

Research Paper

ENERGY CONSERVATION: NEED OF THE HOUR

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INTRODUCTION

Today, we are quite conversant with the wide uses and applications of energy. By burning petrol or diesel, we get energy for vehicular traffic viz.,to run scooters, cars, rails etc. Many sources like,coal, kerosene and gas etc. are in use for cooking food and other domestic activities. Similarly, we also need electrical energy for illumination. In short we live in a world of energy all around us.

Concet of Energy Conservation

Energy conservation means avoidance of waste; but more accurately it means optimal use of available energy resources t achieve high efficiency with low specific energy consumption. The cheapest form of alternative energy id energy saved'

Energy conservation can be broadly defined as bette and more efficient utilization of energy resources. 12 It does not seek to unilaterally curtill economic growth on energy demands but also envisages the effective utilization of energy which in turn influences the large consumption of fuels. In a nutshell, energy conservation does not involve sacrifice of any sort. Rather, it implies a more rational, efficient and effective use of energy in conformity with the laws of thermodynamics. The utilization of energy involves processing and other activites. Processing consists of the following stages:

- **Production of primary forms of energy.**
- Conversion or upgradation of primary forms into usable forms whenever necessary.
- Utilization of energy at the final consuming end.
- Energy conservation is passible at all the above cited stages.

Need of Energy Conservation in India:

The urgent need for energy conservation in India can well be illustrated from the following facts:

- Proved coal reserve in India as on 1 st Jan . 2005 was 92960 million tones only Its estimated demand would be 620 million tones in 2011-12 the coal reserve will finish in 100 to 125 years. Moreover, the quality of Indian coal is not so good therefore we have to import about 25 million tones of coal by spending valuable foreign exchange(1) .
- In the case of petroleum ,the country had 786 million tones of crude oil Indian on Ist Jan 2005. Considering the current rate of crude oil exploration 33981 Thousand tones the oil reserves will be available for 23 years only. Moreover, the import dependency is over 75 percent. If the same trend persists, the International Energy Agency has projected that india's import dependency may increase to as high as 94 percent by 2030. Further we are spending massive foreign exchange of about 1168.06 billion Rupees for the import of petroleums(2) .
- Natural gas reserves have 1101 billion cubic meters

and its present rate of production is 31777 million cubic meters. It means our natural gas reserves will finish within coming 34 years(3).

- On power (electricity) front it is observed that there has been alwaya a shortage of 7 percent to 8 percent between demand and supply. Due to the high demand of electricity there has been shortage of 11 to 12 per cent during recent years.(4)

In order to meet the energy requirement of the country Govt. of india has invested heavy amount for the development of energy sector. It is evident seen from the data of plan allocation in the 4th plan and onwards which has been brought out in the table no.1.2.

Table No.1.2
Plan – Wise Allocation for Energy Sector

Plan	Total Expenditure	Expenditure. On Energy Sector	Percentage of Allotment to Energy Sector to Total
Fourth Plan	15779	2932	18.58
Fifth Plan	39426	7400	18.77
Sixth Plan	109292	30751	28.13
Seventh Plan	218730	61689	28.20
Eighth Plan	434100	115561	26.62
Ninth Plan	941041	219243	23.30
Tenth Plan (outlay)	1525639	403927	26.48

2005.p.902,906,908 and 947.

The table reveals that more and more amount has been spent for the development of energy sector which was always more than 25 percent of total plan expenditure.(5)

Energy Conservation Potential:

A comprehensive study of the potentialities of energy conservation was made in 1981 by the 'Inter-Ministerial Working Group on the Utilization and Conservation of Energy headed by shri D. V. kapoor . One of the important findings of the committee was that there shall be a scope for effecting savings in energy consumption of the order of 20 per cent, 25 per cent, 30 per cent in Transport, Industrial and Agricultural Sectors respectively.(6) The committees Another important was that an investment of Rs.5140 crores in energy conservation measures would obviate an investment of Rs.7980 crores for creation of additional capacity for energy production/ generation which would be required if energy conservation measures are not

adopted. On the other hand, the value of energy saved through energy conservation measures would be around Rs. 3100 crores/per year.

Role of Consumers in Energy Conservation:

The grab of any energy conservation program can not be achieved without the co- operation of consumers. In order to achieve this a nation wide publicity campaign through mass media like news papers, radio television is being launched by government and petroleum conservation research association.

Reference:

- Tata Energy Data Directory and Year Book 2004-05, Teri Press ,The Energy and Resources Institute, New Delhi, 2006, pp. 26,9,20.
- Ibid , pp.55-57
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- Ibid, p. 114
- S. K. Misra and V.K. Puri 'Indian Economy' Himalaya Pubishing House, Mumbai , 2005, pp. 902, 906-908 and 947.
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