

ABSTRACT

Abstract of thesis submitted to the Graduate School of Maejo University in partial fulfillment of the requirements for the degree of Master of Science in Agricultural Economics

FINANCIAL FEASIBILITY ANALYSIS OF MICRO HYDRO – ELECTRICITY
GENERATION IMPROVEMENT PROJECT BY KLONKANLUANG
MAETONLUANG ELECTRICITY COOPERATIVE LIMITED,
CHIANGMAI PROVINCE

By
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The objectives of this research were to 1.) Analyze financial feasibility of a project on micro hydro electricity generation improvement of Maetonluang Royal Project Electricity Cooperative, Limited. 2.) investigate feasible guidelines on management and service of micro hydro electricity in Maetonluang Royal Project electricity cooperative, Limited. Data were collected from 132 members of Maetonluang Royal Project Electricity Cooperative, Limited and analyze by descriptive statistics on time - adjusted Net Present Value (NPV) . The findings of this research were as follow : -

All of respondents preferred electric current from Provincial Electricity Authority to electricity cooperative because of convenience and better service. A majority of respondents (64.4 %) viewed that there was no need to cancel the co-op

project but did need to improve processing and services. A few (25.6 %) viewed that no improvement needed and agreed upon majority vote.

Financial feasibility analysis of micro hydro electric project revealed that :

1) the project was feasible as calculated from direct and indirect benefit by comparing with the project cost. Net Present Value (NPV) was + 12,030,759 baht and Benefit Cost Ratio (B/C) was more than 1 (1.39)

2) Net Present Value (NPV) was + 10,266,284 baht and Benefit Cost Ratio (B/C) was more than 1 (1.33) , once there was no project , based on latest with data from financial B.E. 2539/2540

It was concluded that the improvement project should be done for better benefit even though the Benefit Cost Ratio (B/C) was only 1.39 . Sensitivity analysis indicated that at the 6 % interest rate, 30 % decreasing of benefit effect will make the project unaccountable , i.e. Net Present Value (NPV) - 635,992 baht and Benefit Cost Ratio (B/C) is 0.979. However , once the member of cooperative aware of and unified for the environment conservation, the project would be accountable and sustainable.