



## The Philippines

# 26 NEA/VECO Rural Electrification Project

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The objective was to conduct rehabilitation, construction, and expansion of power distribution facilities for the target 44 Electric Cooperatives (ECs) nationwide and Visayan Electric Company (VECO) on Cebu province as part of an effort to facilitate rural electrification and reduction of distribution loss, and thereby help strengthening poverty reduction measures and promote regional development.

**Loan Amount/Disbursed Amount:** 11,433 million yen / 9,740 million yen

**Loan Agreement:** August 1994

**Terms and Conditions:** Interest rate, 3.0%; Repayment period, 30 years (grace period, 10 years); General untied

**Final Disbursement Date:** October 2001

**External Evaluator:** Takeshi Yamashita (KRI International Corp.)

**Field Survey:** July 2003



## Evaluation Result

In this project, rehabilitation, construction and expansion of distribution lines were implemented. As for the portion that was carried out by the executing agency, National Electrification Administration (NEA) through Electric Cooperatives (ECs), more emphasis than was planned was placed on rehabilitation, in line with the government policy. As for the portion carried out by the other executing agency, Visayan Electric Company (VECO; providing electricity in Metro Cebu with a population of 1.7 million, comparable to the population of Sapporo City, Japan, which is 1.87 million), the number of households covered by the project has increased. Although the project period was longer than planned due to the delay in procurement of materials and equipment, the project cost was almost the same as planned. As for the NEA portion, the household electrification rate in the target area increased from 49.4% in 1993 to 68.6% in 2003, and the barangay (the smallest local administrative unit in the Philippines) electrification rate also increased from 63.0% to 84.5% in the same period. As for the VECO portion, the household electrification rate increased from 71.8% in 1996 to 82.3% in 2001, and the barangay electrification rate also increased from 81.5% to 100% in the same period. In the beneficiary survey, "increase in employment opportunities", "increase in income and savings", etc. were pointed out as economic impacts of the project.

In the educational aspect, many respondents said "the learning environment has improved". Also, more than half of the respondents thought "communications among family members and neighbors have improved" thanks to electric equipment purchased after electrification. There is no problem with the technical capacity, and operation and maintenance system of NEA. However, the financial condition is deteriorating, as nearly half of ECs are in the red in spite of the high collection rate of electricity charges because of their small business scale. VECO has no problem with the technical capacity, operation and maintenance system, or financial condition. It is advisable for NEA to devise measures to reduce distribution losses such as offering incentives.

## Third-Party Evaluator's Opinion

Rural electrification supports poverty reduction via improvement of the educational environment, etc. In order to promote rural electrification in the future, it should be integrated with the overall rural development projects.




**Third-Party Evaluator:** Mr. Tereso S. Tullao

Obtained a doctorate in international economics from Tufts University. Presently holds the post of Professor of Economics, De La Salle University, specializing in development economics and international economics.

### Change in lighting after electrification

Before the project was implemented, most households used kerosene lamps for lighting (78% of households were using portable kerosene lamps and 2% were using pressure kerosene lamps). Kerosene lamps sometimes caused fire when they fell down, and the smoke from them caused an offensive odor, health problems such as coughing and itchy eyes, and sticky soot everywhere in the room. Since electrification, 20W-40W fluorescent lamps and 40W-60W incandescent lamps are generally used. A 60W incandescent lamp is 7-70 times brighter than a kerosene lamp, and costs only 1/2 to 1/9 that of a kerosene lamp per hour.

### Comparison of Brightness and Cost by Type of Lighting

	60W incandescent lamp	Pressure kerosene lamp	Portable kerosene lamp
Shape			
Brightness	700 lumens	40-100 lumens	10-15 lumens
Cost	0.30 pesos/hour	1.76- 2.72 pesos/hour	0.64-0.96pesos/hour