



ELECTRICITY CONSUMERS PROBLEM- A STUDY OF BESCO

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ABSTRACT

Electricity is one of the important essential products, which cannot be stored in any gadgets for longer time. Electricity generation and distribution work take place at the same time. Generated electricity has to travel a considerable distance over transmission and distribution system to reach lakhs of customers to use it at the same time. There are many factors make influence on the reliability of power supply Bangalore Electricity Supply Company (BESCOM) is the power distributor for eight districts of Karnataka. Customers are not satisfied with power supply system due to frequent power cut unfenced transformers, heavy electricity bills, and lack of information to customers. Bangalore in a metropolitan city and famous for Information Technology industries. It requires 24X7 electricity supply to retain the foreign industries and to provide employment opportunities to Bangaloreans. The purpose of this study is to understand customer's problems and factors affecting to customers satisfaction BESCOM.

Keywords: Electricity supply, Consumers Problems, BESCOM

Introduction

Karnataka Power Transmission Corporation Limited (KPTCL) was come into existence in the place of Karnataka Electricity Board (KEB) in the year 1999 and it was considered as a major reform in the power sector. In the next reform process the KPTCL was unbundled in the year 2002. KPTCL takes the responsibility of transmission business and four new companies are formed to distribute power in Karnataka.

BESCOM has all Categories of customers like Domestic consumers, Commercial, Irrigation pump sets, Industrial, Water supply, Public Lighting, Government Department and Others.(Consumers means users of the electricity either for domestic or commercial purpose)

THE BANGALORE ELECTRICITY SUPPLY COMPANY (BESCOM)

Name	The Bangalore Electricity Supply Company
Native Name	BESCOM
Logo with Caption	
Corporate Office	The Bangalore Electricity Supply Company H.O. Bangalore. K.R. Circle Bangalore. Phone No.
Type of Company	Government Company.
Area covered	41092 Sq.KM
Districts	8
Population	20.7 Million
Distribution of Transformer as on 30-9-2014	203803
Total No. of Consumers as on 30-10—2014	92.41 Lakhs
Zonal Office	1. Bangalore Metropolitan Area Zone, Nrupathunga Road, Bangalore 2. Bangalore Rural Area Zone, Nrupathunga Road, Bangalore

	3. Chitradurga Area Zone, Chitradurga
Circles	8
Divisions	27
Subdivisions	419
HT line length	84579 Route Kms
LT line length	160311 Route Kms
Total Employees	Sanctioned 17592 and Working 12047
Total assets	Gross block:5601.20 Crores Net Block:3828.95
Turn over during the Year 2013-14	11778.35Crores
Profitability status	2014 -76 10 31 342(Profit) and 2013-432 76 84 924 (loss)

Source: BESCOM annual report 13-14

BESCOM purchases power from different sources of power generation such as hydel, diesel, biomass, co-generation, wind etc as per government of Karnataka order. It procures power from

- Central Generating Stations like NTPC, NLC, NTECL, Kaiga and MAPS.
- State owned generating station Karnataka Power Corporation Limited- Hydel, Thermal, DG Plant, Solar and Wind
- Independent power producer- Udupi Power company Limited
- Independent power producers non conventional energy sources like wind, biomass, Co-generation And mini hydel

It also purchases power from various short term and medium term contractors to mitigate power shortage problems.

BESCOM sells power to all categories of consumers of metered and unmetered category. Irrigation pump sets and Bhagya Jyothi consumers are unmetered consumers and others are metered consumers. Total distribution loss for the financial year 2013-14 is 13.89% and AT & C loss is assessed at 16.97%

It conducts energy saving awareness programme through advertisement, consumers interaction meeting etc.

Statement of the problem

Consumers satisfaction is very important in the modern marketing system. Electricity is one of the essential services in day-to-day life of the public. Without electricity, we cannot imagine our life in the modern era. However, lack of availability of electricity supply on regular basis made impact of the growth of nation as well as in general. Consumers are not satisfied with electricity supply because of frequent blackout and variations in quality of power supply. The present study is on the impact of power outage on customer satisfaction.

Objectives of the Study

The following are the objectives of the study.

- To understand the reason for BESCOM customer dissatisfaction towards power supply
- To study the reason for power blackouts and irregularity in the power supply
- To give suggestions in respect of power supply and savings usage of electricity to customers.

