

Thesis Title THE ANALYSIS OF ENERGY BALANCE AT VILLAGE LEVEL,
 IN THE NORTHEAST THAILAND
 CASE STUDY OF 2 VILLAGES

Name Wanchai Manokhoon

Degree Master of Science
 (Appropriate Technology For Resource Development)

Thesis Supervisory Committee

Chirapol Sintunawa , Ph.D.

Bunvong Thaiutsa , Ph.D.

Chirtchart Smitobol , Ph.D.

Date of Graduation 16 May B.E. 2534 (1991)

ABSTRACT

The analysis of energy balance is employed to gain insights into the energy and material flow of village farming and household activities. Consequently, to achieve knowledge and understand of the resources used and activities performed, two villages in the Northeast were selected for the study by means of census data collection during the agriculture year 1987-1988.

The study revealed that both villages energy utilizations were in similar pattern in various activities and sectors. In general, apart from the use of energy resource for non-fuel use in the villages, energy consumption for household activities was the largest quantity among other uses of the total energy resource. Whereas biomass resource were still the major supply source of the village energy consumption. The average household energy consumption in these two villages accounted to 10-11 per cent of the total energy use. Fuelwood and charcoal were the the most commonly used fuel. For the

agriculture sector with average of 2-5 per cent of the total energy consumption of the two villages, chemical fertilizers were indirect energy inputs with average percentage of 84-88 per cent of the total energy use. For energy consumption by source-wise, the direct energy was used only a small fraction of the total energy use with average of 1-4 per cent compared with the biomass energy, of 96-99 per cent.

The change of end-use technology to the higher efficiency such as fuelwood and charcoal stoved, fluorescent bulb and changing charcoal making process would be an energy conservation measure. By these changes, the useful energy would be an increase of 12-22 per cent.