

An Impact Study of Rural Electrification in Nepal: Special Reference to Khaira Area in Pyuthan District

By

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Recommendation Letter

This thesis entitled An Impact Study of Rural Electrification in Nepal: Special Reference to Khaira Area in Pyuthan District has been prepared by Ram Krishna Acharya under my supervision. Therefore, I recommend for its final evaluation by the Examination Committee.

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Dr. Ek Raj Ojha

Approval Letter

This is to certify that the thesis entitled An Impact Study of Rural Electrification in Nepal Special Reference to Khaira Area in Pyuthan District has been prepared by Ram Krishna Acharya has been approved by this Department in the prescribed format of the Faculty of Humanities and Social Sciences.

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Abstract

Nepal is rich in water resource. Similarly, the topography of Nepal is also favourable for the hydro electricity generation. In the same way, rural electrification can be extended from this electricity generation which is necessary in order to reduce the use of traditional sources of energy in the rural areas. There are different types of rural electrification process, such as rural electrification from the national grid, rural electrification from the micro hydro, etc in the present position, this rural electrification is being held in higher rate in the rural areas than past. But without the proper study of impact of rural electrification, we cannot say that the rural electrification is creating the favourable impact in the rural areas. This study is basically related the impact of rural electrification project of the Jjimruk Hydro Electricity and Rural Electrification Center (JHEREC) in the Khaira VDC of Pyuthan district of Nepal which reflects the both the positive and negative impact of rural electrification project of JHEREC.

The JHEREC has extended its rural electrification project to this VDC before 12 years from the power station. The people of this VDC are using electricity in different purpose such as lighting, cooking, heating, in machines, in industries, in irrigation sector etc. But it is perhaps unknown that this electrification is creating the favourable impact or not in these sectors. This study mainly focuses on this issue of the rural electrification in this VDC. It mainly illustrates the socio-economic impact of this rural electrification project of JHEREC.

This study has following objectives: to evaluate the impact of rural electrification upon industrial sector and the irrigation systems of the selected area, to evaluate the impact of rural electrification upon the public health and education, to evaluate the impact of rural electrification upon the firewood and petroleum consumption, to evaluate the impact of service delivery system of rural electrification on the selected area.

In order to achieve these objectives of the research, the explorative, descriptive and analytical frameworks of research are used on the basic of primary and secondary data. The major variables used in this research are the household, the irrigation, the education, the public health, the industrial sector, fuel wood consumption, petroleum consumption, etc. The impact of rural electrification is evaluated upon these variables through different techniques in this research but each variable has some conceptual framework in it. The simple random sampling is used while conducting the field survey to acquire the primary data in this research. The sample size of the

study is 829 households of the universe (about 11 percent). In the same way, the secondary data are also used for the comparison. Different statistical tools and the computer programmes are used in order to achieve the objectives of the research.

There are six chapters in this report viz. Introduction, Literature Review, Methodology, Study Area Description and Operational Schedule of Research, Data Analysis and Findings and Conclusion and Recommendations.

More than 20 Previous literatures are reviewed before conducting this research. In the same way, the forth chapter of the research has illustrated the status of selected variables in the study area. From the analysis of the data, we get the following findings of the variables in this research.

-) More than 90 percent households are getting the facility of electricity in Khaira VDC
-) This rural electrification project has given positive impact on the industrial sector of this VDC,
-) The rural electrification is unable to create the favourable impact on the irrigation sector because there is lack of availability of electricity in the nearby farmlands,
-) The electrification is unable to reduce the firewood consumption because of the high tariff rate of electricity than firewood,
-) The electricity has substituted the kerosene consumption in most parts of the VDC but some of the households of the VDC are compelled to use kerosene because lack of extension of electricity in the whole VDC.
-) The electricity supply, the meter reading system, etc. are regular in the VDC.
-) The Bill Payment counter (Khalanga Counter) is far away and the access less or less access to the electricity affords are the main problems of service delivery mechanism to the people,

The report has recommended mainly about the service delivery system of the rural electrification project of JHEREC.

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Acronyms

ADB	:	Asian Development Bank
CBS	:	Central Bureau of Statistics
DDC	:	District Development Profile
HH	:	Households
GN	:	Government of Nepal
ISRSC	:	Informal Sector Research and Study Centre
BPC	:	Butwal Power Company
JHEREC	:	Jhimruk Hydro Electricity and Rural Electrification Center
Kg	:	Kilogram
KM	:	Kilometer
MOWR	:	Ministry of Water Resources
MW	:	Mega Watt
NEA	:	Nepal Electricity Authority
UMN	:	United Mission to Nepal
VDC	:	Village Development Committee
WB	:	World Bank
WBE	:	World Bank Encyclopedia
WEC	:	Water and Energy Commission