Significance of the Study

The study is important because now a day's consumers are not satisfied with power supply service made by BESCOM industries. Power cut is more common in the city and consumers are more dependent on power supply for all their regular activities. Because of power cut industrial people incurs loss near to 200 crores daily in Bangalore city (Deccan Herald dated 10-9-2015). This will make impact on the inclusive growth of the state and nation. Therefore present study is concentrated on customer dissatisfaction and its impact on household consumers due to power outage. The study is important because it gives an opportunity to give some suggestions to BESCOM and to customers of BESCOM on electricity service.

Review of literature

- a. **Shalini Mitra & Mark Miller(2004)**

The author in her article “Power Cuts in Delhi: How Much Does it Cost You?” revealed that power cuts are uncomfortable and extremely disruptive to everyday life. Poor electricity supply costs to big business and imposes large costs on the average residents of Delhi.

b. Hunt Allcott, Allan Collard-Wexler, and Stephen D. O’Connellu(2014)

According to authors in their article “How Do Electricity Shortages Affect Productivity? Evidence from India” opined that Endemic blackouts are a particularly salient example of how poor infrastructure might reduce growth in developing economies. Electricity shortages affect all manufacturers and reduce average output by about five percent.

c. Deva P. Seetharam and others (2013)

Authors concluded in the article “Hidden Costs of Power Cuts and Battery Backups” that Indian electricity suppliers induce several hours of power cuts per day that affect a large number of their customers. Many customers use lead-acid battery backups with inverters and/or diesel generators to power their essential loads during those power cuts. The customers also end up incurring additional costs due to aforementioned losses and due to limited lifetimes of batteries and inverters.

d. Hachimenum Nyebuchi Amadi (2015)

Author’s opinion in his article “Impact of Power Outages on Developing countries: Evidence from Rural Households in Niger Delta, Nigeria” that there is relationship between power outages and its impact on the everyday life of the people. He concluded that power outages have severe negative impact on the social and economic lives of the people.

e. Harpuneet Singh, & Harjeet Singh Mangat (2012)

authors in their article “Impact of Unreliable Power on a Paper Mill: A Case Study of Paper Industry of Punjab, India” revealed that the availability of reliable power supply at reasonable cost is important for economic growth and development of a country. Low system reliability leads to increased outages resulting more losses to business sectors.

Conceptual framework of the study

The study has both dependent and independent variables. Customer dissatisfaction is dependent variables and power supply problems are independent variables. Power supply is one of the important services unavoidably accepted by all the people in the society. Uninterrupted power

supply hugely needful for the society. But due to lack of investment in long term power project, improved technology in power distribution, more dependent on hydro electricity power system, and coal based electricity generation(conventional energy generation system) made impact on the regularity in power supply.

Research Methodology

Research design

The research is based on the descriptive method. BESCOM customers details are collected through secondary data to prepare this article.

Analysis and Interpretations

Table-1

Total Energy supplied to BESCOM, Energy sold to customers, and Loss

Year	Energy available (MU)	Energy Sold (MU)	Distribution Loss (%)	AT&C Loss (%)
2006	15321	11613.69	5.15	34.25
2007	18522	14126.45	21.64	26.55
2008	18665	14933.57	5.71	26.15
2009	19566	16310.48	9.22	17.42
2010	20329	17251.6	5.77	17.54
2011	21909	18736.12	8.6	18.54
2012	24584	21029.95	12.24	19.50
2013	26568	22796.00	8.40	19.22
2014	26786	23065.37	1.18	16.97

From the above it is analysed that distribution loss is more in BESCOM Industries. And it is one of the reason for shortage in the supply of electricity to customers of BESCOM.

Table-2

Table showing installation of total solar water heater and energy saved during the financial year 2013-14

Total solar water heater installed	72,945
Total energy saved	106.50 Mega Units

Source: Annual report of BESCOM

Solar system installation is one of the best methods of renewable source of energy. It saves electricity and also facilitates for use of alternative source of energy in future.

