CHAPTER II

ANALYSIS OF ENERGY POLICY

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2.1 INTRODUCTION :

Up to the end of the second five year plan period (1956-61) there had not been any systematic policy for energy. The Planning Commission and Government of India were not aware of the magnitude of the problem of the energy could be going to acquire at the end of the present Century. The problem of energy started gaining significance and more attention of the policy makers since the beginning of the Third Five Year Plan (1961-66). So, the plan formulaters became aware of the growing shortage of energy in relation to demand for it. Even though, there are number of sources of energy which are being tapped, the supply demand gap continued to be on the increase. As the growing gap was to be made good by increased imports of crude oil and other crude petroleum products, because of balance of payments problem and increasing quantity of foreign exchange to be spent on imports of oil and other petroleum products, the policy makers diverted their attention to developing domestic sources of energy. If we look at the expenditure incurred on energy during the successive five year plans, will reveal that the actual amounts spent on energy have been increading i.e. the actual amounts spent on energy during the Fourth Plan period amounted Rs.2932 crores, forming 18.6% of the total plan outlay increased to Rs. 30,751 crores forming 28.9% by the end of the Sixth Five Year plan period (1980-85). These figures point to

the policy which was designed to meet the growing demand for energy through developing the alternative sources of energy which are non traditional and known as mechanical sources of energy. The research undertaken by the Central and State Government agencies were directed towards finding out new technical devices through which the traditional sources of energy could be saved to a large extent(1). A number of measures adopted by the Government,have been intended to economise on the existing sources of energy. In the teritary sector of economy like transport and even in the agriculture and industrial sector of the economy a good deal of attention was paid to innovating the technical devices of using the energy i.e. in the agricultural and industrial sector, and the attempt made is going to replace the traditional sources of energy through increasing the supply of hydro-electric power and to some extent the supply of electric power has replaced the use of traditional sources like coal,fuelwood etc.,

2.2 REVIEW OF THE POLICY MEASURES

Since the measures adopted and implemented as a part and parcel of the policy, a brief review of the measures implemented so far at the Government level indicates that,the very first measure was directed to stepping up the production of indigenous oil. For that, Oil and Natural Gas Commission (ONGC)was set-up and the ONGC since its inceptions has been trying to explore

crude oil deposits. It has been successful in discovering the new oil deposits for instance, Bombay High Gas. The Government has been investing in terms of land and mechinery for drilling the oil from newly discovered oil ~~mx~~ sources. In the recent past the ONGC has increased its drilling operations all over the country and Off-shore areas. Besides exploring the new oil fields the measures were designed to conserve the oil resources in transport and industrial sector. In the short run at least 6% saving is possible for improving the condition of vehicles driving practice. In industrial sector too, a saving potential of 12 to 13% is possible. Rise in consumption of oil products will have to be kept with in the manageable limit through appropriate devices such as substitution of oil by coal in industries for furnace and steel raising, electrification of railway traction and replacement of diesel pump sets by electric motors. The FuelPolicy Committee appointed by the Government submitted its report in 1974 on the different aspects of development and exploitation of commercial sources of energy. As per recommendation of the Committee, the Government drew up phased programme of substitution of furnace oil by coal in a number of industries consistent with the availability of coal and transport capacity.

2.3 ELECTRICITY :

The importance of electricity as a source of energy has been increasingly realised by both the policy

decision makers and implementers with the frequent crises of oil that took place after 1972-73. With its variability of application and ease of transport over a long distance, the importance of electricity has increased further. Even though at present, the emphasis is being laid down on nuclear sources of energy, the expansion of power should be based on maximisation of hydro-electric power generation. That is because this source of energy is replenishable.

2.4 ENERGY POLICY AND RURAL SECTOR:

At the cost of repetition, it is to be stated that the demand for energy, owing to increasing population, rapid development activities in industrial and territary sector and also modernisation of human activities has been mounting up in the recent years very fast. In the rural sector 80% of the energy requirement is met from fuel-wood, cowdung and other organic materials. This is reflective of the fact that, the rural population, and particularly agricultural population is cutting down valuable trees and plants to get the fuel wood which is in turn leads to deforestation and burning of cowdung which otherwise can be used as organic manure for agriculture. In short, the natural resources like forest and animal excreta which could have been used for purposes other than fuel for cooking food have been becoming rapidly exhausted. All this underlines the need for the development of new and renewable sources of energy.

