scheme due to subsidy and wide awareness programme.

VIII. FINDINGS :

- About 50 beneficiaries prefer using non-traditional sources of energy apart from traditional source of energy.
- The most important reason behind the practice of using non-conventional energy is one time cost (fixed nature) / minimum cost ,involved is its installation. Solar Lanthern is very popular among the beneficiaries.
- The study shows that if Government provides them subsidy at the time of purchase of these machines and their installation charges are also borne by the Government authority, maximum number of people would be attracted towards utilizing those non-conventional energy (efficient machines).
- It is seen from the study participants are very much satisfied with the products which is supplied by "TREDA" and they are very much enthusiastic about more such energy efficient products.
- In this case study it was observed that most of the people of North Tripura District are aware about the usage of non-conventional energy efficient product and are willing to adopt it.
- People of North Tripura district believe that non-conventional energy products are more useful than conventional energy product and also non-conventional energy are ecofriendly as it is pollution free.

IX. CONCLUSION:

This study concludes that renewable energy mission which is contributed by "TREDA" as well as Government through Nagar Panchyat and BDO office is successful. The researchers suggest that total coverage of this programme should reach to every household of rural area. Majority of this people of Tripura specially people belonging to remote and hilly areas are aware about the utility and usage of renewable energy products provided by "TREDA" but more efforts are needed to create awareness in other areas.

In hilly areas where power is not being supplied at present , both "TREDA" and Government should take sufficient care to identify such areas and resolve the issue. Government should ensure power supply to those household on urgent basis by distribution of solar Lantans, installation of bio-gas plant, installation of solar light as well as wind power energy plants .

In future when there would be tremendous demand by the people of Tripura for non conventional energy equipment (i.e Solar light, Solar lantern, Bio-gas plant, Wind energy machine, Solar street light) ,

government must also welcome private (PPP) companies /Agencies to Supply high quality machines. They must take initiative for proper maintainence along with "TREDA" and Nagar panchayet office. It is also expected that government will get program implementation in all uncovered areas. This will really make Tripura clean energy state.

References:

1. Abrahamse, W., L. Steg, C. Vlek, and T. Rothengatter (2005), A review of intervention studies aimed at household energy conservation, Journal of Environmental Psychology 25, 273-291.
2. Bartiaux, F. (2003), A socio-anthropological approach to energy related behaviours and innovations at the household level, ECEEE 2003 Summer Study, St. Raphael.
3. Douglas, M., B. Isherwood (1979), The World of Goods: Towards an Anthropology of Consumption, New York.
4. Hansen, U., U. Schrader (1997), A Modern Model of Consumption for a Sustainable Society,Journal of Consumer Policy 20, 443-468.
5. Kaplan, S. (2000), Human nature and environmentally responsible behaviour, Journal of Social Issues 56 (3): 491-508.
6. Kurz, T. (2002), The Psychology of Environmentally Sustainable Behaviour: Fitting Together Pieces of Puzzles, Analysis of Social Issues and Public Policy 2 (1), 257-278.
7. Tap, P. (1998), Marquer sa différence, in: L'identité, l'individu, le group, la société, J.-C.Ruano-Borbolan (coord.), ed Sciences Humaines, Paris.
8. Van Vliet, B. (2002), Greening the Grid. The Ecological Modernisation of Network-bound Systems. PhD-Thesis Wageningen University.
9. Wilhite, H., E. Shove, L. Lutzenhiser and W. Kempton (2000), The Legacy of Twenty Years of Demand Side Management: We Know More about Individual Behaviour But next to Nothing About Demand, In: E. Jochem, J. Stathaye and D. Bouille (Eds), Society,Behaviour and Climate Change Mitigation, Luwer Academic Press, Dordrect.
10. Wissenschaftlicher Beirat für Verbraucher- und Ernährungspolitik beim BMVEL 2003,Strategische Grundsätze and Leitbilder einer neuen Verbraucherpolitik, Stuttgart-Hohenheim/Berlin.

REPORT/ BOOK

11. Renewable Energy and Energy Efficiency status in India, Report compiled by ICLEI South Asia May 2007.
12. Research Methodology by C.R.Kothari, New Age International Publication, New Delhi.

WEB LINKS:

13. Webside of TREDA (www.treda.nic.in).
14. Webside of Tripura ElectricityPower Corporation Ltd. (www.tsecl.gov.in)
15. Webside of Directorate of Economics & Statistics Planning (Statistics) Department Government Of Tripura (www. destripura.nic.in)