

Case Study: An effort of Faridabad Entrepreneurs for Energy Efficiency

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Abstract

India a fastest emerging economy is heavily dependent on energy for industrial development and growth which will lead to achieve the human development goals. The country's energy supply and demand has been a challenge for all including the Government as it needs to create the opportunities for increased power generation and dissemination or alternative arrangements. Various initiatives by the Government, organizations and industries regarding energy consumption and efficiency have been taken. This case study is about one such initiative by the Faridabad Small Industries Association. Faridabad Small Industries Association (FSIA) has initiated the World Bank Funded project for the Faridabad industries. SIDBI executed the project through FSIA and its SPV IamSME of India.

Keywords: Energy Efficiency, Growth, Faridabad Small Industries Association

Introduction

India is one of the fastest growing economies in the world with a growth rate ranging between 5-9% in the last decade. The country is further targeting for double digit growth rate in the next decade. As the country witnessed slow growth rate from 2008-09 it needs to sustain at least an 8-10% of economic growth rate over the next twenty years to eradicate poverty and meet the human development goals.

Energy is the vital factor of economic growth. Future economic growth rate depends upon the long-term availability of quality energy from the affordable, accessible and secure sources. To deliver sustained growth rate and to meet the requirement of energy of all the citizens, the country needs to increase its primary energy supply, by electricity generation, and capacity

and supply manifolds. According to the reports of World Resources Institute India's energy demand will be approximately double than today in 2030.

India's requirement for energy is growing at a extraordinary rate. The annual electricity generation and consumption in India has increased by approximately 64% in the last decade. As per the Global Environment Facility (GEF), the industry is the largest consumer of energy in the Indian economy; accounting for over 50% of total primary energy consumption in the country. India's commercial energy supply would need to grow from 5.2% to 6.1% per annum while its total primary energy supply would need to grow at 4.3% to 5.1% annually.

As per the report ICLEI South Asia 2007, power generation capacity must be nearly 8,00,000 MW from

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the current capacity of around 1,60,000 MW inclusive of all captive plants by 2031-32. As per the report of Trends in Global energy efficiency 2011, the efficiency of the power sector is decreasing and in 2009 it stood at 30% compared with 36% in 1990. Thus it requires the setting up of more power plants and energy generation. The resources are limited thus the energy saved at any point will contribute to energy generation and it leads to the requirement of energy consumption and energy efficiency.

Energy Efficiency

Energy efficiency is the use of technology that requires less energy to perform the same function. It is often viewed as a resource option like coal, oil or natural gas. It provides additional economic value by preserving the resource base and reducing pollution. The concern towards energy efficiency emerged due to increased carbon emission, poor availability of resources, supply scenario and rising energy prices.

The Government, different companies and industry associations, are aware that increasing energy efficiency would lead to cutting the costs and help in achieving sustainable economic growth, and they establish goals to improve energy productivity.

The importance of energy efficiency in the development of the country was recognized during 1972 in India and in mid 1990's a drive for promoting energy efficiency through technical assistance and training activities aimed at exposing Indian organizations to management and technological advancement in the West took place. The Government of India initiated different energy efficiency related programs, with the help of various laws and regulations. All these regulations have been gradually introduced and implemented effectively in the last two decades.

With reference to the energy efficiency the Indian Government created Petroleum Conservation Research Association (PCRA) in 1978. To promote and accelerate the energy efficiency drive the Government further introduced the Energy conservation act 2001 with target objective of 5% reduction in energy consumption by 2015. This law came into force in March 2002. It was required to implement specific actions and introduction

of consumption labels and performance standards for electrical appliances on large energy consumers and for this Bureau of energy efficiency was created to implement the mentioned provisions.

The mission of Bureau of Energy Efficiency is to develop programs and strategies on self-regulation and market principles to reduce the intensity of energy in the Indian economy. Few other activities of BEE are the development of energy performance labels for refrigerators, motors, air conditioners, and other mass produced equipment, certification of energy managers and auditors, assisting industry in the benchmarking of their energy use, and energy audits of prominent government buildings. BEE is also working closely with different agencies at the state/ central level in order to provide energy efficiency services through public-private partnership.

Different Industry associations in India are playing an important role in energy efficiency. The Federation of Indian Chambers of Commerce and Industry (FICCI) and Confederation of Indian Industry (CII) are involved in capacity building through the organization of training programs, workshops, conferences, exhibitions, poster displays, awards, and field visits.

Efficiency can be increased in energy extraction, conversion, transportation, as well as in consumption. It includes the same level of service provided by alternate means that require less energy. The major areas where energy efficiency can make a substantial impact are mining, electricity generation, electricity transmission, distribution, pumping water, industrial production and processes, transport equipment, mass transport, building design, construction, heating ventilation and air conditioning, lighting and household appliances.

There is a huge potential of Energy saving in all sector in India. The target for energy savings in the 10th Plan is 95,000 Million Units which is about 13% of the estimated demand of 7,19,000 Million Units in the terminal year of the 11th Plan.

About the Study

The article is about energy efficiency drive at Faridabad, industrial hub of auto component manufactures in

Haryana. The objective of this case study is to explore the energy efficiency drive in Faridabad and compile the literature. The drive included the efforts by Faridabad Small Industries Association (FSIA), SIDBI and IamSME of India named industry association. In this World Bank funded project a sample of 200 organizations was covered. For the purpose of study the authors interviewed the representatives from IamSME of India a chapter of FSIA and then compiled the same.

Initiative

Faridabad Small Industries Association has initiated the World Bank Funded project for the Faridabad industries. SIDBI executed the project through FSIA and its SPV IamSME of India.

1. The survey of 400 industries was done for energy efficiency.
2. These industries were selected on the basis of high consumption of electricity
3. Five sectors were chosen
 - i. Light Engineering
 - ii. Dye Casting
 - iii. Casting and forging
 - iv. Plastic and sheet metal
 - v. Miscellaneous
4. Out of those 400 industries only 200 were selected for the detailed survey on the basis of energy efficiency potential.
5. The implementation of energy efficiency measures was done in those 250 units.
6. Energy audit was conducted first and on the basis of audits, required energy efficiency equipment was installed in those units.
7. After installation of energy efficiency equipment at unit these firms could be able to save on an average 10%- 20% on their energy bills.
8. For installation of this equipment financing was facilitated by the FSIA through banks and MSME financing schemes.
9. The payback period of investment was calculated from 1.5 years to 2 years as per the efficiency management equipment cost.
10. Within a year FSIA could be able to get result from these efforts and inspired other industries for adopting the same.

Role of FSIA:

- The funds were provided by the World Bank and execution was the responsibility of SDBI. But spreading awareness among industries for energy efficiency was the main role of FSIA.
- It was done through various workshops conducted by FSIA in Faridabad
- A Cluster Coordination committee was made to monitor the progress of this project at various stages
- Various organizations were involved in this project like PWC (Price Waters & Coppers), DESL, FICCI, BEE etc.
- Finally a project report has been prepared and submitted to the World Bank with the recommendation and workable models, tested in Faridabad.
- Other Industrial Association can adopt this model of working and energy efficiency at local level

Conclusion

There are various agencies which are working to provide companies and governments with the best energy efficiency practices to reduce energy costs and prepare for a low-carbon future. Their experts offer an integrated service package comprising technology, policy, and financing components. These agencies seek fund from the Government or international agencies and conduct the projects in the interest of the society at large, thus the authors suggest here the same kinds of initiatives by the other industries association to increase the pace and accessibility of such programs and contribute in saving energy as it will lead to increased energy with us.

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