Unfortunately, at the national level no determinative policy in regard to the energy in the rural sector had been formulated and implemented until the Sixth Five Year Plan. Only in the Sixth Plan period, the Government of India has formulated the National Project on Biogas Development (for the implementation) keeping in view the objectives and basic approach given in the energy development. The new energy policy in the 7th Five Year Plan focused on technologies which hove been also included in the new 20 point economic programme to give a new sense of urgency to its implementation. As a result technology for converting animal waste into biogas has been developed. Biogas technology is based on the phenomenon of anaerobic decomposition of organic materials in Methane production, which serves as a source of fuel for cooking, lighting, propelling engines etc. the residual organic matter as rich manure containing nutrients in a concentrated form can be used for agriculture. It also improves the environmental health in rural areas and reduces the drudgery of women[2].

Developed as well as developing countries have been adopting biogas technology to meet their energy needs. Among 45 countries in the World which are promoting biogas, China and India are leading. In India, it is estimated that about 300 to 400 million tonnes of animal excreta are available as the basic material for biogas production, besides bulk quantities of plant residual

and organic waste which could also be mixed with animal excreta for the production of gas.

Taking into consideration livestock population in India, there is a good potential for setting-up more than 10 million family size biogas plants, so for a modest number of 1 Million biogas plants is constructed at an approximate cost of Rs.300 crores. However, the question arises what is the pattern of investment on biogas plants of different sizes which are financially and economically viable etc.

In conclusion, the major thrust of energy policy in the near future should be of at propagating and popularising the new technology particularly the biogas and biomass in the rural sector so that the process of deforestation and the wasteful use of cow dung cakes could be held in check.

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REFERENCES:

1. K.C.Khandelwal and S.S.Mahdi 'Biogas Technology' A Practical Hand Book- Volume I Tata McGraw-Hill Publishing Company Ltd., New Delhi, Third Reprint 1989 Table 10.2 Nodal departments in the State Governments or their agencies for biogas, page 62, see Appendix 1.

2. H.D.Manjappa "Economics of Bio-gas Technology in India" published in "The Indian Economic Journal" Volume 37 April-June, 1990 No.4 page 100 to 109.

APPENDIX 1

NODAL DEPARTMENTS IN THE STATE GOVERNMENTS FOR THEIR AGENCIES FOR BIOGAS

TABLE 1.1

NODAL DEPARTMENTS IN STATES

Sr. No.	State	Nodal Departments
1.	Andhra Pradesh	Department of Industry, Commerce and Power, Hyderabad. Non Conventional Energy Development Corporation of Andhra Pradesh, Hyderabad.
2.	Assam	Director of Rural Development, Guwahti.
3.	Bihar	Department of Energy, Patna, Bihar Energy Development Agency, Patna.
4.	Gujarat	Department of Agriculture, Forests and Co-Operation, Gandhinagar. Gujarat State Agro-Industries Corporation Ltd., Ahmedabad.
5.	Haryana.	Director of Agriculture, Haryana Chandigarh.
6.	Himachal Pradesh	Department of Science and Technology, Shimla.
7.	Jammu & Kashmir	Department of Agriculture, Srinagar.
8.	Karnataka	Department of Rural Development and Panchayati Raj, Bangalore.
9.	Kerala	Department of Agriculture, Trivandrum.
10.	Maharashtra	Department of Rural Development, Bombay.
11.	Madhya Pradesh	Department of Agriculture, Bhopal and Madhya Pradesh State Agro-Industries Corporation, Bhopal.
12.	Meghalaya	Department of Agriculture, Shilong.

Sr.No.	State	Nodal Departments
13.	NAGALAND	Department of Industries, Kohima.
14.	Orissa	Department of Science, Technology and Environment, Orissa Renewable Energy Development Agency, Bhubaneshwar.
15.	Pynjab	Director of Agriculture, Punjab, Chandigarh.
16.	Rajasthan	Special Scheme and Integrated Rural Development Department, Jaipur.
17.	Sikkim	Department of New and Renewable Sources of Energy, Gangtok.
18.	Tamilnadu.	Department of Rural Development and Local Administration, Madras.
19.	Tripura	Department of Agriculture, Agartala.
20.	Uttar Pradesh	Department of Rural Development, Lucknow.
21.	West Bengal	Department of Cottage and Small Scale Industries, Calcutta.
22.	Dadara and Nagar-Haveli.	Animal Husbandry-cum-Veterinary Officer, Silvassa.
23.	Delhi	Delhi Energy Development Agency, Delhi.
24.	Goa, Daman & Diu	Director of Agriculture, Panaji.
25.	Pondicherry	Director of Agriculture, Pondicherry.