Table-3

Category of customers in BESCOM for the Financial Year 2013-14

Sl No.	Category	Customers as on 31-03-2014
1.	Bhagya Jyothi	7,32,030
2.	Domestic lighting and AEH	60,72,901
3.	Commercial lighting	8,24,739
4.	LT power	1,69,289
5.	HT power	10,449
6.	Irrigation pump sets	6,96,446
7.	Street light and others	1,06,814
8.	Temporary powers	2,66,311
9.	Defunct IP installations	48,673
Total		89,24,652

Source :annual report of BESCOM

Domestic lighting customers are more in BESCOM as compared to others category of customer due to more density of population in Bangalore and other districts.

Table-4

Unmetered energy sales during Financial Year 2013-14

Sl. No.	Category	In Mega Units
1	Irrigation Pump Sets	5238.10
2	BJ/KJ	0.02
	Total	5238.12

Unmetered Consumers are using electricity supplied by BESCO at concessional rates. However, there is a need for usage of power saving irrigation pump sets to save the electricity.

Findings

- Total transmission and distribution losses in the state is nearly 19.5% and in BESCO is about 16.97 , which has high transmission and distribution losses as compared to other Indian states. In the world total transmission and distribution loss rate is nearly 5% to 10%
- Unmetered connections to operate pump sets are provided to agricultural consumers to encourage them in agricultural field at concessional rates.
- Demand for energy is growing at double the rate of supply. And it leads to short-time power purchase from other states and unscheduled load shedding.
- Karnataka ESCOMs received B, and B+ annual ratings of state utilities by the Ministry of in March 2013. However, Gujarat distribution companies received A+ ratings and Maharashtra and West Bengal received ratings of A. It shows that Karnataka ESCOMs are not up to the mark in distribution of power.
- Power plants established for power generation in Karnataka is not utilized fully for generation of power. Power plants are operated at an average capacity to generate energy.
- Uncovered wires, unfenced transformers for distribution, old switch for operations etc. reason to death and disability of many citizens due to electrocution.
- A due from its customer and from government is in huge figures.

Conclusion

From the above study, it was found that BESCO is not successful in satisfying its customers to the full extent due to irregularity in the power supply. Power outages will occur minimum once in a day. Electrical equipment will damage due to variations and irregularity in power supply.

Therefore, customers are not satisfied with power supply service in Bangalore city fully. Good communication techniques, regularity in power supply or uninterrupted power supply, scheduled power cuts, innovation of new techniques greatly make influence on customer satisfaction. There is a need for proper plan and systematic changes in power generation, transmission and distribution system is required to reduce the gap between demand and supply of electricity.

Suggestion and Recommendation

- ❖ Generating capacity is not match with the demand for electricity in Karnataka. Those live around us are not much aware about reckless use of electricity. Therefore, one of the best solutions for power shortage is to save the electricity by reducing the consumption of electricity. Saving electricity is easier than generating the power.
- ❖ Power outage in the state is common due to increase in the demand for the energy. But load shedding is to be made in systematic manner and it should be published in advance to the consumers for their knowledge. It will help the consumers to prepare themselves to face the consequences of power cut.
- ❖ Consumers of BESCO are not much aware about BESCO's information, its website address, facilities provided by the company etc. Therefore it is important to distribute BESCO's information on unit cost, rate per unit, meetings proceedings, message on save electricity, electricity problem, helpline number etc. in the printed form along with the electricity bill to each customer on regular monthly basis.
- ❖ There is a information in the web regarding the BESCO staff that "staff is over loaded". Therefore it is essential to reduce staff by absorbing them in other departments of electricity. In addition, it is essential to introduce 100% online payments, campaign on power savings, strengthening of consumer redressal grievances, training the staff to take care of its customers, proper information regarding power outages to customers in advance etc.
- ❖ There is a need of new technological devices for energy conservation, improve the power quality, automation in power distribution, good quality transmission lines in power distribution system to reduce the power leakage.

- ❖ Prepaid meters and checking bills via SMS will give customers satisfaction and perfect information to its customers.
- ❖ However, there is a need for installation of electricity meter to check the total power consumption and efficiency in usage of electricity by agricultural consumers
- ❖ . It is essential to generate the power with more than 90% of its capacity to ensure power generation economically. Up gradation in power plants technologically is must for making improvement in power generation transmission and distribution.
- ❖ Introduction of smart power supply network, communicable metering system, systematic scheduling of power to match the supply and demand, automated billing are required to connect the link between generation of electricity and users of electricity
- ❖ Waste lands are to be identified to establish solar and wind energy plants, which are renewable and not required much maintenance cost to generate electricity.

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