

**REPORT ON EVALUATION OF THE RURAL  
ELECTRIFICATION PROGRAMME - 1965**

**1. The Study**

This study was undertaken by the Programme Evaluation organisation at the instance of Planning commission. The main focus of the study was to review some of the policy and planning issues, an analysis of costs, returns and relevant techno-economic problems and an assessment of the impact of electricity on the Village people and their economy.

**2. Objectives**

- i) To assess the extent of coverage achieved under the rural electrification programme, the cost involved, the existing pattern of power use and the disparity in use among different areas in the States;
- ii) TO analyse problems hampering better utilisation of power in the rural areas, find out possibilities and ways of minimising seasonal variation in the consumption of energy at the village level and explore potential uses which could result in an improvement in the load; and
- iii) To assess the direct benefits and ascertain the nature of indirect benefits (positive and negative) derived from rural electrification.

**3. Sample Size/Selection of Sample**

15 States were selected for this study. In 11 States, two districts were selected in each one having the maximum percentage of rural places electrified (as on 31-3-1960) and the other where the proportion was more or less equal to the average for the State as a whole. In each of the remaining four States (Assam, J&K, Orissa and Rajasthan) where the coverage of Rural electrification was not at all extensive, only one district having the maximum number of rural places electrified was selected.

Data were collected from 2460 households, spread over 201 villages drawn from 94 section offices in 26 districts. The respondents canvassed included 1345 actual

users of electricity, 311 prospective users i.e. those who had applied for but not received connection, and 804 non-users.

#### 4. Reference Period

The study was conducted in 1961-62 and the data was collected for the years 1951 to 1961-62.

#### 5. Major Findings

1. Over the 13 years since 1950 the aggregate installed capacity in the country had increased by 3.3 times from 2.3 million kw to 7.6 million kw and the total generation of electricity 4.6 times from 6,575 million kwh to 30,321 million kwh. The State-owned public utilities had recorded a relatively high growth both in capacity and generation. The State-owned public utilities which accounted for about 27% of the aggregate installed capacity around 1950 had by 1963-64 acquired control over nearly 64% of the capacity. The role of the private sector had declined considerably, in relative terms.

2. The guiding criteria generally adopted for the selection of villages for electrification were remunerativeness, nearness to main transmission lines, population and accessibility. In Punjab, a provision of 10% in the project estimate was made for electrifying the villages enroute. The practice was worth emulating in other States. The Electricity Boards were not generally given due weightage to the strategy of taking up rural electrification in a concentrated form in compact blocks of area having considerable agricultural or other potential. Pursuit of such a strategy would lead to integrated area development and yield richer dividend in the future.

3. The delay in constituting Electricity Boards by a number of State Governments has affected adversely

the progress of the rural electrification programme.

4. The arguments and evidence appeared to go over-whelmingly against panchayats being involved in the work of distribution of power either as licensees or even in a limited way. It was difficult to make out a case for a general policy in favour of transfer of such functions to the panchayats till they could build up their strength, technical competence and efficiency. However, the involvement of panchayats in minor functions such as switching on or off of street light and meter reading could be promoted and secured on a much wider scale than had been done till then.

5. Cooperation and active participation of the villagers was expected to be an important element in the development of rural electrification. Their contribution of labour was expected to reduce its cost. But, on the whole, people's response in these respects was not very encouraging.

6. The rural electrification programme was concentrated among villages in the population range 5001-10000; 55% of such villages were covered as against 4% in the 0-5000 group.

7. Of the 201 sample villages where electricity had reached by March 1961, nearly 45% had electrically operated pumpsets; and the figure went upto 53% if villages with private tubewells were also included. The proportion of villages with industrial load was, however, greater (nearly 84%). Taking into account all the States, 16% of the industrial units were operated by electricity.

8. During the period 1955-56 to 1960-61, the number of sample villages with electric pumpsets increased by nearly 127 percent, though the growth in average number of pumpsets per village had not been striking. While 51% of the sample villages electrified upto 1955-56, had electrically operated units in 1955-56, the corresponding figures for the villages electrified upto 1960-61, was 76%.

9. At the households level, only 19 per cent of the non-labour households had electric connections. In 27 per cent of the villages electricity had reached less than 51 per cent of non-labour households.

10. For all the States taken together, connected load per consumer worked out to 1.3 kw in the sample villages; and electricity consumption, in 1960-61, to nearly 67,600 kwh per village or 13 units per house hold per month.

11. In the sample villages, the consumption of electricity in 1960-61 averaged to 149.60 kwh per household and to about 30 kwh per capita, as against the all-India figure of 37.92 kwh per capita in 1960-61. Agricultural, industrial and domestic **consumption** accounted for 41%, 38% and 12% respectively.

12 Consumption per consumer (or per electric connection in 1960-61 showed the highest level for industrial connections (8665 kwh) followed by agricultural(5252 kwh), street-lighting (3640 kwh),

other connections (2208 kwh), commercial (377 kwh) and domestic connection (204 kwh).

13. Cultivators constituted, by far, the highest proportion (44%) of the electricity users followed by traders and shopkeepers(27%). Households **other than the** traditional village artisans who reported other industry as their principal occupation came next (13%).

14. The average area brought under new crop as a result of electric pumping was 3.81 acres per household, which worked out to 15.8% of the cultivated area of the households reporting introduction of new crops.

15. The minimum charges were not uniform in all the States. For agricultural uses, it varied from Rs.15 per h.p per year (leaving out Assam) in Madras to Rs.60, in Gujarat, Kerala, Maharashtra, Orissa, Punjab, Rajasthan and Uttar Pradesh. For industrial use, it varied from Rs.24 to Rs.90 per h.p per year. In **States like** Kerala, Orissa, Rajasthan and even West- Bengal, where the agricultural load had yet to develop, the need for promotional incentive might be served by lowering or waiving the high minimum charges (as is done in Madras and Punjab).

## **6. Major Suggestions**

1. The analysis of the financial position of the State Electricity Boards revealed that inadequacy of funds had been hampering their efforts for rural electrification. There was a strong case for giving them financial assistance on specially liberal terms, ranging from outright grant-in-aid or subsidy to interest free loans or long term loans at reduced rates of interest, if this programme was to be promoted or intensified.,

2. With the rapid growth of power stations and transmission lines, the physical constraints in laying distribution lines in backward regions lose their importance. The main issues in such situations are economic and social. Since electrification brings facilities and amenities for all, greater social orientation to the policy and practice of the Electricity Boards was required.

3. While deciding on the introduction of electricity for small scale industries in the rural areas, the fear that it might aggravate unemployment or underemployment, acted as an inhibiting factor. The rural electrification programme would continue to be hampered unless this policy issues were resolved clearly and satisfactorily.

4. Regional priorities especially in respect of dispersal of electricity benefits, had to be clearly enunciated and the problem of separating the budgetary allocation for rural electrification from that of bulk industrial load. Unless this was done, funds got transferred, as had been the case in Andhra Pradesh, to the industrial sector which was mostly in the non-rural areas.

5. with a view to achieving an accelerated progress in rural electrification, both R.C.C. poles and wooden poles should be used increasingly.