

Rationale behind Developing Awareness Among Electricity Consumers

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Abstract – This paper focuses on the importance of awareness among electricity consumers. Awareness has several positive consequences, realizing the grave need of developing the awareness among electricity consumers. Consumer awareness leads to welfare of consumers and utilities as well. Awareness enables the electricity consumers to protect themselves from exploitation by giving information about their right of services from the suppliers. Awareness also makes the customers realize their duty towards supplier companies. Consequently, utility company provides good services to the company and the customers pay the bills honestly. In this way, high awareness give benefit to both utility and customers. There are many strategies for raising the level of awareness among electricity consumers. Aware consumer also makes other people aware thus spreading the awareness in society resulting into efficient distribution system.

Keywords: *Energy consumer, Consumer awareness, Service sector.*

I. BACKGROUND

Today, electricity has become key driver of sustainable growth of economy especially for a country like India which is a developing country. For sustainable development in this period of industrial growth, availability of both, i.e., reliable quantity and reliable quality of electricity supplied matter a lot. For this type of electricity supply services, smart and advanced distribution networks are being used which have the mechanisms of detecting any anomalies in the quality of energy [21-31]. This is the consequence of increasing awareness among electricity consumers about their rights. Today, consumers know about what they deserve in lieu of the money spent. Thus, consumer awareness brings the sustainable development of the people and country and demands the better supply and utilization of electricity [6]. In earlier times when distribution sector was in hands of SEBs, the energy consumers' awareness was given least attention due to poor service quality [5]. But after the arrival of power sector reforms which infused competition in the power sector market, it has become one of the sine qua non for the power sector.

Energy saving has become more important now for sustainable growth in the era of scarcity of resources and requires firstly the awareness about energy. Energy awareness enables the consumer realize the total amount of energy consumed in a period of time. Energy consumer should know the why, when, how of the reduction in energy consumption can take place. The consumers' awareness will more likely result into his energy saving behavior. Energy consumer can be domestic consumers, industrial consumers, commercial consumers, or

agricultural consumers depending on the type of load they are using electrical energy for [2]. Domestic consumers are the households in the residential areas and commercial consumers are the small scale industries or companies working in the service sector and having high energy consumption. As per European Commission report (2007), the domestic and commercial energy consumers have large potential to highly contribute to the energy saving. The report says that they have energy saving potential of around 27% and 30% of energy use respectively. The realm of consumer awareness is same for other type of energy consumers also. The fundamentals of consumer awareness and its need have been briefed in next sub-section.

II. NEED OF CONSUMER AWARENESS

Today, servicing industry has become profit-oriented. Every service provider aims to increase his profit as much as possible by hook or crook. It doesn't look for consumer's profit first. All of their strategies are aimed at increasing the sale of their products by ignoring the interests of consumer and exploiting them in many ways like under weighing, misleading the consumers by giving false advertisement, overcharging, selling of adulterated and poor quality goods etc. All these means of dodging followed by the producers/suppliers demands the consumer awareness for the consumers for being safe from all these foil treatments. Another need is of utilities; consumers will not cause any financial losses to the company by not doing electricity theft if they would be aware of its aftermaths [9-12]. Consumer awareness implies to creating the knowledge of their duties and rights among consumers [1].

Different means for spreading consumer awareness are shown in Figure 1 with their effectiveness [3].

Consumers are not being served either with the level of service or the quality of goods which they have right upon [13-20]. Very high price is charged from them that too in lieu of adulterated and low quality goods. This behavior of producers/suppliers can be improved by raising the level of consumer awareness. Different important consequences of consumer awareness which drives the need of developing the consumer awareness are presented below:

a) Consumer satisfaction

Every consumer wants to buy the best quality goods and services with the economical cost. The person gets fully satisfied if and only if the quality of the purchased goods is worthy of the price. Therefore, he must be fully aware of the quality of goods/services so that he can identify the bad quality of services if offered.

b) Knowledge of the proper conduct of services

Consumers get exploited in many ways by the producers and sellers, e.g., in the form of under weighing of products, charging more price than the market price, selling bad quality products etc. Consumer awareness protects them against such type of exploitations.

c) Non-consumption of harmful goods

In the market, there are many products available which should not be consumed by the consumers, e.g. liquor, cigarette, tobacco etc. Still they are consumed in large amount owing to consumer ignorance. So, consumer awareness is necessary to prevent people consume such harmful things.

d) Money saving

People can take right decision to save their money and put a check on extravagancy if and only if they are fully aware of false attractions like sale, free offers, concession etc. Consequently, being aware of such schemes, consumers can save their income and spend economically.

e) Capability of problem solving regarding the products

Generally people get cheated due to their unawareness and lack of information about the rules and regulations. They should be made aware of their rights in case of any discrepancy in the provided services so that they could not be overcharged for the maintenance or return services.

f) Society growth

Consumers make the society and fully aware consumers make the society grow in every manner. Being aware of all the policies and rights, he can take a healthy decision and act irrationally.

