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ORIGINAL ARTICLE

A ROLE OF ELECTRICITY SECTOR IN MP'S ECONOMIC INFRASTRUCTURAL DEVELOPMENT

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Abstract:

This paper aims to examine the Role of Electricity Sector in MP's Economic Infrastructural Development. The study is primarily based on secondary sources and data. The present paper articulates the current problems of electricity with analyze the process and consequences of decline such sector in M.P. on an Empirical basis. To capture the different aspects of MPEB, the study has carried out the new horizon in M.P.'s development particularly its rural areas as well as empowerment of weaker sector of the society. The major finding may reflect a role of govt. in infrastructural development of the state so for as the present status of MBEB is concerned. Issues like development through electricity sector, long term vision its importance for socio-economic growth and to invest more in order to overcome the perennial problem of electricity sector that has emerged in the study area. Further, the paper highlights the loopholes of electricity distribution system. The paper concludes with some suggestive measures in combating the Role of Electricity (energy) in the economic development of the state in particular and country as a whole.

KEYWORDS:

Electricity sector, Infrastructural development, Economic growth, rural, social empowerment.

INTRODUCTION

Infrastructural development is quite crucial for economic development as well as sustaining high economic growth rate of the country. Road, power, telecommunication, banking, transport and so on are sine que non for the development of a nation as well as providing basic facilities for a decent life to common man. Infrastructure sector mainly consists of power, roads and irrigation is essential for providing services like health, water, sanitation, etc. The absence of some of the most basic infrastructure services often undermines human development. Today India faces a formidable challenge in meeting its energy needs and providing adequate and affordable energy to all sections of society in a sustainable manner. The country faces as energy demand supply gap of about 8 percent with peak shortages to the order of 11-12 percent. Also, grid access is yet to be provided to over 56 percent of rural households (Sukumaram, K P and Dilip Nigam 2010). The generation of Hydro-power depends primarily on storage of dam resulting due to rainfall. The southwest monsoons arrive in Madhya Pradesh state around June 15th and withdraw by October 15th. Hydropower is a renewable, non-polluting and environment friendly source of energy. Hydropower represents use of water resources towards inflation free energy due to absence of fuel cost. Hydropower contributes around 22 percent of the world electricity supply generated. Fiscal incentive announced by the Central and State governments time to time for investment in Hydropower sector have further caused private investor to give attention to this sector (Mehra, T.S., N.I. Alvi, A.Rajasekhar 2007).

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METHODOLOGY: -

According to the objective and requirement in present study. Exploratory research design is used.

Area of the study: - M.P. and MPEB

Universe of the study: - All common men are universe of the study.

Unit of study:- M.P.'s Electricity Sector specially (MPEB).

Data collection tools and techniques :- The study is based on secondary data are collected from various published unpublished sources reports of M.P. Govt. MPEB, CEA, Planning commission, directorate of Economic and statistics, etc.

Main Objectives: - In such context the main objective of the paper are:

To analyze current electricity situation in M.P.
To highlight the loopholes of electricity distribution system.
To find out the demand and supply situation in the state.
To analyze the impact of electrification on human development.
To give recommendation to improve in the electricity supply in the state.

A)Electricity Profile of Madhya Pradesh:-

The availability of power in the State of Madhya Pradesh has increase over the years and so has the demand. Peak power and energy shortages in FY'04 and FY'05 declined due to commissioning of generating units of the Indira Sagar Hydro Project and Sardar Sarovar Project-joint venture projects of the Madhya Pradesh Government. The generating capacity of the state at present is 4588 MW out of which 2147 MW is thermal power while 2441 MW is Hydro power. Madhya Pradesh is rich in low- grade coal suitable for power generation and also has immense potential of hydro-energy. Total installed power generation capacity in year 2000-2001 was 2900 M.W. There are eight hydroelectric power stations with 747.5 MW installed capacity. A total of 50,271 out of 51806 villages had been electrified by 2000-2001. Power generation is 14023.7 m.k.w.h.

The installed capacity of MPSEB as on 31.03.2006 is 2,990.45 MW. Further, State has share of 1,665.85 Mw in the Central Sector Project and additional allocation of 50 MW is available from EREB. Apart from the above, 1,000 MW from indira Sagar Hydro-Electric Power (HEP) and 712.5 MW from Sardar Sarover HEP (Interstate) are also available. Total capacity of 1,094 MW is likely to be added from State sector, Narmada Projects and Central Sector by March, 2007 resulting in total Installed capacity of 3570.45 MW. The percentage of villages electrified to total inhabited villages was 97.43 percent as on 31st March 2006. The number pump-sets and tube wells reached in 2005-06 to 13.40 lakh.

Similarly, against the targeted additional generation capacity of 2355.40 MW, the additional generation capacity anticipated to be created is 2466.5 MW, (Tenth Five Year plan 2002-07). 14.88 percent of total outlay were spent on electricity sector In the tenth five year plan (2002-07) but in the eleventh plan (2007-12) only 13.46 per cent of the out lay of the plan will be spend on the electricity sector, This is less than previous five year plan and it is not a fine indicator for energy sector. In recent years, private sector has shown interest in the creation of generation capacities and the state too has shown positive response in promoting such partnerships. This has resulted in signing of Memoranda of Understanding (MOU).

Table No. 1 Comparative Electricity Status of M.P.(as in 1956-57 and 2012-13)

Items	1956-57	As on 31st March 2012-
Installed Capacity Part of M.P. (M.W.)	154	3725
Production in (M.K.W.H.)	189	16715.28
No of Consumer (in Thousands)	073	9075
No of Electrified Villages	179	35910
Electrified Pumps/Tube well (in Thousands)	-	1320

Source: Government of Madhya Pradesh, Dairy 2012

Table show that the previous and current electricity status M.P. The installed capacity of the state was 154 (M.W.) in 1956-57 Now it is increased many times it becomes 3725 (M.W.) Production was also have charged from 1956-57 (189) to 2012 (16715.28 M.K.W.H.). Only 179 villages were electricity 1956-57. Now 35910 are electrified No. of electrified pump/tube well were nil in 1956-57 now it is 1320 (in thousands)

(B) Availability of Electricity in M.P. :-

As late as 2010-11 only 42 per cent of all households had domestic power connections. A larger proportion around 70 per cent had access to electricity is some way, but even this is very far from the national average or the goal of universal access Predictably, the situation is especially bad in rural areas, where more than 70 per cent of the households do not have their own domestic power connection and 40 per cent of the households still do not have any access to electricity.

Table No.2 Available Capacity of Electricity Production

S.No.	Particular	Capacity
1	State Electricity Power house	2857.5 (M.W.)
2	State Water electricity power house	922.95 (M.W.)
3	Narmada Project	2356.5 (M.W.)
4.	Achieve % of electricity from central electricity sector	2375.98 (M.W.)
5	Captive production capacity	1690.00 (M.W.)
	Total available electricity capacity	**10202.93 (M.W.)**

Source :- An introduction of M.P. : Gautam Rakesh, Bhadoriya Jitendra Mc grow hill Education Pvt. New Delhi (P.12.16 to 12.17)

In last five years electricity production capacity has been increased at macro level. It was 9458.08 (m.w.) in 2007, 9658.45 (m.w.) in 2009 (210 m.w. increase) Now 10202.93 (m.w.)

This is show that progress has been painfully slow, with less than 100 villages added to the number of electrified villages in the recent years. Once again, regional differences have also increased. The impact of electricity access on quality of life is so obvious that it surely requires no elaboration, yet in this most basic of indicators, public provisioning has sadly been lacking.

(C)Electricity Consumption in M.P. :- The pattern of electricity consumption are shown in table.

Table No. 3 Pattern of Electricity Consumption in M.P.