All these factors drive the need of spreading consumer awareness from preventing the consumers being exploited from the producers and suppliers.

III. CONSUMER RIGHTS

The consumers have the right of having good commodities and services in lieu of their cost. Consumers are facilitated legally with some laws to protect them from any form of exploitation. These laws have fixed their rights which they can use for being saved against cheating by suppliers and producers. The consumer rights are briefed as below:

a) Right to safety

This right saves the consumers from any safety risk which the producer has ignored during the product check. Producers are bound to obey all the safety rules so that consumers don't get exposed to any risk. For instance, safety valve in pressure cookers should be properly designed and checked before being supplied to the consumers to prevent them from any fatalities. Consumers can use this right against such behavior of producers and suppliers.

b) Right to be informed

Consumers have the right of getting each and every information of the product which they are going to purchase. The information can be regarding the operation of that product or any return or exchange policies etc. Different products have different information printed on them, e.g. batch number, manufacturing date, expiry date, address of manufacturing company, dosage, precautions, directions for usage etc. Consumers should be supplied all these information before delivering the service or product to them.

c) Right to redressal

Consumers have right to redressal in case of any misoperation of the product or any form of exploitation. If the consumer bears any form of loss due to the fault of producers and suppliers, he has right to complaint against them and to get justice in monetary terms. Consumers can utilize their spent money and product in a better way if they are aware of their rights against product grievances [4]. With this right, producer or supplier will have to hear the consumers' complaints and also do the redressal.

d) Right to choose

Consumers are free to choose whatever product they want to buy. They can't be pressurized by the suppliers or producers to select a particular product. Suppliers and producers can't forcefully influence the consumers' choices regarding the product selection. This right allows the consumers to decide about purchasing the auxiliary products with their purchased product.

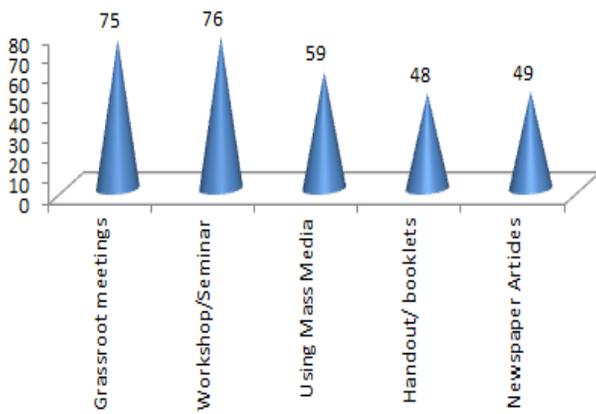


Figure 1. Effectiveness of different means for creating consumer awareness (in %)

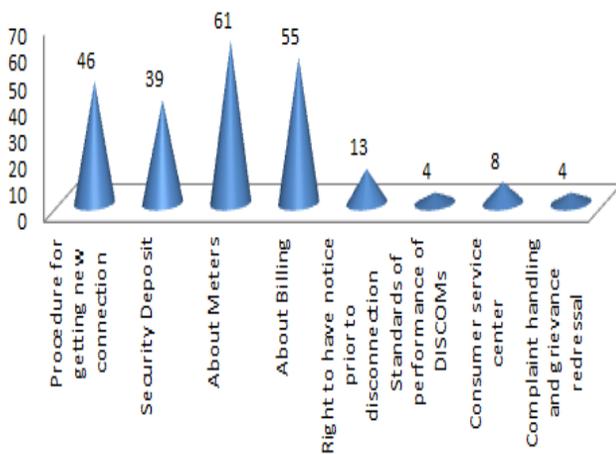


Figure 2. Energy consumer awareness for different parameters (in %)

IV. ENERGY CONSUMERS' AWARENESS

In our developing country, most of the consumers are energy consumers in one or other manner. Energy consumer awareness encompasses the knowledge of different concepts like need of energy saving, their rights as energy consumer for the grievance redressal, ways of energy saving and its results etc [8]. The consumer awareness as per a survey [4] for different parameters is presented in Figure 2. Increasing energy consumers' awareness has become the need of the hour but it doesn't guarantee that it will surely bring the change into the energy consumption behavior. Implementation of energy saving at behavioral level comes from the motivation of consumers and their engagement in such activities rather than spreading consumer awareness [3]. Increasing the consumer awareness level is only a primary step towards energy saving by informing the consumers about importance of energy saving.