S.N.	Category	% of consumption pattern
1	Domestic	20.82
2.	Agriculture	31.04
3.	Industrial Production	39.11
4.	Commercial use	4.72
5.	Others	4.32

Source :-Economic Survey of M.P. 2012.

(D)Rural Electrification in M.P.:-According to revised new definition of rural electrification percentage is 74 of and according to old definition of rural electrification it was 97.

For the complete total electrification of 48 district govt. sanctioned 2600 crore to REC Ltd. under. Rajeev Gandhi Rural Electrification scheme rural present govt. targets year 2012-13 whole rural electrification year.

(e)State Govt. expenditure on Energy :- When we analyze There is no consistency has been found in expenditure in the electricity sector. It reflects that government doesn't have any long term plan for development of electricity sector in the state. Annual budget for such sector shows that govt. of M.P. is not bothering for electricity problem but the main objective of the Tenth Plan (2002-2007) was to improve the physical infrastructure like power and roads. For achieving this objective the proportion of the outlay on energy has increased from 17.33 per cent in the Ninth Plan to 21.39 per cent in the Tenth Plan.

(f) Access to power – A comparative analysis:- According to the 2001 census and the Madhya Pradesh State Electricity Board (MPSEB), the status of household electrification is displayed in Table

Table No.5 Number of Households Electrified in Madhya Pradesh

Source-wise Total Number of HHs and Electrified HHs	Total	Rural	Urban
Occupied Households in Lakhs (Census 2001)	109.20	81.25	27.95
Electrified Households in Lakhs (Census 2001)	76.42	50.63	25.79
Percentage of Households Electrified (Census 2001)	70.00	62.30	92.30
Occupied Households as on 31st March 2004 in Lakh (Projected on the basis of Census 1991 and Census 2001)	109.24	81.28	27.96
Electrified Households as on 31st March 2004 in Lakh (MPSEB)	46.35	22.76	23.59
Percentage of Households Electrified as on 31st March 2004 (MPSEB)	42.40	28.00	84.40

Source : Census of India, 2001 and MPSEB

The basic issue of household access to electricity has seen progress in the state. 43.3 per cent households had been estimated (Census of India, 1991) to be electrified in 1991. This figure has gone up substantially to 70 per cent for all households and 62.3 per cent for rural households (Census of India, 2001), However, there are two disturbing factors-one is that if we see the number of households with domestic connections, as registered in the MPSEB, it is just 43 per cent overall, and 29 per cent in rural Madhya Pradesh signifying that either many household do not have a valid connection, or that actually only 29 per cent rural households have proper connections that delivers power as supplied. The high loss levels till 2005 indicates that the probability of the farmer is higher.

The second disturbing factor is the low per capita energy consumption. If we compare it with some of the other 'more developed' status such as Maharashtra and Gujarat, the difference becomes very clear. The inter-district variations within Madhya Pradesh, Place some region in a very poor power scenario. While the average per capita domestic consumption is the highest in Bhopal, Indore, Gwalior, Jabalpur and Ujjain, it is the lowest (below 500 K.W. per year per Person) in Mandla, Seoni, Jhabua, Damoh, and Dindori, which are sparsely populated areas. However this low per capita consumption does not present the right picture because the losses on account of illegal connections are actually consumption and hence actual data for per capita consumption may be higher than indicated.

There is also substantial inter-district variation in basis access to electricity as estimated in the Census of India, 2001. The districts with over 90 per cent household access to power in 2001 were Bhopal, Indore, Neemuch, Shajapur and Ujjain, Overall, 18 districts had more than 80 per cent households with access to power which, given the past record of the state, is a very substantial gain. On the other hand, the districts which still had below 50 per cent access were Bhind, Chhatarpur, Dindori, Jhabua, Mandla, Panna, Shahdol, Siddhi, Tikamgarh, and Umaria.