As every coin has two sides, consumer engagement in the direction of energy saving can also result to downfall in energy saving. This phenomenon is also popularly known as 'rebound effect' or 'boomerang effect'. Energy consumers' awareness programs motivate consumers to save energy in

case they are consuming more than their peers. If their energy saving behavior reduces their energy consumption more than their peers, then the reverse may also happen that they get motivated to consume more energy. This phenomenon comes under the 'rebound effect' or 'boomerang effect'. Energy consumer awareness involves both information dispatch and feedback receiving. Information is some kind of knowledge that is disbursed regarding the need of energy saving, ways to save energy, their rights and duties as energy consumers etc. Whereas feedback implies the information back provided by the consumers in return of the awareness information given to them [7]. There are certain types of issues to be decided for the effective implementation of consumer awareness.

a) Measures of energy savings

Energy saving can be considered in terms of different parameters like environmental impacts, monetary terms, energy units etc.

b) Frequency of feedback

Feedback from the consumers can be taken at different intervals to judge the efficacy of consumer awareness programs. Intervals for feedback can be yearly, monthly, weekly, daily, hourly basis or in real-time.

c) Representation of feedback

Consumers should be made free to give their feedback in any form like, numeric, graphical, and textual representations.

d) Strategies

Various strategies need to be devised to motivate consumers for energy saving and bringing the energy saving at their behavioral level.

These issues are firstly considered for designing the consumer awareness programs. The Government runs many consumer awareness programs for saving the consumers from the grip of suppliers and producers and making the consumers also contribute to the sustainable growth of society.

V. CONCLUSION

Consumer awareness has become the important concept of the energy market. The consumer awareness is the prerequisite for the consumer empowerment whether the consumer is energy consumer or consuming any other product or services. In this profit-driven world, every producer and supplier is trying to maximize his profit regardless of the consumers' interests. This ignorance of consumers' benefits hampers the development of the society and makes the consumer feel not to contribute for its development, for instance by saving the energy. Consequently, the awareness of energy consumers' regarding their rights, grievance redressal mechanisms, their duties toward the society etc. is the essential task which needs to be undertaken with utmost priority in any service sector.

REFERENCES

- [1] D. J. Usman et al., "Lack of Consumer Awareness: A Major Challenge for Electricity Consumer Protection in Nigeria," *Asian Social Science*, vol. 11, no. 4, pp. 240-251, 2015.
- [2] R. D. Jatain, "Consumer Protection in Electricity Services in India," *International Journal of Engineering and Management Research*, vol. 4, no. 10, pp. 1-11, 2014.
- [3] CUTS Report, "Consumer Empowerment in Electricity Reforms – A Review from South Asia," 2010.
- [4] "Final Report on Survey of Electricity Consumers To Assess the Level of Consumer Awareness on Consumer Rights & Consumer Grievance Redressal Mechanism," *Marketing & Development Research Associates*, Delhi, 2013.
- [5] Policy Research Working Paper, "Transforming Electricity Governance in India: Has India's Power Sector Regulation Enabled Consumers' Power?," *World Bank Group*, 2015.
- [6] S. Saini, R. Singh and Satpal, "Determinant of Electricity Theft – A Case Study of Charkhi-Dadri," *Proceedings in: Sixth International Conference on Advanced Computing & Communication Technologies*, pp. 300-307, 2016.
- [7] CUTS Report, "Consumer Survey Findings and Enhancement Of Social Accountability," *Mercados Energy Markets India Private Limited*, 2010.
- [8] R. Singh, Satpal and S. Saini, "Power Sector Development in Haryana", *International Journal of Science Technology and Management*, vol. 5, pp. 278-285, 2016.
- [9] S. Saini, "Social and behavioral aspects of electricity theft: An explorative review", *International Journal of Research in Economics and Social Sciences*, vol. 7, no. 6, pp. 26-37, 2017.
- [10] S. Saini, "Scenario of Distribution Losses – A Case Study From Haryana", *International Journal of Research in Economics and Social Science*, vol. 8, no. 1, pp. 163-175, 2018.
- [11] S. Saini, "Malpractice of Electricity Theft: A major cause of distribution losses in Haryana," *International Research Journal of Management and Commerce*, vol. 5, no. 1, pp. 284-313, 2018.
- [12] S. Saini, "Expectancy-disconfirmation based assessment of customer Satisfaction with electric utility in Haryana," *International Research Journal of Human Resources and Social Sciences*, vol. 5, no. 1, pp. 320-335, 2018.
- [13] S. Saini, "Electricity Theft – A primary cause of high distribution losses in Indian State", *International Research Journal of Management and Commerce*, vol. 8, no. 1, pp. 163-175, 2018.
- [14] S. Saini, "Service quality of electric utilities in Haryana – A comparison of north and south Haryana", *International Journal of Research in Engineering Application & Management*, Accepted, 2018.
- [15] S. Saini, "Analysis of service quality of power utilities," *International Journal of Research in Engineering Application & Management*, Accepted, 2018.
- [16] S. Saini, "Difference in Customer Expectations and Perceptions towards Electric Utility Company", *National Journal of multidisciplinary research and management*, vol. 3, no. 1, pp. 264-269, 2018.
- [17] S. Saini, "Appraisal of Service Quality in Power Sector of NCR", *National Journal of multidisciplinary research and management*, vol. 3, no. 1, pp. 270-274, 2018.
- [18] S. Saini, "Evolution of Indian Power Sector at a Glance", *National Journal of multidisciplinary research and management*, vol. 3, no. 1, pp. 275-278, 2018.
- [19] S. Saini, R. Singh and Satpal, "Service quality assessment of utility company in Haryana using SERVQUAL model", *Asian Journal of Management*, Accepted, 2018.
- [20] S. Saini, "Influence of gender on service quality perceptions", *International Journal of Economics, Commerce & Business Management - A Peer Review Quarterly Journal*, Accepted, 2018.
- [21] R. K. Beniwal, A. Aggarwal, R. Saini and S. Saini, "Analysis of electricity supply in the distribution network of power sector", *International Journal of Engineering Sciences & Research Technology*, Accepted, 2018.
- [22] R. Kumar, A. Aggarwal, R. K. Beniwal, Sumit, R. Paul and S. Saini, "Review of voltage management in local power generation network", *International Journal of Engineering Sciences & Research Technology*, Accepted, 2018.
- [23] Sumit, R. K. Beniwal, R. Kumar, R. Paul and S. Saini, "Modelling for improved cyber security in Smart distribution system", *International Journal on Future Revolution in Computer Science & Communication Engineering*, vol. 4, no. 2, pp. 56-59, 2018.
- [24] R. Kumar, Sumit, A. Aggarwal, R. Paul, R. Saini and S. Saini, "Complete management of smart distribution system", *International Journal of Engineering Sciences & Research Technology*, Accepted, 2018.
- [25] R. K. Beniwal, A. Aggarwal, R. Saini and S. Saini, "Detection of anomalies in the quality of electricity supply", *International Journal on Future Revolution in Computer Science & Communication Engineering*, vol. 4, no. 2, pp. 6-10, 2018.
- [26] M. K. Saini, R. Dhiman, A. N. Prasad, R. Kumar and S. Saini, "Frequency management strategies for local power generation network", *International Journal on Future Revolution in Computer Science & Communication Engineering*, vol. 4, no. 2, pp. 49-55, 2018.
- [27] R. Kapoor and M. K. Saini, "Detection and tracking of short duration variations of power system disturbances using modified potential function", *International Journal*

- of *Electrical Power and Energy Systems*, vol. 47, pp. 394-401.
- [28] M. K. Saini and R. K. Beniwal, "Optimum fractionally delayed wavelet design for PQ event detection and classification", *International Transactions on Electrical Energy Systems*, vol. 27, no. 10, pp. 1-15.
- [29] S. Dahiya, D. K. Jain, A. Kumar, R. Kapoor and M. Kumar, "Detection and Classification of power quality events using multiwavelets", *International Journal of Energy Technology and Policy*, vol. 5, no. 6, pp. 673-683.
- [30] M. K. Saini and R. K. Beniwal, "Recognition of Multiple PQ issues using Modified EMD and Neural Network Classifier", *Iranian Journal of Electrical and Electronics Engineering*, In Press, 2018.
- [31] R. Kapoor, M. K. Saini and P. Pramod, "Detection of PQ Events Using Demodulation Concepts: A Case Study", *International Journal of Nonlinear Science*, vol. 13, no. 1, pp. 64-77.