(G)The state of supply of Electricity in M.P.:– The Transmission and Distribution (T&D) losses for Madhya Pradesh in 2006 at 42 percent are much higher than the national average (33 per cent). It has been noted that high sub-transmission and distribution losses reduce the viability of distribution companies, thereby weakening their ability to source more power and invest in infrastructure and in new production. In general, the supply position in the state has improved over the past few years but it is still unsatisfactory, particularly in Tehsil headquarters, smaller towns, and rural belts. Supply restrictions are imposed during every rabi season due to demand supply mismatch, resulting because of an additional load of about 2000 MW of agricultural pumps that have come onto the system. The peak demand and peak availability projected for the next five years is shown in Table

Table No.6. Projected Peak Demand and peak Availability

Year	Estimated Peak Demand (MW)	Peak Availability (MW)	Shortage (MW)
2006-07	7114	5783	1331
2007-08	7492	6248	1244
2008-09	8091	7570	521
2009-10	8738	8038	700
2010-11	9437	9446	Surplus
2011-12	10192	10452	Surplus

Source : MPSEB Estimates

Table 6 states that Madhya Pradesh has acute power shortage in the past, MPSEB estimates are showing some indication of relief to the consumer that they can have sufficient electricity supply in the future.

(H)Access to electricity and Human development :– Access to electricity directly stimulates the faster economic growth and indirectly facilities in achieving enhanced social development. When the electricity is used by a community can significantly improve their living condition. Electricity plays a key role in both

economic and social development. Recognizing the importance of access of electricity especially in rural areas, the government of Madhya Pradesh shows its commitment to build human capital. Improvement in the quality of education, diversification in sources of drinking water, improvement in health care services result in greater benefits to women, children, and the elderly, especially in rural areas because of their gained access. Through television, there is a flow of information technology. Power has environmental impact as well, as it reduce pressure on woodlands.

CHALLENGES:-

The state Madhya Pradesh faces multiple challenges to provide access to electricity to all. The main challenges are –

1.Low per capita consumption of electricity.
2.Estimated demand growth of power at 6-7% specially in Rabi season it increased up to 15-
Privatization of SEB.
4.Rationalization of the tariff, structures.
5.Alarming level of transmission and distribution losses.
6.Metering of consumers act so on.
7.Politically sensitive issues such as subsidies, mad equate power generation capacity.
8.% of received electricity from CEB is low.

Final Remarks :- To sum up, electricity should have universal coverage and should be accessible and affordable to all households. The lack of adequate and assured supply of power to villages and to households is holding back a large part of our population from a better quality of life that comes with availability of power. Barriers to access should be given greater attention in investment and management planning, particularly those that prevent the poor from accessing the benefits of such services. This is important to alleviate poverty in more systematic way. In particular, the cost of power connection for the poor rather than the cost of delivering power may be subsidized.

FINDING :-

M.P. Govt. signed 22 MOU with private companies for electricity product but such companies are unable to status their work.
M.P. Govt. mode collaboration with money International institutions the financial assistance and electrical crises.
Govt. reestablished MPSEB for better and effective management.
M.P. Govt. enabled 5 companies in 2002 for production transmission and duties potion of electricity.
99 Special court established for quick.
MPEB established consumer problem less forum.
M.P. Govt. targets year 2012-13 for complete electrification specially in rural area

SUGGESTIONS:-

Stop commercial loss special in transmission and in distribution.
To less in difference in availability and demand.
Need for quality improvement in electricity supply.
Improve quality of service and greater transparency in billing.
Both poor and non poor consumer would be more willing to pay the full cost of power.
Investment should be made in the complementary infrastructure that promoter producing less of power.
The performance of service providers should be evaluated by an independent agency.
Public participation will be helpful in implement transparency in all matters.
It is also essential to monitor the physical progress achieved in rural electrification programs.
This study will suggest better way to implementation is such sector. It is expected to provide an automatic feedback for improving the system. The study in relevant both with respect to enriching the theoretical base and its applied aspect.

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